

MINISTRY OF HIGHER AND SECONDARY EDUCATION OF THE REPUBLIC OF  
UZBEKISTAN

MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN

BUKHARA STATE MEDICAL INSTITUTE NAMED AFTER ABU ALI IBN SINO

“I APPROVE”

Vice-rector for academic and  
educational work, PhD, Associate  
professor: G.J.Jarilkasinova

“ \_\_\_\_\_ ” 2020 y.

CHAIR OF "FACULTY AND HOSPITAL SURGERY, UROLOGY"

# **Training and metodology complex**

ON THE SUBJECT "FACULTY SURGERY"

COMPILED BY:

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Assistant  
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Bukhara - 2020 y.

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UROLOGY"**

720000 - Healthcare, 5720100 - Educational-methodical complex was developed for students of medical and medical-pedagogical faculties on the basis of the curriculum.

**Compiled by:**

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**Reviewers:**

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V.R..Akramov - Head of the Department of Traumatology and Orthopedics, PhD, Associate professor t

The educational and methodological complex was considered and approved at the meeting of the Central Medical Research Center of the Bukhara State Medical Institute by the protocol of

" \_\_\_\_\_ " \_\_\_\_\_ 2020.

## **ANNOTATION**

Faculty surgery is a special clinical discipline dealing with etiology, pathogenesis, clinic, research methods, prognosis and complications, principles of treatment and prevention of surgical diseases, emergency care in case of emergency. In the conditions of R MS and CMS , from up to 1/3 of patients are treated for surgical diseases and they often need urgent measures to save the patient's life. Therefore, the study of the faculty under the GP program is a necessary requirement for students of medical and medical-pedagogical faculties.

The standard program for faculty surgery is compiled taking into account the State educational standard, the qualification characteristics of a general practitioner and the volume of the study load, in accordance with the curriculum. The program includes a volume of theoretical and practical skills that students of the medical and medical-pedagogical faculties must master when studying surgical diseases under the GP program.

# POSITION

## on organizing and conducting independent work of students at the department

The regulation on the organization and control of the independent work of students in the subject of faculty and hospital surgery for students of the medical faculty is drawn up on the basis of the standard regulation on the organization, implementation, control and assessment of the independent work of undergraduate and graduate students of the MHSSE RUz and the standard regulation of BSMT on the independent work of students

On the subject of faculty and hospital surgery, students of 4-5 courses of the medical faculty study. Independent work (IWS) is planned as part of the total load for the discipline (Table 1).

**Table 1.**

**Study load**

| No. | Item name        | Total load | Practical lessons and lectures | IWS ( hours ) | Academic semester |
|-----|------------------|------------|--------------------------------|---------------|-------------------|
| 1   | Faculty surgery  | 1 80       | 16 0<br>( 124 + 36 )           | 20            | 7-8               |
| 2   | Hospital surgery | 160        | 140<br>(104 + 36)              | 20            | 9-10              |

**The main goal of the IWS:** to instill in students the skills of self-education, which will be necessary for him in his subsequent professional activity .. Individual work of students, as one of the forms of the training system, must be provided organizationally and methodically. The task of the teacher is to develop such support, as well as to provide advice and control the results of individual work. The task of the students is to independently study a certain section of the program material of the discipline, taken out for self-education.

When planning an IWS, the types of work that the student must perform out of class, in their free time, are determined. Control is exercised by the teacher of the student group.

### Information about the student's independent work

The organization of the IWS involves the allocation of a specific volume of student activities (all the necessary types of tasks for independent work) and those target settings associated with the allocation of a specific object; the choice of the way to achieve the goal, that is, forecasting the way of activities to perform specific work, determining the expected result, organizing control over compliance with the planned reporting deadlines.

The control, carried out at different stages of training, is a method of determining the readiness of students for the transition from passive assimilation of knowledge to active (creative, research work).

Based on the above, the following forms of self-education of students are recommended as one of the types of individual work:

1. Make a training stand on a given topic, size 1x2 m, 1.5x2 m (one stand for 2-3 students);
2. Prepare an abstract on the IWS topic (10-15 pages);
3. Preparation of a report or message on the topic (15-20 min.) The text of the report is submitted in the form of an abstract;
4. Preparation of a presentation on the topic of IWS with the obligatory delivery of a report or an abstract of the presentation;
5. Make a report on modern methods of diagnosis and treatment in surgery;
6. Create handouts on a given topic (tables, diagrams, photographs, graphs, organizers);
7. Make tests on a given topic (at least 20 tests on one topic);
8. Create a script for an interactive method and conduct a lesson on the topic of IWS;

9. On the topic of IWS, compose crosswords, scanwords, teawords, rebuses;
10. Work with scientific literature (write abstracts and reports on journal articles, monographs) (at least 10 pages).

### **IWS planning for departments**

1. For students of 4-5 courses of the medical and faculty, 2 IWS are planned for each semester, 1 work.
2. On the first day of the cycle, students are explained the purpose of IWS in surgery, assessment criteria, types of IWS, topics of IWS. When planning the IWS form, the individual abilities of each student are taken into account. During the cycle, the student must prepare not only for his chosen topic of the IWS, but also for all the proposed topics.
3. The score obtained by the IWS is put together with the TC. A student who has not passed the IWS topic for that day is considered not certified and receives a low grade. But during the cycle, he is obliged to pass his topic on the IWS.
4. The IWS at the department should be kept for 2 years.

### **List of IWS topics for 4th year students in faculty surgery**

1. The order of work of the surgical department.
2. Internal hernia.
3. Diastasis of the abdominal muscles.
4. Perineal hernia and hernia of the Petit triangle.
5. Atypical course of acute appendicitis.
6. Acute ulcers and medicinal erosion of the stomach.
7. Polyposes.
8. Endemic and sporadic goiter.
9. Dyskinesia of the biliary tract.
10. Tumors of the liver.
11. Cystitis and fistulas of the pancreas.
12. Tumors of the large intestine.
13. Acute adhesive obstruction .
14. Gynecological peritonitis.
15. Internal intestinal fistulas.

### **IWS assessment criteria**

| <b>Assessment criterion</b> | <b>Points</b> | <b>Student knowledge level</b>                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Excellent<br>86-100%        | 96-100        | The IWS is prepared at a high level in the form of a presentation, fully meets the requirements of the program. In preparing for the topic, new data from various sources were used. The student prepares IWS in English, using new pedagogical technologies. On the defense of the IWS, the student answers all questions correctly and clearly, the student managed to interest the audience. |
|                             | 91-95         | The IWS is prepared at a high level in the form of a presentation, fully meets the requirements of the program. The student prepares IWS in English, using new pedagogical technologies. During the defense of the IWS, the student answers all questions correctly and clearly.                                                                                                                |
|                             | 86-90         | IWS fully meets the requirements of the program. Prepared as a presentation. The student prepares the IWS, preferably in English. On the defense of the IWS, the student answers all questions correctly, he is familiar with the new data in this area.                                                                                                                                        |
| Good<br>71-85.9%            | 81-85.9       | The IWS is prepared in the form of a presentation, meets the requirements of the program. During the defense of the IWS, the student answers all questions correctly.                                                                                                                                                                                                                           |

|                       |         |                                                                                                                                                                                                                                                                 |
|-----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | 76-80   | IWS meets the requirements of the program. The student knows the essence of the problem, but the IWS is prepared in the form of an abstract.                                                                                                                    |
|                       | 71-75.9 | IWS meets the requirements of the program. The student knows the essence of the problem, but does not answer the questions confidently. The IWS is prepared in the form of an abstract or oral communication.                                                   |
| Satisfied<br>55-70.9% | 66-70.9 | IWS was prepared at a satisfactory level, meets the requirements of the program. During the defense, the student makes inaccuracies in answering questions. The IWS is made in the form of an abstract, the student reads the abstract in full when answering . |
|                       | 61-65.9 | Errors were made when performing the IWS. The topic is not fully covered, it is made in the form of an abstract. When answering questions, the weakness of theoretical knowledge is revealed.                                                                   |
|                       | 55-60.9 | The IWS was made in a very simple way, a ready-made abstract was downloaded from the Internet. On defense, the student is weak to answer questions, theoretical knowledge is very weak.                                                                         |
| Unsatisfied 30-54     | > 55%   | The IWS is of very low quality and was made with gross errors. During the defense, the student does not answer questions, does not know the essence of the problem.                                                                                             |

**A typical program on  
discipline  
"Faculty Surgery"**

**MINISTRY OF HIGHER AND SECONDARY SPECIAL  
EDUCATION OF THE REPUBLIC OF UZBEKISTAN**

**"Approved"**

Ministry of Higher  
and secondary specialized education of  
the Republic of Uzbekistan

**Registered**

No. \_\_\_\_ " \_\_\_\_ " \_\_\_\_\_ 201 \_\_\_\_ 1 year

\_\_\_\_ " \_\_\_\_ " \_\_\_\_\_ 201 \_\_\_\_ 1 y.

**PROGRAM  
BY DISCIPLINE**

**FACULTY SURGERY**

Area of expertise: 720,000 - "Healthcare"

For the direction (specialty):

5720100 - "General Medicine"

5720100 - "Professional education"

(5720100 - "General Medicine")

Tashkent - 2016



#### **CREATED BY:**

**Karimov Sh.I.** - Head of the Department faculty and hospital surgery medical faculty of the Tashkent Medical Academy, MD, etc. on fessor.

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**Berkinov U.B.** - responsible for the educational process of the department faculty and hospital Hira p ology of the medical faculty of the Tashkent Medical Academy, MD, assistant professor.

**B.A. Ugarov** - responsible for the educational process of the department fakulte t tion and hospital surgery medical and pedagogical faculty of the Tashkent Medical Acad e mission, Ph.D. assistant.

#### **REVIEWERS:**

**Ataliev A.E.** - Professor of the Department of Surgery of the GP of the TMA, Doctor of Medical Sciences, pr o fessor

**Soatov RR .** - Associate Professor of the Department of Surgery TashIUV, Ph.D. sciences.

The program was discussed and recommended at the Academic Council of the Tashkent Medical Academy.

Minutes No. \_\_\_\_ dated "\_\_\_\_" \_\_\_\_\_ 20 08 .

The program discussed at the inter-university coordination council (protocol number \_\_\_\_ of "\_\_\_\_" \_\_\_\_\_ 20 08 ) and recommended for approval by the Ministry of Higher and Secondary Special Education of the Republic of Uzbek and mill

## **Introduction**

Faculty surgery is a special clinical discipline dealing with etiology, pathogenesis, clinic, research methods, prognosis and complications, principles of treatment and prevention of surgical diseases, emergency care in case of emergency. In the conditions of SVP and HVP, from up to 1/3 of patients are treated for surgical diseases and they often need urgent measures to save the patient's life. Therefore, the study of the faculty under the GP program is a necessary requirement for students of medical and medical-pedagogical faculties.

The standard program for faculty surgery is compiled taking into account the State educational standard, the qualification characteristics of a general practitioner and the volume of the study load, according to the curriculum. The program includes a volume of theoretical and practical skills that students of the medical and medical-pedagogical faculties must master when studying surgical diseases under the GP program.

### **Abdominal hernia. Inguinal hernia.**

Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis of abdominal hernias, indications and contraindications for surgery, types of operations, features of operations for sliding hernias, anatomical and clinical differences between congenital and acquired umbilical and inguinal hernias, anatomical and clinical differences between direct and oblique inguinal hernias and their surgical treatment, preparation for surgery of patients with a giant ventral hernia, especially surgical interventions and postoperative management.

### **Umbilical, femoral, hernia. Rare forms of hernias and incisional hernias.**

Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis of hernias, indications and contraindications for surgery, types of operations, features of operations for sliding hernias, anatomical and clinical differences between congenital and acquired umbilical and inguinal hernias, anatomical and clinical differences between direct and oblique inguinal hernias, and their surgical treatment, preparation for surgery of patients with hernias, peculiarities of surgical interventions and postoperative management. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis of postoperative and rare hernias, indications and contraindications for surgery, types of operations, features of operations, features of surgical interventions and postoperative management.

### **Complications of abdominal hernias. (inflammation, coprostasis, irreducibility, infringement).**

Clinic, diagnostics, differential diagnosis, and treatment of inflammation, coprostasis and irreducibility of hernias, the concept of elastic and fecal infringement, clinic of a restrained hernia, justification of pathological changes in restrained organs (strangulation groove, changes in restrained loops of the intestine and greater omentum, hernial water, ischemic necrosis), features of surgical treatment, determination of the viability of the restrained organs,

indications for bowel resection, tactics for independently or forcibly reduced hernias, the concept of imaginary reduction and false infringement, stages of surgery for restrained hernias, features of surgery for phlegmon of the hernial sac, diagnostic difficulties in parietal infringement (Richter infringement).

### **Acute appendicitis**

Various pathological forms, clinical and anatomical classification, clinical picture, diagnosis, differential diagnosis, treatment and features of the course of acute appendicitis in pregnant women, the elderly and children. Features of surgical treatment depending on the location of the appendix and the pathological form.

### **Complications of acute appendicitis**

Clinical manifestation of an atypical course of acute appendicitis, preoperative and postoperative complications, their diagnosis, differential diagnosis and treatment tactics. Clinic of periappendicular infiltration and abscesses (subphrenic, subhepatic, interintestinal and abscess of the Douglas space). Differential diagnosis of acute appendicitis from perforated ulcers, cecum tumors, ectopic pregnancy, renal colic, acute cholecystitis and pancreatitis.

### **Peptic ulcer and 12 duodenal ulcer**

Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis and treatment of gastric ulcer and 12 duodenal ulcer. Conservative treatment for uncomplicated peptic ulcer disease, features of the clinical manifestation of callous and penetrating ulcers, characteristic signs of ulcers with EGDFS, X-ray examination, CT and the choice of types of surgical treatment.

### **Complications of gastric ulcer and duodenal ulcer (bleeding, perforation).**

Symptoms, classifications, pathological changes, clinical manifestation by stages, diagnosis, differential diagnosis and treatment tactics for ulcerative bleeding, indications and contraindications for radical surgery. Clinical manifestations, diagnosis, differential diagnosis of ulcer perforation, the value of fluoroscopy and endoscopy in the diagnosis of atypical cases, differential diagnosis of perforation (acute appendicitis, acute cholecystitis, acute pancreatitis, right-sided renal colic, treatment tactics, correction of homeostasis, control of peritoneostasis).

### **Complications of gastric ulcer and duodenal ulcer (stenosis, penetration, malignancy)**

The clinical course of stenosis by stages, the importance of X-ray examination in determining the degree of stenosis, absolute and relative indications for operations and types of surgical treatment. Clinical manifestations, diagnostics, differential diagnostics and treatment tactics for penetration and malignancy.

### **Diseases of the thyroid gland.**

The concept of goiter, frequency, etiopathogenesis, clinical picture and diagnosis, differential diagnosis and treatment, principles of conservative therapy, indications for surgical treatment.

### **Chronic calculous cholecystitis, diagnosis and treatment.**

Cholecystolithiasis, classification of cholecystolithiasis and their complications, clinical manifestations of acute cholelithiasis, the importance of non-invasive and invasive research methods in establishing cholelithiasis (ultrasound, RPHG, HCG), clinical manifestations and tactics of cholecystolithiasis treatment in elderly patients clinic, diagnosis and surgical treatment of Mirizzi syndrome hepaticoholedochus with gallbladder due to the impression of hepaticoholedochus with a stone); indications and contraindications for surgery (traditional cholecystectomy, laparoscopic cholecystectomy, lithotripsy).

#### **Acute cholecystitis and its complications**

Clinical manifestation, diagnosis, differential diagnosis of choledocholithiasis and their complications; changes occurring during obstruction of the OBD with a stone, strictures of TOX and IWS, the importance of X-ray contrast studies in their identification, the choice of surgical treatment.

#### **Surgical liver diseases**

The concept of surgical liver diseases, changes in liver dysfunctions (cytolytic syndrome, cholestatic syndrome, hepatic cell failure syndrome, inflammatory syndrome) changes in laboratory studies, the importance of biochemical tests in liver damage, the clinic of pyogenic and amoebic liver abscesses, diagnosis, clinical course, tactics treatment depending on the etiopathogenesis. Types of nonparasitic cysts, diagnostics, differential diagnostics, clinical course, treatment tactics, indications for various types of operations. Etiopathogenesis of liver echinococcosis, clinical picture, course of the disease and complications, the value of immunological parameters, diagnosis, differential diagnosis, methods of surgical treatment. Clinic of liver alveococcosis, diagnosis, course of the disease and possible complications, methods of surgical treatment.

#### **Acute and chronic pancreatitis**

Types of acute pancreatitis, clinical course, the significance of the "trypsin" and "lipase" phases on the development of the disease, pathological changes depending on the clinical course, the importance in the diagnosis of laboratory tests, differential diagnosis of pancreatitis with other similar diseases and treatment tactics. The clinical course of biliary pancreatitis, diagnosis, the value of instrumental research methods, the principles of conservative treatment of acute pancreatitis, along with general treatment, the value of protease inhibitors that reduce pancreatic secretion (trasilol, counterkal, gordox and others), indications and contraindications for surgical treatment, methods of surgical treatment, complications of acute pancreatitis, their clinic, diagnosis and treatment. laboratory research, differential diagnosis of pancreatitis with other similar diseases and treatment tactics.

#### **Surgical diseases of the colon**

Clinic of ulcerative colitis, Hirschsprung's and Crohn's disease, diagnosis and differential diagnosis, complications, studies in diseases of the colon (digital examination of the rectum, irrigography, sigmoidoscopy and colonoscopy), tactics for complications of diseases of the large intestine, surgery.

#### **Surgical diseases of the rectum**

Clinic of rectal diseases, diagnosis and differential diagnosis, causes of secondary hemorrhoids in liver cirrhosis, pelvic cancer and other diseases, studies conducted for the diagnosis of rectal prolapse, types of paraproctitis and treatment tactics, types of surgical interventions.

### **Acute intestinal obstruction**

Clinic of various types of mechanical intestinal obstruction, diagnosis, clinical course of obstructive and strangulated intestinal obstruction, the value of changes in water-electrolyte and acid-base balance, differential diagnosis with similar diseases, conservative and surgical tactics for various types of mechanical intestinal obstruction, preoperative preparation of the patient and management of the postoperative period, indications for bowel resection. Types of intestinal intussusception, clinical course, clinical picture, diagnosis and differential diagnosis, treatment tactics, indications for disinvagination and resection of intussusception, types of surgical treatment Types of dynamic intestinal obstruction, causes, clinical picture, diagnosis, and principles of treatment (combating intoxication, intestinal paresis , hydroionic disorders) and surgical methods of treatment.

### **Acute peritonitis**

Etiology of peritonitis, distribution, causes, course depending on the stage and diagnosis, various studies for early diagnosis, differential diagnosis, indications for surgery, preparation for surgery and treatment, indications for draining the abdominal cavity, combating the development of paralytic intestinal obstruction after surgery ( intestinal decompression and nasointestinal and transanal intestinal intubation for early nutrition), peritoneal and intestinal lavage, abdominal dialysis, postoperative management of patients (hemodynamic and homeostatic disorders, combating intoxication), antibacterial treatment in the treatment of peritonitis.

### **Intestinal fistulas**

Intestinal fistulas - a serious pathology of surgery, methods of its prevention, complications, etiology of intestinal fistulas, distribution, causes, diagnosis, differential diagnosis, indications for surgery, preparation for surgery and treatment.

## **Workshops**

Subject of faculty surgery. Curation. Abdominal hernia. Hernias of the white line of the abdomen, umbilical, inguinal, femoral hernias. Postoperative hernias, rare types of hernias. Complications of abdominal hernias. (inflammation, coprostasis, irreducibility, infringement). Acute appendicitis. Complications of acute appendicitis. Peptic ulcer and 12 duodenal ulcer. Complications of gastric ulcer and duodenal ulcer (bleeding, perforation). Complications of gastric ulcer and duodenal ulcer (stenosis, penetration, malignancy). Diseases of the thyroid gland. Acute cholecystitis and its complications. Surgical liver diseases. Diseases of the pancreas. Surgical diseases of the colon. Surgical diseases of the rectum. Acute intestinal obstruction .. Acute peritonitis. Intestinal fistulas.

## **Independent work.**

The work of the surgical department. Management of patients in the late postoperative period Principles of operation of the surgical unit, the device of the surgical and dressing unit is the fundamental difference between the surgical department and the therapeutic department. Inpatient and spa treatment. Rehabilitation therapy methods. Questions of VKK and VTEK. Internal hernia. Clinic, diagnostics, differential diagnostics. The role of modern technologies in the diagnosis of internal hernias. Surgery. Diastasis of the rectus abdominis muscles. Recurrent hernias. Clinic, diagnostics, differential diagnostics. Methods of plasty for diastasis of the rectus abdominis muscles, plastics methods for recurrent hernias. Features of the clinical course of hernias of senile and elderly age .. Etiopathogenesis. The principles of conservative therapy. Indications and types of surgical interventions. Preparing for surgery. Hernia of the Petit triangle and perineum. Etiopathogenesis, clinical picture, diagnosis and differential diagnosis. Instrumental diagnostics methods and their information content. Treatment. Types of plastics. The results of surgical treatment. Features of the course of acute appendicitis in children and the elderly. The clinical picture of acute appendicitis in children and the elderly, differential diagnosis.

Atypical course of acute appendicitis. Appendicitis in pregnant women. Clinic, diagnostics, differential diagnostics. The role of instrumental diagnostics. Treatment. Acute erosion and stomach ulcers. Medicinal ulcers Diagnostic methods conservative and surgical treatment Methods of preventing medicinal ulcers. Chronic hyperacid and anacid gastritis. Modern theories of the etiology of peptic ulcer disease and ulcer formation. Etiology and pathogenesis, types and forms, clinic, diagnosis, treatment. The role of microbes in ulcer formation.

Precancerous diseases. Polyposes. Classification, etiology and pathogenesis, clinical picture, diagnosis, treatment of various forms of precancerous diseases of pericarditis. Therapeutic tactics for polyposis.

Endemic and sporadic goiter. Clinic, diagnostics, differential diagnostics. The role of radiological methods in diagnosis and differential diagnosis. Surgical tactics.

Dyskinesia of the gallbladder. Etiology, pathogenesis. The role of modern instrumental research methods in diagnostics and differential diagnostics. Tumors of the gallbladder and biliary tract. Treatment methods and results. Clinic. Diagnostic methods. Differential diagnostics. Modern methods of establishing the passage of bile. Liver tumors (fibroma, lipoma, hemangioma). Etiopathogenesis, clinical picture, diagnostics, differential diagnostics. Methods of interventional and surgical treatment.

Cyst and fistula of the pancreas. Etiology, pathogenesis. The role of modern instrumental research methods in diagnostics and differential diagnostics. Treatment methods and results.

Colon tumors. Etiology, pathogenesis. The role of modern instrumental research methods in diagnostics and differential diagnostics. Treatment methods and results.

Rectal cancer. Classification. Dependence of clinical manifestation on the stage of pathology diagnosis, differential diagnosis. Treatment methods depending on

the type of the stage of the process. Adhesive intestinal obstruction. Etiopathogenesis, clinical picture, diagnosis. Conservative therapy methods. Indications for surgical treatment. Types of surgical interventions. Treatment results. Gynecological peritonitis. Etiopathogenesis, clinical picture, diagnosis, differential diagnosis. Conservative therapy methods. Indications for surgical treatment. Types of surgical interventions. Treatment results.

Internal fistulas. Etiology, types. Clinic. Diagnostics and differential diagnostics. Surgical tactics. Surgical treatment methods.

### **Qualification practice.**

The student undergo qualification practice in the clinics of the Tashkent Medical Academy, polyclinics, in the bases of research institutes and in hospitals at the place of residence of the students. During the qualifying practice, students will be divided into groups of 3-4 students, perform the following functions: initial examination of a patient in a clinic or polyclinic, establishing a primary diagnosis, drawing up a plan for examining a patient, participating in the preoperative preparation of a patient, participating in an operation as an assistant, maintaining the patient in the postoperative period. During practice, each student keeps a diary, writes a report about the material studied and gains a rating point.

List of tutorials and tutorials

### **Educational literature**

1. Surgical diseases. Sh.I. Karimov, Tashkent, 2005
2. Surgical diseases. Under the editorship of M. I. Kuzin., Medicine., 2002
3. Methodological manual for hospital surgery. Nazyrov F.G. et al. Tashkent 2004
4. Clinical Surgery. Ed. Pantsyreva Yu.M. M. "Medicine", 1988
5. Surgical Diseases Edited by V.S. Savelyeva, A.I. Kirienko, Moscow, 2006

### **additional literature**

#### **Main**

6. Vorobiev A Handbook of a practical doctor in 3 volumes. 1990
7. Conden R., Neuhaus L. Clinical surgery Moscow. Practice 1998
8. Nazirov F.G., Denisov I.I., Ulumbekov E.G. Reference guide a practicing physician. Moscow 2000
9. Petrovsky B.V. ed. Guide to surgery (in 12 volumes) M. Medicine 1959-1966

#### **Desired:**

10. Amenev A.M. Textbook for proctology. M., 1969.
11. Aripov U.A. Complications of acute appendicitis. Lecture text. Tashkent, TashGosMi publishing house, 1983.
12. Aripov U.A., Blagovidov D.F., Danilov M.V. Operations on the large duodenal papilla and pancreas. Tashkent, M., 1978.

13. Aripov U.A., Vilyavin G.D., Vishnevsky V.A., Grishkevich E.V. Acalculous cholecystitis. Toshkecht, M., 1977.
14. Aripov U.A., Vinogradov V.V., Grishkevich E.V. Pancreatitis surgery. Tashkent, M., 1974.
15. Aripov U.A., Vinogradov V.V., Danilov M.V. Pancreatic cysts. Toshkent, M., 1975.
16. Aripov U.A., Mazaev P.N., Grishkevich E.V., Danilov M.V. Obstructive jaundice. Tashkent, M., 1971.
17. Vakhidov V.V., Khodzhibaev A.M. Postvagotoma syndromes and their surgical correction. Toshkent, M., 1993.
18. Voilenko V.I., Mendslyan A.I., Omelchsnko V.M. Atlas of operations on the abdominal wall and abdominal organs. M., 1965. D
19. Voskresensky II.V., Gorelik S.L. Abdominal wall hernia surgery. M., 1969.
20. Gromov A.S. Peptic ulcer disease. Riga, M., 1983.
21. Dairov A.V., Elkin M.A. Obstructive intestinal obstruction. Alma-Ata, M., 1981.
22. Dultsev Yu.V., Solomov G. Paraproctitis. M., 1981.
23. Krylov A.A., Zemlyanoy A.G., Mikhailovich V.A., Ivanov A.I. Emergency gastroenterology. Leningrad, M., 1988.
24. A.P. Krymov Abdominal hernia. Kiev, M., 1950.
25. A.P. Krymov The doctrine of hernias. M., 1969.
26. Kuzin M.I. Spilled purulent peritonitis and acute renal failure. M., 1978.
27. Levin G.N. Peptic ulcer disease. M., 1980.
28. Levitan M.Kh. Nonspecific colitis. M., 1980.
29. Milonov O.B., Toskin K.D., Zhebrovsky V.V. Postoperative complications and dangers in abdominal surgery. A guide for doctors. Moscow, M., 1990.
30. Norenberg-Charkviani A.E. Acute intestinal obstruction. M., 1969.
31. Operative Surgery (edited by Litman, Budapest, 1981).
32. Pantsyrev Yu.M. Clinical Surgery. A reference guide for doctors. Medicine, 1988.
33. Pantsyrev Yu.M. Pathological syndromes after gastric resection and gastroectomy. M., Medicine, 1973.
34. Pantsyrev Yu.M., Gallinger Yu.M. Operative endoscopy of the gastrointestinal tract M., Medicine, 1981.
35. Pathophysiology of surgical diseases (edited by J. Odaszczko., Warsaw, 1967). -
36. I. L. Rotkov Diagnostic and tactical errors in acute appendicitis. M., Medicine, 1988.
37. Rusanov A.A. Appendicitis. M., 1979.
38. Saveliev V.S. Acute pancreatitis. M., 1980.
39. Savenko V.O. Guide to Emergency Abdominal Surgery. M., 1976.
40. Savchuk B.D. Purulent peritonitis. M., 1979.
41. Simonyan N.S. Peritonitis. M., 1971.
42. Skuya N.A. Diseases of the pancreas. Moscow, M., 1986.



43. Sokolov L.K., Savrasov V.M., Ternova S.K. Clinical and instrumental diagnostics of diseases of the organs of the hepatopancreato-duodenal zone. Moscow, M., 1987.
44. Toskin KD, Zhebrovsky VV Abdominal hernias . Moscow, Medicine, 1990.
45. Uteshev N.S. Surgical treatment of postoperative peptic ulcers. M., Medicine, 1971.
46. Shalimov A.A. Acute peritonitis. M., 1981.
47. Shalimov A.A. Surgery of the liver and bile ducts. M., 1975.
48. Shalimov A.A., Ermolov A.S. Surgery of the stomach and duodenum. M., 1975, 1982.
49. Yu. Shalimop A.A., Saenko V.F. Digestive tract surgery . Kiev, Health, 1987.
50. Yudin S.S. Sketches of gastric surgery. M., 1955.

# **Work program for the training of Faculty Surgery**

## **Purpose of the item:**

**The aim of the training is :** training 4-year students of the medical and medical-pedagogical faculties of the most common surgical pathology of the gastrointestinal tract, diseases of the gallbladder and extrahepatic biliary tract, surgical diseases of the liver, pancreas and intestinal fistulas, using modern diagnostic methods and treatment, in conditions such as a hospital, a polyclinic, an SVP, training in the provision of first aid.

## **Objectives of the subject:**

- Using theoretical knowledge to provide qualified assistance at the patient's bedside, while receiving patients in the clinic, working in the operating room and in the dressing unit.
- The use of practical skills in the provision of primary care and in the formulation of the clinical diagnosis of surgical patients, while widely using modern diagnostic techniques.
- Teaching students to independently supervise patients and use practical skills.
- Filling out medical history, outpatient cards and other documents.
- Providing emergency medical care and diagnostics of acute surgical diseases.
- Planning diagnostics and treatment of patients according to the diagnostic and treatment standards of surgical diseases.

Faculty surgery is taught to 4-year students of the medical faculty and medical pedagogy. The lesson is held in the departments of the surgical profile of the clinic using new pedagogical technologies: slides, multimedia, tables and demonstration of case patients. Students' knowledge is assessed based on the ranking.

Students participate in seminars and lectures. Classes at the department are conducted in the form of cycles. During the cycle, each student daily takes part in the supervision of case patients. Moreover, they are in the departments of abdominal surgery, intensive care, and purulent surgery. If there are no patients on the topic, for the purpose of diff. diagnostics examine patients with similar diseases.

Each student hands over 2 night shifts and one medical history. This is all taken into account when assessing the student.

For 4-year students, 278 hours are allocated, of which 36 hours of lectures (18 topics), 120 hours of practical training (23 topics) and 122 hours of independent work (23 topics).

The innovation in teaching lessons is that the lessons use interactive methods: multimedia, test questions, and situational tasks, etc. All students are assessed based on the rating throughout the year. Based on a 100 point rating system, students are assessed in TO, PO, IO.

Current grade (TO) 0.45 coefficient, student independent work (IWS) 0.05 coefficient, intermediate grade (PO) 0.2 coefficient, final control (IC) consists of two parts - OSKI-0.15 coefficient and test control-0.15 coefficient. Practical lessons 50% are conducted by inter-active methods.

### The student should know:

- Etiology, pathogenesis, clinic, diagnostics, treatment and ways of preventing surgical diseases according to the program.
- Clinical symptoms of the most common urgent and planned surgical diseases of the abdominal cavity organs, thyroid gland;
- Clinical symptoms of the most common chronic surgical diseases, methods of diagnosis, prevention and treatment;
- Methods of modern rehabilitation in the postoperative period.
- The importance of exo and endogenous factors in the development of surgical diseases;

### Skills that the student must possess .

1. H ond ation stomach
2. Performing a siphon enema
3. Digital rectal examination
4. Definition of the symptom of " cough push "
5. Determination of vascular pulsation in the groin area
6. Determination of the symptom Shchetkin a Blumber ha
7. Definition of symptoms of acute appendicitis
8. Definition of symptoms of acute cholecystitis
9. Determination of symptoms of acute intestinal obstruction
10. Definition of symptoms of acute pancreatitis
11. Palpation of the thyroid gland
12. Carrying out lavage of the abrasive cavity
13. Bladder catheterization
14. Bandaging and postoperative care

### The volume of academic hours of the subject

| Total scope of work: | Auditorium clock |          | Independent work |
|----------------------|------------------|----------|------------------|
| Total                | Lecture          | Practice | 76               |
| 1 8 2                | 17               | 88       |                  |

### CALENDAR-THEMATIC WORKPLAN OF LECTURAL LESSONS IN FACULTY SURGERY FOR 4-COURSE STUDENTS OF MEDICAL-PEDAGOGICAL AND DENTAL FACULTY

| No. | Topic name                                     | Clock | Grou p-py      | Ti me spent | Visual material            | Used literature                                            |
|-----|------------------------------------------------|-------|----------------|-------------|----------------------------|------------------------------------------------------------|
| 1   | Faculty surgery subject, goals and objectives. | 2     | 4 0 1<br>4 0 2 |             | Tables 1,2.3.4. Multimedia | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005. |

|   |                                                                                                               |   |                                                                       |  |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---|---------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------|--|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | C yzhi front of the abdominal wall.                                                                           |   | 403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus                     |  | Textbook. movie                            | 2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal wall " KD Toskin, VV Zhebrovsky, Moscow 1990.<br>8. " Hernia of the anterior abdominal wall ", R.M. Akhmedov; I.A.Mirkho dzhaev va b., Conv. K'yl. 2010y.                                                               |
| 2 | Hernias of the white line of the abdomen, umbilical, inguinal, femoral, postoperative. Rare forms of hernias. | 2 | 4 0 1<br>4 0 2<br>403<br>4 0 4<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 1,2.3.4. Multimedia Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal wall " KD Toskin, VV Zhebrovsky, Moscow 1990.<br>8. " Hernia of the anterior abdominal wall ", R.M. Akhmedov; I.A.Mirkho dzhaev va b., Conv. K'yl. 2010y. |
| 3 | Complication of hernias: strangulation, coprostasis, irreducibility, inflammation.                            | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus   |  | Tables 1,2.3.4. Multimedia Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal                                                                                                                                                           |

|      |                                        |    |                                                                     |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|----------------------------------------|----|---------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                        |    |                                                                     |                                                      | wall” KD Toskin, VV Zhebrovsky, Moscow 1990.<br>8. “Hernia of the anterior abdominal wall”, R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. Kŷl. 2010y.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4    | Acute appendicitis.                    | 2  | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 5, 6,7.<br>Multimedia<br>Textbook. movie      | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 1998th.<br>6. VS Savelyev , AI Kirienko “Surgical diseases”, M .; 2006; T- II ;<br>7. "Appendicitis" A . A. Rusanov, 1979.<br>8. “Diagnostic and tactical errors in acute appendicitis” IL Rotkov, M. 1988.<br>9. “tkir appendicitis va uning asoratlari”, R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.                                                                   |
| five | Complication of acute appendicitis a . | 2  | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 5, 6.7 , 8,9<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3 . "Surgical diseases" p od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 1998th.<br>6. VS Savelyev , AI Kirienko “Surgical diseases”, M .; 2006; T- II ;<br>7. "Appendicitis" A . A. Rusanov, 1979.<br>8. “Diagnostic and tactical errors in acute appendicitis” IL Rotkov, M. 1988.<br>9. "Complication of acute appendicitis" Aripov UA, T.1983.<br>10. “tkir appendicitis va uning asoratlari”, R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. Kŷl. 2010y. |
| 6    | Peptic ulcer and duodenal ulcer.       | 12 | 4 0 1<br>4 0 2<br>403                                               | Tables 10 , 11,12, 13,14<br>Multimedia               | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|       |                                                                                             |   |                                                                     |  |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------|---------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------|--|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                                                                             |   | 404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus                          |  | Textbook. movie                                          | Sh.I.Karimov N.H.<br>Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.<br>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.<br>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.                                                                                                                            |
| 7     | Complication of gastric ulcer and 12 duodenal ulcer.<br>( bleeding , perforation) .         | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 15.1 6 , 17<br>Multimedia<br>Textbook. movie      | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.<br>8. "Peptic ulcer" Gromov AS, 1983.<br>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.<br>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y. |
| eight | Complication of gastric ulcer and 12 duodenal ulcer.<br>(stenosis, penetration, malignancy) | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 15.1 6 , 17 , 18<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|      |                                                           |   |                                                                     |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|-----------------------------------------------------------|---|---------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                           |   |                                                                     |                                                        | <p>hospital surgery. Nazirov F.G. et al. T - 2004 .</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;</p> <p>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.</p> <p>8. "Peptic ulcer" Gromov AS, 1983.</p> <p>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.</p> <p>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p>                 |
| nine | Thyroid disease .                                         | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 1 9 , 20 , 2 1<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliyev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;<br>7. "Thyrotoxic buok" Ismoilov SI, monograph, T.2008.<br>8. "Qalongonsimon without casalliklari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y. |
| 1 0  | Chronic cholecystitis. Clinic, diagnostics and treatment. | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Table 22 , 23 , 24<br>Multimedia<br>In films           | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliyev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.                                                                                      |



|     |                                                                                                                    |   |                                                                     |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|--------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 1 | Acute cholecystitis and its complication.                                                                          | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables<br>22 , 23 , 24.25<br>Multimedia<br>Textbook. movie          | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Method - e manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko "Surgical diseases", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.<br>8. "Etkir cholecystitis", R.M. Akhmedov; I.A.Mirkho dzhaev va b., Conv. K'yl. 2010y. |
| 1 2 | Surgical liver diseases. Liver abscess and echinococcus, clinical picture, diagnosis, diff. diagnostics treatment. | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 26 , 27 , 27<br>Multimedia<br>Textbook. movie<br>X-ray grams | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Method - e manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko "Surgical diseases", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975 ..                                                                                       |
| 1 3 | Pancreatic disease. Acute and chronic pancreatitis.                                                                | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Table 28 , 29 , 30<br>Multimedia<br>Roentgenogramma lar             | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases", M .; 2006; T- II ;<br>7. "Surgery of pancreatitis " Aripov U.A., T.1974.<br>8. "Ytkir pancreatitis", R.M. Akhmedov; I.A.Mirkho                                                 |

|             |                                  |   |                                                                     |  |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|----------------------------------|---|---------------------------------------------------------------------|--|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                  |   |                                                                     |  |                                                           | dzhaev va b., Conv. Kjl. 2010y.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1 4         | Colon disease.                   | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 31 , 32 , 33<br>Multimedia<br>X-ray grams          | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases", M .; 2006; T- II ;<br>7. "Nospecificity of colitis" Navrÿzov SN, monograph, T.2009.<br>8. "Yon Ichak Kasalliklari", R.M. Akhmedov; I.A.Mirkho dzhaev va b., Conv. Kjl. 2010y. |
| fifte<br>en | Rectum disease.                  | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 34 , 35 , 36<br>Multimedia<br>Radiographs,<br>RPHG | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases", M .; 2006; T- II ;<br>7. "Textbook on proctology" Aminev AN, Medicine, 1969.<br>8. "Tari Ichak Kasalliklari", R.M. Akhmedov; I.A.Mirkho dzhaev va b., Conv. Kjl. 2010y.       |
| sixte<br>en | Acute intestinal<br>obstruction. | 2 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 34 , 35 , 36<br>Multimedia<br>Radiographs,<br>RPHG | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzin a, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases", M .; 2006; T- II ;                                                                                                                                                            |

|     |                        |                 |                                                                                                            |  |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|------------------------|-----------------|------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                        |                 |                                                                                                            |  |                                                                              | <p>7. "Obstructive intestinal obstruction", Dairov AV, Alma-Ata, 1981.</p> <p>8. "Atkir Ichak Kasalliklari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 17. | Acute peritonitis.     | 2               | <p>4 0 1</p> <p>4 0 2</p> <p>403</p> <p>404</p> <p>4 0 5</p> <p>TP.-</p> <p>uzb</p> <p>TP.-</p> <p>rus</p> |  | <p>Tables</p> <p>3 8, 3 9.40.41</p> <p>Multimedia</p> <p>Textbook. movie</p> | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.</p> <p>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;</p> <p>7. "The Island 's second peritonitis," Shalimov AA , M. 1981.</p> <p>8. "tkir peritonitis ", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p> |
| 18. | K ish echnye fistulas. | 2               | <p>4 0 1</p> <p>4 0 2</p> <p>403</p> <p>404</p> <p>4 0 5</p> <p>TP.-</p> <p>uzb</p> <p>TP.-</p> <p>rus</p> |  | <p>Tables 45,46, Multimedia</p> <p>X - ray - gram s</p>                      | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazirov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;</p> <p>7. "Intestinal fistulas " E.V. Vantsyan, M. 2003.</p>                                                                                                         |
|     | <b>AND TO GO:</b>      | <b>36 hours</b> |                                                                                                            |  |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Calendar-thematic working PLAN practical training on faculty surgery  
FOR STUDENTS 4-COURSE MEDICAL AND  
MEDICAL PEDAGOGICHESKOGO FACULTY**

| No. | Topic name | Clock | Group | Time spent | Visual material | Used literature -23                |
|-----|------------|-------|-------|------------|-----------------|------------------------------------|
| 1   | Predmed    | 6     | 4 0 1 |            | Tables 1,2,3,4. | 1. "Surgeon kasalliklar", Sh .. I. |

|   |                                                                                                                             |   |                                                                     |  |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---|-----------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------|--|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | £ akultet tion surgeons and.<br>By uracil patients.<br>Abdominal hernia.                                                    |   | 4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus          |  | Multimedia<br>Textbook. movie                    | Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal wall " KD Toskin, VV Zhebrovsky, Moscow 1990.<br>8. " Hernia of the anterior abdominal wall ", R.M. Akhmedov; I.A.Mirkhodz haev va b., Conv. Kÿl. 2010y.                                    |
| 2 | Hernia of the white line of the abdomen, umbilical, femoral, inguinal hernia.<br><br>...                                    | 6 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 1,2,3,4.<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Edited by Kon-den R. , Neuhus L. M. "Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal wall " KD Toskin, VV Zhebrovsky, Moscow 1990.<br>8. " Hernia of the anterior abdominal wall ", R.M. Akhmedov; I.A.Mirkhodz haev va b., Conv. Kÿl. 2010y. |
| 3 | Postoperative hernias and rare forms of hernias. Complication of hernias (inflammation, coprostasis, cramping, indigestion) | 6 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 1,2,3,4.<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;<br>7. " Herbs of the abdominal wall " KD Toskin, VV                                                                                                                                           |

|      |                                           |   |                                                                     |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------|---|---------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                           |   |                                                                     |                                                           | Zhebrovsky, Moscow 1990.<br>8. "Hernia of the anterior abdominal wall", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. K'yl. 2010y.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4    | Acute appendicitis.                       | 6 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 5, 6,7.<br>Multimedia<br>Textbook. movie           | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Method - e manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. "Appendicitis" A . A. Rusanov, 1979.<br>8. "Diagnostic and tactical errors in acute appendicitis" IL Rotkov, M. 1988.<br>9. "tkir appendicitis va uning asoratlari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.                                                                       |
| five | Complication of acute appendicitis.       | 6 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 5, 6,7 , 8,9<br>Multimedia<br>Textbook. movie      | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. "Appendicitis" A . A. Rusanov, 1979.<br>8. "Diagnostic and tactical errors in acute appendicitis" IL Rotkov, M. 1988.<br>9. "Complication of acute appendicitis" Aripov UA, T.1983.<br>10. "tkir appendicitis va uning asoratlari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. K'yl. 2010y. |
| 6    | Peptic ulcer of the stomach and duodenum. | 4 | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5                               | Tables 10 , 11,12, 13,14<br>Multimedia<br>Textbook. movie | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|       |                                                                                        |      |                                                                      |  |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------|----------------------------------------------------------------------------------------|------|----------------------------------------------------------------------|--|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                                                                        |      | TP.-<br>uzb<br>TP.-<br>rus                                           |  |                                                             | <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Method - e manual for hospital surgery. Nazyrov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;</p> <p>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.</p> <p>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.</p> <p>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p>                                                                                                                                                                                        |
| 7     | Complications of gastric ulcer and duodenal ulcer (bleeding, perforation)              | five | 4 0 1<br>4 0 2<br>403<br>40 4<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 15.1 6 , 17<br>Multimedia<br>Textbook. movie         | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;</p> <p>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.</p> <p>8. "Peptic ulcer" Gromov AS, 1983.</p> <p>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.</p> <p>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p> |
| eight | Complications of gastric ulcer and duodenal ulcer (stenosis, penetration, malignancy). | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus  |  | Tables 15.1 6 ,<br>17 , 18<br>Multimedia<br>Textbook. movie | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|      |                                                                                |      |                                                                     |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|--------------------------------------------------------------------------------|------|---------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                                |      |                                                                     |                                                           | <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;</p> <p>7. " Surgery of the stomach and duodenum" AA Shalimov, AS Ermolov, 1982.</p> <p>8. "Peptic ulcer" Gromov AS, 1983.</p> <p>8. "Surgery of gastric ulcer and duodenal ulcer" R.M.Akhmedov, I.A.Mirkhodzhaev, monograph, Bukhoro-2006.</p> <p>10. "Surgery of gastric ulcer and duodenal ulcer", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p>                                                                                                          |
| nine | Thyroid disease. ...                                                           | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 1 9 , 20 , 2<br>1<br>Multimedia<br>Textbook. movie | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Saveliev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;</p> <p>7. "Thyrotoxic buok" Ismoilov SI, monograph, T.2008.</p> <p>8. "Qalongonsimon without casalliklari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p> |
| ten  | Thyrotoxic goiter, surgical methods of treatment, postoperative complications. | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus | Tables 1 9 , 20 , 2<br>1<br>Multimedia<br>Uch. movie      | <p>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.</p> <p>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.</p> <p>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.</p> <p>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.</p> <p>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.</p> <p>6. VS Saveliev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;</p> <p>7. "Thyrotoxic buok" Ismoilov SI, monograph, T.2008.</p> <p>8. "Qalongonsimon without casalliklari", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y.</p> |

|          |                                                                |      |                                                                     |  |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------|------|---------------------------------------------------------------------|--|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| eleven   | Chronic cholecystitis. Clinic, diagnostics, treatment methods. | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 22 , 23 , 24<br>Multimedia<br>Uch. movie      | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko " Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.                                                                                        |
| 12       | Choledocholithiasis and its complications.                     | 6    | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 22 , 23 , 24<br>Multimedia<br>Uch. movie      | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko " Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.                                                                                        |
| 13       | Acute cholecystitis and its complication.                      | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 22 , 23 , 24.25<br>Multimedia<br>Uch. movie   | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko " Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.<br>8. "Etkir cholecystitis", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. K'yl. 2010y. |
| fourteen | Surgical diseases. Liver abscess.                              | five | 4 0 1<br>4 0 2<br>403                                               |  | Tables 26 , 27 , 27<br>Multimedia<br>Uch. X-ray film | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



|         |                                         |      |                                                                     |  |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|-----------------------------------------|------|---------------------------------------------------------------------|--|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                         |      | 404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus                          |  | grams                                                      | Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975 ..                                                                                                                                                                             |
| fifteen | Parasitic liver diseases.               | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 26 , 27 , 27<br>Multimedia<br>Uch. Film Radiographs | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Saveliev , AI Kiriyeenko "Surgical diseases ", M .; 2006; T - I ;<br>7. "Surgery of the liver and bile ducts" Shalimov AA, Moscow 1975.<br>8. "Zhigar echinococcosis", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Cond. L. 2010y. |
| sixteen | Diseases of the pancreas.               | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 28 , 29 , 30<br>Multimedia<br>X-ray gram            | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. "Surgery of pancreatitis " Aripov U.A., T.1974.<br>8. "Ytkir pancreatitis ", R.M. Akhmedov; I.A.Mirkhodzhaev va b., Conv. K'yl. 2010y.                  |
| 17      | Chronic pancreatitis. Pancreatic cysts. | five | 4 0 1<br>4 0 2<br>403                                               |  | Tables 28 , 29 , 30<br>Multimedia<br>Radiographs           | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|          |                                                    |      |                                                                     |  |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------|----------------------------------------------------|------|---------------------------------------------------------------------|--|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                    |      | 404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus                          |  |                                                  | Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. " Surgery of pancreatitis " Aripov U.A., T.1974.<br>8. "ŷtkir pancreatitis ", R.M. Akhmedov; I.A.Mirkhodz haev va b., Conv. Kŷl. 2010y.                                                                                                   |
| 18       | Colon disease.                                     | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 31 , 32 , 33<br>Multimedia<br>X-ray grams | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Met-something guide to hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. "Nospecificity of colitis" Navrŷzov SN, monograph, T.2009.<br>8. "Yon Ichak Kasalliklari", R.M. Akhmedov; I.A.Mirkhodz haev va b., Conv. Kŷl. 2010y. |
| nineteen | Colon disease. Crohn's and Hirschsprung's disease. | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 31 , 32 , 33<br>Multimedia<br>Radiographs | 1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Met-something guide to hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko "Surgical diseases ", M .; 2006; T- II ;<br>7. "Textbook on proctology" Aminev AN, Medicine, 1969.<br>8. "Yon Ichak Kasalliklari", R.M. Akhmedov; I.A.Mirkhodz haev va b., Conv. Kŷl. 2010y.        |
| 20       | Rectum disease.                                    | 6    | 4 0 1                                                               |  | Tables 34 , 35 , 36                              | 1. "Surgeon kasalliklar", Sh .. I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|     |                                      |      |                                                                     |  |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|--------------------------------------|------|---------------------------------------------------------------------|--|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                      |      | 4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus          |  | Multimedia<br>Radiographs,<br>RPHG                        | Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",<br>Sh.I.Karimov N.H. Shamirzaev<br>T. 1995.<br>3. "Surgical<br>diseases" n od ed. M.I. Kuzina,<br>Medicine 2002.<br>4. Methodological manual for<br>hospital surgery. Nazyrov<br>F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit<br>R. , Neyhus L. M. "Medicine"<br>19 9 8th.<br>6. VS Savelyev , AI Kirienko<br>“ Surgical diseases ”, M<br>.; 2006; T- II ;<br>7. "Textbook on proctology"<br>Aminev AN, Medicine, 1969.<br>8. “Tari Ichak Kasalliklari”,<br>R.M. Akhmedov; I.A.Mirkhodz<br>haev va b., Conv. Kjl. 2010y.                                                       |
| 2 1 | Acute intestinal<br>obstruction. ... | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Tables 34 , 35 , 36<br>Multimedia<br>X-ray grams,<br>RPHG | 1. "Surgeon kasalliklar", Sh .. I.<br>Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",<br>Sh.I.Karimov N.H. Shamirzaev<br>T. 1995.<br>3. "Surgical<br>diseases" n od ed. M.I. Kuzina,<br>Medicine 2002.<br>4. Methodological manual for<br>hospital surgery. Nazyrov<br>F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit<br>R. , Neyhus L. M. "Medicine"<br>19 9 8th.<br>6. VS Savelyev , AI Kirienko<br>“ Surgical diseases ”, M<br>.; 2006; T- II ;<br>7. "Obstructive intestinal<br>obstruction", Dairov AV, Alma-<br>Ata, 1981.<br>8. “Atkir Ichak Kasalliklari”,<br>R.M. Akhmedov; I.A.Mirkhodz<br>haev va b., Cond. L. 2010y. |
| 2 2 | Acute peritonitis.                   | five | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Table<br>3 8, 3 9.4 0.41<br>Multimedia<br>Uch. movie      | 1. "Surgeon kasalliklar", Sh .. I.<br>Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar",<br>Sh.I.Karimov N.H. Shamirzaev<br>T. 1995.<br>3. "Surgical<br>diseases" n od ed. M.I. Kuzina,<br>Medicine 2002.<br>4. Methodological manual for<br>hospital surgery. Nazyrov<br>F.G. et al. T - 2004.<br>5. Clinical surgery. Edited<br>by Kon-den R. , Neuhus L. M.<br>"Medicine" 19 9 8.<br>6. VS Savelyev , AI Kirienko<br>“ Surgical diseases ”, M<br>.; 2006; T- II ;<br>7. "The Island 's second<br>peritonitis," Shalimov AA , M.<br>1981.<br>8. “tkir peritonitis ”,<br>R.M. Akhmedov; I.A.Mirkhodz                                        |

|     |                          |                                 |                                                                     |  |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----|--------------------------|---------------------------------|---------------------------------------------------------------------|--|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23. | Intestinal fistulas. ... | 4                               | 4 0 1<br>4 0 2<br>403<br>404<br>4 0 5<br>TP.-<br>uzb<br>TP.-<br>rus |  | Table<br>4 5.46 Multimedia<br>X-ray gram s | haev va b., Cond. L. 2010y.<br>1. "Surgeon kasalliklar", Sh .. I. Karimov Toshkent. 2005.<br>2. "Surgeon Kasalliklar", Sh.I.Karimov N.H. Shamirzaev T. 1995.<br>3. "Surgical diseases" n od ed. M.I. Kuzina, Medicine 2002.<br>4. Methodological manual for hospital surgery. Nazyrov F.G. et al. T - 2004.<br>5. Clinical surgery. Ed Condit R. , Neyhus L. M. "Medicine" 19 9 8th.<br>6. VS Savelyev , AI Kirienko " Surgical diseases ", M .; 2006; T- II ;<br>7. "Intestinal fistulas " E.V. Vantsyan, M. 2003. |
|     | <b>AND T<br/>ABOUT:</b>  | <b>1 2<br/>0<br/>hou<br/>rs</b> |                                                                     |  |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## CALENDAR-THEMATIC PLAN INDEPENDENT S X WORKS FOR 4-COURSE STUDENTS OF MEDICAL AND MEDICAL- PEDAGOGICAL FACULTIES BUKH MI

| No.   | Topic name                                                              | Clock | annotation                                                                                                                                                                                                                                    |
|-------|-------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Organization of the work of the surgical department                     | five  | The organization works in the surgical department , operationally - pens I dressings s first unit of its contrast to the medical departments.                                                                                                 |
| 2     | Postoperative period and methods of rehabilitation of surgical patients | 6     | Management of patients in the postoperative period. Inpatient and spa treatment. Rehabilitation therapeutic methods of VKK and VTEK.                                                                                                          |
| 3     | Internal hernia.                                                        | 6     | Internal hernia. Clinical signs, diagnosis, differential. diagnostics. The value of timely diagnosis, diff. diagnostics and treatment.                                                                                                        |
| 4     | Diastasis of the rectus abdominis muscles.                              | five  | Diastasis of the rectus abdominis muscles. Etiopathogenesis, conservative therapy, principles of prevention. Surgical treatment methods, indications for them.                                                                                |
| five  | Features of the course of hernias in elderly and senile persons.        | 6     | Features of the course of hernias in elderly and senile persons. Clinical symptomatology, diagnosis and differential. diagnostics. Methods of instrumental diagnostics and their informativeness, methods of surgical treatment, its results. |
| 6     | Intermediate and hernia of the Petit triangle.                          | five  | Petit triangle hernias and intermediate hernias. Etiopathogenesis, conservative therapy, principles of prevention. Surgical treatment methods, indications for them, possible complications, plastic methods.                                 |
| 7     | Features of the course of hernias in children and the elderly.          | 6     | Features of the course of hernias in children and the elderly. Clinical symptoms, diagnosis and differential diagnosis.                                                                                                                       |
| eight | Atypical appendicitis. Appen - ditsit in pregnant                       | five  | Atypical appendicitis. Appendicitis in pregnant women. Clinic, differential diagnostics. Features of the course of appendicitis in pregnant women.                                                                                            |

|          |                                                                    |                 |                                                                                                                                                                                                           |
|----------|--------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | women.                                                             |                 |                                                                                                                                                                                                           |
| nine     | Acute ulcers and erosion of the stomach. Medicinal stomach ulcers. | 6               | Acute ulcers and erosion of the stomach. Post-drug ulcers. Etiology, pathogenesis, types and forms, Clinical symptoms, diagnosis, treatment.                                                              |
| ten      | Pre-ulcer diseases of the stomach, diagnosis and treatment ..      | five            | Chronic heperacid gastritis. Contemporary theories ulceration, classification, etiopathogenesis, clinical symptoms, treatment of gastritis.                                                               |
| eleven   | Polyp and polyposis.                                               | five            | Polyposes. Clinical symptoms, diagnosis and differential . d iag - notika . The role of endoscopy and surgical management.                                                                                |
| 12       | Endemic and sporadic goiter.                                       | five            | Endemic and sporadic goiter. Classification, clinic, the value of instrumental research in diagnostics, diff . diagnostics - ka, operative methods of treatment.                                          |
| 13       | Dyskinesia of the gallbladder.                                     | five            | Dyskinesia of the gallbladder. Etiology, clinic, diagnosis - tics, differential diagnostics. Modern tech- - ology treatment.                                                                              |
| fourteen | Tumors of the gallbladder and extrahepatic biliary tract.          | five            | Tumors of the gallbladder and extrahepatic biliary tract. Etiopathogenesis, clinical simptomatolo - ogy. Diagnostics, differential diagnostics, treatment methods.                                        |
| fifteen  | Liver tumors (fibroma, lipoma, hemangioma)                         | five            | Liver tumors (fibroma, lipoma, hemangioma). Etiopato - genesis, clinical periods, diagnosis and the role of interventional therapies. Technique of operations.                                            |
| 1 6      | Cysts and fistulas of the pancreas                                 | five            | Fistulas and cysts of the pancreas, the concept of them. Principles of treatment, the role of minimally invasive methods of treating cysts and fistulas of the pancreas.                                  |
| 1 7      | Colon tumors.                                                      | 6               | Colon tumors. Classification, complications, diagnostics, differential diagnostics. Treatment depending on the stage of the disease. Indications for surgical treatment.                                  |
| 18       | Tumors of the rectum                                               | five            | Tumors of the rectum. Clinic, diagnostics and treatment methods                                                                                                                                           |
| 1 9      | Adhesive disease and its complications                             | five            | Adhesive disease, definition, etiopathogenesis. Clinic, modern views on conservative and surgical methods of treatment                                                                                    |
| 20       | Adhesive intestinal obstruction                                    | five            | Adhesive intestinal obstruction. Clinical symptoms, diagnosis and treatment methods.                                                                                                                      |
| 2 1      | Gynecological peritonitis.                                         | 6               | Gynecological peritonitis. Etiopathogenesis, clinical picture, diagnosis and differential diagnosis. Surgical tactics. Surgical treatment methods.                                                        |
| 22       | Intestinal fistulas.                                               | five            | Internal intestinal fistulas. Etiopathogenesis, classification, clinical picture, complications svi u s. Method s treatment complicates g nN s x and uncomplicated g nN s x forms the pigs kishechnh u s. |
| 23       | Methods of surgical treatment of internal fistulas                 | five            | Methods of surgical treatment of internal fistulas                                                                                                                                                        |
|          | <b>F and:</b>                                                      | <b>88 hours</b> |                                                                                                                                                                                                           |

## Main literature on the subject:

1. Kasaliklar surgeon. Sh.I. Karimov, Toshkent, 2005
2. Kasaliklar surgeon. Sh.I. Karimov, N.H. Shamirzaev, Toshkent, 1995
3. Surgical diseases. Edited by M. I. Kuzin., Medicine., 2002
4. Methodological manual for hospital surgery. Nazyrov F.G. with co-workers Tashkent 2004
5. Surgical diseases. ed. V.S.Savelieva Moscow 2006;

## Additional literature:

6. Amenev A.M. Textbook for proctology. M., 1969.
6. Aripov U.A. Complications of acute appendicitis. Lecture text. Tashkent, TashGosMi publishing house, 1983.
7. Aripov U.A., Blagovidov D.F., Danilov M.V. Operations on the large duodenal papilla and pancreas. Tashkent, M., 1978.
8. Aripov U.A., Vilyavin G.D., Vishnevsky V.A., Grishkevich E.V. Acalculous cholecystitis. Tashkent, M., 1977.
9. Aripov U.A., Vinogradov V.V., Grishkevich E.V. Pancreatitis surgery. Tashkent, M., 1974.
10. Aripov U.A., Vinogradov V.V., Danilov M.V. Pancreatic cysts. Toshkent, M., 1975.
11. Aripov U.A., Mazaev P.N., Grishkevich E.V., Danilov M.V. Obstructive jaundice. Tashkent, M., 1971.
12. Vakhidov V.V., Khodzhibaev A.M. Postvagotoma syndromes and their surgical correction. Toshkent, M., 1993.
13. Voilenko V.I., Mendolyan A.I., Omelchenko V.M. Atlas of operations on the abdominal wall and abdominal organs. M., 1965. D
14. Voskresensky II.V., Gorelik S.L. Abdominal wall hernia surgery. M, 1969.
15. Gromov A.S. Peptic ulcer disease. Riga, M., 1983.
16. Dairov A.V., Elkin M.A. Obstructive intestinal obstruction. Alma-Ata, M., 1981.
17. Dultsev Yu.V., Solomov G. Paraproctitis. M., 1981.
18. Krylov A.A., Zemlyanoy A.G., Mikhailovich V.A., Ivanov A.I. Emergency gastroenterology. Leningrad, M., 1988.
19. A.P. Krymov Abdominal hernia. Kiev, M., 1950.
20. A.P. Krymov The doctrine of hernias. M., 1969.
21. Kuzin M.I. Spilled purulent peritonitis and acute renal failure. M., 1978.
22. Levin G.N. Peptic ulcer disease. M., 1980.
23. Levitan M.Kh. Nonspecific colitis. M., 1980.
24. Milonov O.B., Toskin K.D., Zhebrovsky V.V. Postoperative complications and dangers in abdominal surgery. A guide for doctors. Moscow, M., 1990.
25. Norenberg-Charkviani A.E. Acute intestinal obstruction. M., 1969.
26. Operative Surgery (edited by Litman, Budapest, 1981).
27. Pantsyrev Yu.M. Clinical Surgery. A reference guide for doctors. Medicine, 1988.
28. Pantsyrev Yu.M. Pathological syndromes after gastric resection and gastroectomy. M., Medicine, 1973.
29. Pantsyrev Yu.M., Gplingsr Yu.M. Operative endoscopy of the gastrointestinal tract M., Medicine, 1981.
30. Pathophysiology of surgical diseases (edited by J. Odaszczko., Warsaw, 1967). -
31. I. L. Rotkov Diagnostic and tactical errors in acute appendicitis. M., Medicine, 1988.
32. Rusanov A.A. Appendicitis. M., 1979.
33. Saveliev V.S. Acute pancreatitis. M., 1980.
34. Savenko V.O. Guide to Emergency Abdominal Surgery. M., 1976.
35. Savchuk B.D. Purulent peritonitis. M., 1979.
36. Simonyan N.S. Peritonitis. M., 1971.
37. Skuya N.A. Diseases of the pancreas. Moscow, M., 1986.
38. Sokolov L.K., Savrasov V.M., Ternova S.K. Clinical and instrumental diagnostics of diseases of the organs of the hepatopancreato-duodenal zone. Moscow, M., 1987.
39. Toskin KD, Zhebrovsky VV Abdominal hernias . Moscow, Medicine, 1990.
40. Uteshev N.S. Surgical treatment of postoperative peptic ulcers. M., Medicine, 1971.
41. Shalimov A.A. Acute peritonitis. M., 1981.
42. Shalimov A.A. Surgery of the liver and bile ducts. M., 1975.

43. Shalimov A.A., Ermolov A.S. Surgery of the stomach and duodenum. M., 1975, 1982.
44. Yu. Shalimov A.A., Saenko V.F. Digestive tract surgery . Kiev, Health, 1987.
45. Yudin S.S. Sketches of gastric surgery. M., 1955.

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1. Aripov U.A., Karimov Sh.I. Corinne bushligi azolaring oshigich kasalliklari. Toshkent, 1993 and.
2. J. Murtha's Handbook of General Practitioners. Moscow 1998 1242 pp.
3. Karimov Sh.I. Kasalliklar surgeon. Toshkent 1991 p. 464
4. Conden Y.R. and Nyhus L. Clinical Surgery. Moscow 1998 716 p.
5. Kuzin M.I. Surgical diseases. Tashkent, 1986, 1996, 703 pp.
6. Petrovsky B.V. Surgical diseases Moscow 1984
7. Saveliev V.S. other. Guide to Emergency Abdominal Surgery. Moscow 1987 608 p.
8. Taylor R.B. Difficult diagnosis. Volume 1-2 Moscow 1988 605 p.
9. Fedorov V.D., Dultsev Yu.V. Proctology. Moscow, 1986, 382 p.
10. Shalimov A.A. Digestive tract surgery Moscow. 1984

#### **List of instructional films by subject "Faculty Surgery"**

| <b>No.</b> | <b>Educational films</b>                    |
|------------|---------------------------------------------|
| 1.         | External abdominal hernia surgery           |
| 2.         | Appendectomy                                |
| 3.         | Cholecystectomy (traditional, laparoscopic) |
| 4.         | Stomach resection                           |
| five.      | Vagotomy of the stomach                     |
| 6.         | Pancreatoduodenal resection                 |
| 7.         | Thyroid surgery                             |

#### **List of multimedia on the subject of faculty surgery**

| <b>No.</b> | <b>Media name</b>                                                         |
|------------|---------------------------------------------------------------------------|
| 1.         | Hernia of the anterior abdominal wall, inguinal hernia                    |
| 2.         | Umbilical, femoral, postoperative and rare abdominal hernias.             |
| 3.         | Complication of external abdominal hernias                                |
| 4.         | Acute appendicitis                                                        |
| five.      | Complication of acute appendicitis                                        |
| 6.         | Peptic ulcer and 12 items of the intestine                                |
| 7          | Complicated. ulcers. bol. yellow and 12 p. to. (bleeding and perforation) |
| eight.     | Stenosis, penetration, malignancy of ulcers.                              |
| nine.      | Thyroid disease                                                           |
| ten.       | Chronic cholecystitis                                                     |
| eleven     | Acute cholecystitis                                                       |
| 12         | Surgical liver diseases                                                   |
| 13         | Acute and chronic pancreatitis                                            |
| fourteen   | Colon disease                                                             |
| fifteen    | Rectum disease                                                            |
| sixteen    | Acute intestinal obstruction                                              |
| 17         | Acute peritonitis                                                         |
| 18         | Intestinal fistulas                                                       |

**Timing of practical lessons  
(lesson duration - 4 hours)**

| No.   | The main parts of the classes                                                                | Place of classes                           | Instructional method aids                       | Time distribution. (minutes) | Observation and evaluation  |
|-------|----------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------|------------------------------|-----------------------------|
| 1     | Checking student attendance                                                                  | Study room                                 |                                                 | five                         |                             |
| 2     | Introduction, homework and synopsis                                                          | Study room                                 |                                                 | ten                          |                             |
| 3     | Assessment of students' primary knowledge                                                    | Study room                                 | Tables, slides, pictures, disks and a computer. | 20                           | Current test control. Poll. |
| 4     | Patient supervision                                                                          | In departments, wards                      | Tonometer, Fonen-doskop                         | 35                           |                             |
| five  | Discussion of supervised patients                                                            | In departments, wards                      | Disease history.                                | 20                           |                             |
| 6     | Session in the operating unit and dressing room                                              | In rooms X-ray, ultrasound, and Endoscopy. | Endoscopic devices.                             | thirty                       |                             |
| 7     | Application of new methods of pedagogical technologies and assessment of students' knowledge | Study room                                 |                                                 | 40                           | 100 point rating system.    |
| eight | Lesson summary. Exposing rating points. Homework.                                            | Study room                                 |                                                 | 20                           |                             |



# **Teaching technology on the subject "Faculty Surgery"**

# LEARNING TECHNOLOGY OF LECTURES

## THEME No. 1 . Abdominal hernia. Inguinal hernia.

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** In many clinics in our country, the tradition is still preserved to begin the presentation of private surgery with the teaching of hernias. This tradition carries the essential elements of classical surgery and has played a large role in the training of many generations of remarkable surgeons. Modern herniology is armed with accurate anatomical information and vast practical experience. The etiological factors of hernia are well studied, a critical analysis of many methods of operations has been made. However, what has been achieved does not diminish the relevance. Every year, thousands of various hernia repairs are performed in the country, and today we cannot say that the results of these operations are completely satisfying.

**The purpose of the lecture:** To acquaint students with the history of the doctrine of hernias, etiology and pathogenesis of hernia formation, to disassemble the general factors of hernia formation, symptoms and general principles of hernia treatment.

**Educational goals:** To acquaint students and teach the correct communication with patients with hernias of the abdominal wall, as well as the ability to distinguish between different types of hernias in compliance with medical ethics and human standards.

**Objectives of the lecture:** To acquaint students with the historical data of the development of the doctrine of hernia, with the works of scientists who have made a great contribution to the development of herniology. To acquaint with the etiology, pathogenesis, classification, clinic, diagnosis of hernias. To acquaint the methods of pre- and postoperative management of patients, methods of treatment of these patients.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Historical data - 5 min
2. General data (definition of the concept) - 10 min
3. Classification. Etiology and pathogenesis - 10 min
4. General factors of hernia formation - 20 min
5. Symptoms and general principles of treatment - 45 min

**Questions to the audience to establish feedback:**

1. Give a definition to the concept of "hernia"
2. What are the elements of the hernia
3. Which organ is most often an element of hernial contents
4. What are the predisposing factors of hernia formation?
5. What is a sliding hernia

### Abdominal hernia

Hernia (hernia) called stepping viscera through natural or pathological cavities of holes, normal but occupied by them under the body coverings or to another cavity.

There are external and internal abdominal hernias.

**External hernia of the abdomen** is the exit of internal organs together with the parietal peritoneum from the abdominal cavity through the natural or artificial openings of the abdominal wall, subcutaneous tissue, while maintaining the skin.

**Internal hernias of the abdomen** are formed inside the peritoneal cavity when the viscera penetrates into the peritoneal pockets.

In contrast, when the outer abdominal hernia **eventration** prois goes without going out of the internal organs injured parietal peritoneum through the abdominal wall under the skin (subcutaneous eventration) or outwardly (outer eventration).

**Precipitation** inner NOSTA called stepping body outside through a natural orifice (e.g., rectal prolapse, the uterus).

## EXTERNAL ABDOMINAL HERNIA

External hernia of the abdomen is a common disease, hernia carriers make up 3-4% of the total population. Hernia limits abilities, is life-threatening because of possible complications (pinching, inflamed of).

**Elements** of external hernia: hernial sac, contents, hernial ring.

Hernia are weaknesses in the musculo-aponeurotic wall of the abdomen, through which the internal organs pass with the parietal peritoneum out of the abdominal cavity. These weaknesses may be natural channels or slots extending in the thickness of the abdominal wall: inguinal canal, femoral canal, the umbilical passage, gap between the aponeurotic fibers, forming a white line, semilunar line, obturator foramen, sciatic foramen. Hernia may be a defect in the muscular-aponeurotic layer or channel, which includes a deep opening, the channel itself and the external or superficial opening.

Hernial sac is the parietal protrusion of peritoneum through the hernial ring. The hernial sac has various parts: mouth, neck, body and bottom. Mouth part called hernial neck, which borders the abdominal cavity.

Plays neck of the hernial sac called narrow hernial sac separated from the abdominal wall thickness - a hernial ring. The body of the hernial sac is its largest part. The distal part of the hernial sac is called the bottom.

The hernial sac can be single-cavity, two-, three- and sometimes multi-cavity.

By increasing the hernia due to trauma and inflammation within the hernial sac formed junctions and diverticula, which may contribute to the contents of the hernial sac in one of the cavities (chambers) of the hernial sac. A complete septum of the hernial sac with isolation of one segment can lead to the formation of a hernial sac cyst.

The contents of the hernial sac are internal organs that are released into the hernial sac. Any body of the abdominal cavity (except for gastric cancer) can be the content of the hernial sac. Most hernial sac contains most mobile organs of the abdominal cavity: the greater omentum, the small intestine.

### **Classification of external hernias .**

By origin, congenital and acquired hernias are distinguished. Acquired hernias are divided into hernias from effort (due to a sharp increase in intra-abdominal pressure), hernias from weakness (in the elderly with muscle atrophy, decreased elasticity of the abdominal wall), postoperative, traumatic artificial.

Depending on the anatomical location of the hernias, there are inguinal, femoral, umbilical, epigastric, xiphoid process, lateral abdominal hernias, lumbar, sciatic, obturator foramen, perineal hernias.

According to the clinical course, depending on the state of the viscera included in the hernia, hernias are reducible, irreducible, hernias with symptoms of constipation, hernias with symptoms of infringement, hernias with symptoms of inflammation.

**Etiology and Pathogenesis:** The largest number of patients with hernias happen in children younger than 1 year, then the number of patients decreases gradually until the age of 10, after it goes again increased to 30-40 years and reaches a maximum in the middle and old age as an increase the number of patients with abdominal hernias.

The most frequently observed inguinal hernia (75%), followed femoral (8%), umbilical (4%), postoperative (12%). Plays a role, 1% are all other forms of hernias. The men would often have inguinal hernia in women - femoral and umbilical.

Many factors, both local and general, play a role in the origin of hernias.

Local factors: features of the anatomical structure of the hernia outlet. These include the inguinal canal, through which the spermatic cord passes in men, the femoral canal through which the femoral vessels pass, the navel and the white line of the abdomen, where there are spaces free from muscles.

Common factors contributing to the formation of a hernia are divided into predisposing and producing ones.

Predisposing factors: heredity, age (weak abdominal wall in children of the first year of life, atrophy of the tissues of the abdominal wall in old people), gender (features of the

structure of the pelvis and large size of the femoral ring in women, great weakness of the groin in men), physique features, degree fatness (rapid weight loss), frequent childbirth, trauma to the abdominal wall, postoperative scars, paralysis of the nerves that innervate the abdominal wall.

These factors contribute to local weakening of the abdominal wall.

Producing factors - factors that cause the increase in intra-abdominal pressure: hard physical work, hard road, difficulty urinating (adenoma of prostate cancer, phimosis, urethral stricture), constipation, prolonged cough (tubercle climbing, chronic bronchitis). The force contributes to the intra-abdominal pressure, and may be the only sudden nym (hard work, lifting of gravity) or frequently repeated and minimal (cough).

The mechanism of formation of hernias varies depending on about the origin of hernia (congenital or acquired). Cause of congenital hypoplasia hernias of the abdominal wall is in utero (embryonic umbilical Plays yarn, umbilical hernia), cleft-peritoneum inguinal bone.

The hernial orifice and hernial sac are formed at first, and then, as a result of physical effort, the internal organs penetrate into the hernial sac.

With acquired hernias, the internal organs exit at the level of the hernial orifice and penetrate further, most often along the vascular bundle or organ (femoral canal, inguinal canal). Under the influence of elevated intraabdominal pressure inside of organs pushing ahead of itself layers of the abdominal wall. Gra zhevoy bag is formed by stretching and progression ruyuscheho protrusions parietal peritoneum.

**Clinic and diagnosis:** The main symptoms of bolevaniya are a pain in the hernia and abdominal pain, presence of protrusions in one of the zones hernia. Protrusion appears straining or upright patient, vanishing zaet or decreases in the horizontal position after manual reduction.

Pain in the herniation occurs when physics cal load, walking, sharp movements, with changes baro metric pressure. Nausea, belching, bloating, constipation often appear.

Hernia usually develops slowly. At the beginning, at the site of the forming hernia, a tingling pain occurs during exercise, walking, running, lifting weights. After some time the protrusion appears, which disappears in the horizontal position of the patient and again occurs when physics cal load.

Diverticulum is gradually increasing, pur PETA round or oval shape. By hernia, acute WHO arising as a point of sharp increase in abdominal pressure, the patients felt a strong pain in the emerging hernia, the sudden appearance of protrusion of the abdominal wall and hemorrhage Nia into surrounding tissue.

Local status research includes examination, palpation, percussion, and special techniques. Patient visiting the polo zhenii standing and in a horizontal position; in this case, it is necessary to expose the abdomen and the upper third of both thighs.

Inspection of standing makes it possible to define sometimes imperceptible asimmet tory in the groin area and under the inguinal ligament. When natuzhi Vania cough and define minor protrusions, previously unnoticed, and for large hernias establish their greatest resolution. When percussion herniation tympanic auscultated sound in the presence of the hernial sac intestine contains zhaschey gas and dulling when the contents of the hernial sac is a large gland or organ containing no gas.

On palpation, the consistency of the contents of the hernia is determined (a sensation of an elastic-elastic consistency gives the intestinal loop, a lobular structure of a soft consistency has a large omentum).

In the horizontal position of the patient, the reducibility of the contents of the hernial sac is determined. When reposition pain Scheu hernia can hear a characteristic rumbling in the gut. A hernia can be reducible, partially reducible, and irreducible. These findings are important for the characterization of the hernia and should be reflected in the diagnosis.

Special research methods include the determination of the hernial orifice and the symptom of a cough thrust. After reducing the contents of the hernia with a finger inserted into the hernial orifice, the size and shape of the external opening of the hernial orifice are specified. When the patient coughs, the examiner's finger feels the jolts of the protruding peritoneum and adjacent organs (a symptom of a cough jolt).

Cough push - a characteristic symptom on ruzhnoy abdominal hernia. To identify hernias need to obsl Dowa all hernial area.

In case of large hernias, an X-ray examination of the gastrointestinal tract and bladder is performed to determine the contents of the hernial sac.

**Sliding hernias** are hernias in which one of the walls of the hernial sac is an organ partially covered by the peritoneum (for example, the bladder, ascending and descending colon). Rarely, the hernial sac is absent, and the entire protrusion is formed only by those segments of the slipped organ, which are almost not covered by the peritoneum. Sliding hernias of the colon are more common with oblique inguinal hernias, and the bladder with direct inguinal hernias. Sliding hernias account for 1-1.5% of all inguinal hernias.

Sliding hernias by the mechanism of occurrence can be congenital and acquired. In congenital sliding hernias organs (e.g., colon, bladder) due to various reasons, sometimes beginning with the embryonic period, gradually are some of its divisions without a covering tymi peritoneum, down or to slip on loose retroperitoneal tissue to internal hernial ring, exit the abdominal cavity and become an integral part of the hernial protrusion without a hernial sac.

Acquired sliding hernias arise from fur -ethnic contraction peritoneum adjacent thereto intestine segments or bladder deprived serous cover.

A sliding hernia of the colon has no pathognomonic symptoms. Usually it is a large hernia with a wide hernial orifice in elderly or senile people. X-ray examination of the colon (irrigoscopy) helps diagnose.

When moving hernias bladder patients may demon to lie urination or urinary disorder in two steps. First, the patient empties the bladder, and then, after pressing on the hernial protrusion, a new urge to urinate appears, and the patient begins to urinate again. If a sliding bladder hernia is suspected, bladder catheterization and cystography should be performed. Afterbirth NJ can reveal the shape and size of hernia of the bladder, the presence of stones in the bladder.

**Treatment:** surgical only. If you do not know the anatomical features of the sliding hernia, you can during the operation to open the hernia sac instead of the intestinal wall or the wall of the urine Vågå bubble.

Surgical treatment - primary treatment outdoor temp GOVERNMENTAL abdominal hernias. Operation - the only way to prevent these serious complications of a hernia, her prejudice of inflammation, etc..

Activity uncomplicated hernias carried out in stages: multiple cabins fabric over the hernial sac, dissect the hernial ring, isolated hernial sac, reveal it reduce a content of the hernial sac into the abdominal cavity, is sewn and sling vayut hernial sac in the neck, cut off the hernial sac and strengthen the abdominal wall in the area of the hernia orifice by plastics with local tissues or alloplastic materials. Hernia repair is performed under local or general anesthesia.

Conservative treatment of hernias is carried out with umbilical hernias in children. It consists in the use of bandages with a bandage, which prevent the exit of internal organs. In adults Prima nyayut various kinds of bandages.

Wearing shroud administered to patients who can not be operated because of their serious contraindications to surgery (decompensation of chronic iCal heart disease, lung, kidney, liver cirrhosis, dermis tit, eczema, cancer). The purpose of the ban of wearing dazha - to prevent going out of the internal organs in the hernia howling bag. The bandage helps to close the hernia gate. Wearing a bandage is possible only with reducible hernias.

Dli Tel'nykh wearing band atrophy contributes to tissue of the abdominal wall, the formation of adhesions between the viscera and hernial sac, t. E. The development leads to irreducible hernia.

**Prevention:** matters hygiene piles GOVERNMENTAL children, which is in the care of the navel, the right feeding, regulating bowel function. Regular practice of physical education and sport as a means of strengthening the muscles and organs nism at all. It is necessary to fight obesity, and especially with a strong exhaustion after him, as these abnormal

with standing often favor the formation of hernias. On before acceptance must correctly select the workers to physical work in accordance with their strength and health.

Early identification of people with abdominal hernias and their referral for surgery before complications develop is of great importance. For this, it is necessary to conduct preventive examinations of the population, in particular schoolchildren and persons of retirement age.

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## **THEME No. 2 . Umbilical, femoral hernia of the white line of the abdomen, postoperative and rare hernias of the abdomen.**

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** In many clinics in our country, there is still a tradition to begin the presentation of private surgery with the doctrine of hernias. This tradition carries the most important elements of classical surgery and has played a large role in the training of many generations of famous surgeons. Modern herniology is armed with accurate anatomical information and vast practical experience. The etiological factors of hernia are well studied, a critical analysis of many methods of operations has been made. However, what has been achieved does not diminish the relevance. Every year, thousands of various hernia operations are performed in the country, and at the moment we cannot say that the results of these operations are completely satisfying.

**The purpose of the lecture:** **To** acquaint students with the anatomy of various forms of hernias of the abdominal wall, the etiology and pathogenesis of hernias, methods of diagnosis and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** **To** acquaint students with topographic and anatomical data of various forms of hernias of the anterior abdominal wall. To acquaint students with the etiology, pathogenesis of hernias, their classification, diagnosis and differential diagnosis. To acquaint the principles of pre- and postoperative management of patients operated on for hernias.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomical and topographic data of the groin area - 5 min.

2. Clinic, recognition, treatment of inguinal hernias - 20 min.
3. Anatomical and topographic data of the femoral triangle - 5 min.
4. Clinic, recognition, treatment of femoral hernias - 20 min.
5. Anatomical and topographic data of the umbilical ring - 5 min.
6. Clinic, recognition, treatment of umbilical hernias - 15 min.
7. Anatomical and topographic data of the white line of the abdomen - 5 min.
8. Clinic, recognition, treatment of hernias of the white line of the abdomen - 10 min.
9. Diastases of the rectus abdominis muscles - 5 min.

## INGUINAL HERNIA

**Inguinal hernias** account for 80-90% of other types of hernias. Among patients with inguinal hernias, men account for 90-97%, and women - 3-10%. The more frequent occurrence of inguinal hernias in men is associated with the developmental and anatomical features of the inguinal region in men. Inguinal hernias are congenital and acquired.

Embryological information from III month of fetal development originated when male testicular descent process begins. In the area of the inner inguinal ring, a protrusion of the parietal peritoneum is formed - the peritoneal-inguinal process. In the following months of intrauterine development, there is a further protrusion of the peritoneal diverticulum into the inguinal canal. At the end of VI-VII months, the testicles begin to descend into the scrotum. By the child's birthday, the testicles are in the scrotum, the peritoneal inguinal process is overgrown. With a non-closure of the peritoneal-inguinal process, a congenital inguinal hernia is formed. In the case of incomplete overgrowth of the peritoneal-inguinal process in some areas of it, dropsy cysts of the spermatic cord appear. The peritoneal-inguinal process, which covers the testicle, forms its own vaginal membrane of the testicle. The external oblique abdominal fascia forms a common tunica vaginalis of the testicle and spermatic cord. The internal oblique and transverse muscles are involved in the formation of the muscle that lifts the testicle. Anatomy of the groin.

When viewed from the anterior abdominal wall from inside the abdominal cavity can be seen five spaces docking peritoneum and recesses (pits), which are stepping places for hernias. On the right inguinal fossa is an inner hole of the inguinal canal, it is projected approximately on the mid-inguinal arch 1-1.5 cm above it.

Normally, the inguinal canal is a slit-like space filled in men with a spermatic cord and in women with a round uterine ligament. The inguinal canal runs obliquely at an angle to the pubic ligament and has a length of about 4-4.5 cm in men.

The anterior walls of the inguinal canal are the aponeurosis of the external oblique abdominal muscle, the lower pubic ligament, the posterior wall is the transverse fascia of the abdomen, the upper is the free edge of the internal oblique and transverse abdominal muscles.

The outer (surface) of the inguinal canal opening formed by the aponeurosis of the external oblique abdominal muscle, one of which is attached to the Langer's tubercle, the other - to the quantity of the fusion of the external opening of the inguinal canal varies in transverse diameter it is 1.2-3 cm, about partite - 2.3-3 cm. In women, the external opening of the inguinal canal is slightly smaller than in men.

Internal oblique and transverse abdominal muscles in the groin. Areas are difficult to separate from each other. This muscular layer, being located in the groove of Poupard's bundles suitable for the spermatic cord and being transferred through it, forming a different shape and size inguinal interval boundaries inguinal interval:

below - pubic's ligament,

top - the internal oblique edge and external abdominal muscles,

from the medial side - the outer edge of the rectus abdominis muscle.

The inguinal space can be slit, spindle-shaped, or triangular. The triangular shape of the inguinal gap indicates weakness of the groin area. The transverse fascia in the groin area is reinforced with tendon fibers in two places along the lateral edge of the rectus abdominis muscle is the Henle ligamentum. The edge of the internal opening of the inguinal canal is clearly outlined due to the arcuate fibers of the Hesselbach's ligamentum. At the site of the internal opening of the inguinal canal, the transverse fascia is funnel-shaped and passes to the spermatic cord, forming a common sheath of the spermatic cord and testis.

The round uterine ligament at the level of the external opening of the inguinal canal is divided into fibers, some of which end in the pubic bone, the other is lost in the subcutaneous tissue of the pubic region.

**Congenital inguinal hernia.** If vaginal process Bru tire is completely cleft, its cavity freely communicates with the peritoneal cavity. In the future, a congenital inguinal hernia is formed, in which the processus vaginalis is a hernial sac.

Congenital inguinal hernia composition lyayut bulk hernias in children (90%). However, adults also have congenital inguinal hernias (about 10-12%).

**Acquired inguinal hernia.** Distinguish between oblique external inguinal hernia and direct (internal) inguinal hernia. An oblique inguinal hernia passes through the external inguinal fossa; straight - through the medial inguinal fossa. At the initial stage of development of an oblique inguinal hernia, the hernial protrusion is imperceptible to the eye. When coughing or straining of the patient defined fissile oval swelling rapidly disappears after once the patient stops straining at the bottom of the channel form a hernial sac reaches the external opening pas by ear canal. When the shape of the cord exits through hernia on ruzhnoe hole inguinal canal and located at different heights of the spermatic cord. In the inguinal-scrotal form, the hernia descends into the scrotum, stretching it.

Only in the initial stages of the disease does an oblique inguinal hernia have an oblique direction. As the inner hole hernia inguinal canal extends in the medial direction SRI, intrasternal vessels pushing inwards. The farther the medial extended hernial ring, the weaker becomes the rear wall ka inguinal canal.

When long-existing inguinal-scrotal hernia pas hovy channel acquires the forward direction, and its opening surface is almost flush with the inner bore (oblique hernia rectified stroke).

For large hernia scrotum greatly increases in size, the penis is hidden under the skin, contains zhimoe hernia itself does not reduce a into the abdominal cavity. When repositioned, rumbling in the intestines is heard.

**A straight inguinal hernia** exits the abdominal cavity through the medial fossa, protruding the transverse fascia (the posterior wall of the inguinal canal). Having passed through the external opening of the inguinal canal, it is located at the root of the scrotum above the pupar ligament in the form of a rounded formation. The transverse fascia prevents the direct inguinal hernia from descending into the scrotum. Often straight pas hovaya hernia is bilateral.

There is a special group of **intramural (interstitial)** inguinal hernias. With these hernias, the hernial sac is located between the different layers of the abdominal wall.

**Allocate preperitoneal hernia**, when the hernial sac is located between the peritoneum and the transversal fascia, intermuscular hernia when Plays zhevoy bag located between the various layers of muscle and aponeurosis; Surface hernia, when the hernial sac Raspaud false for the superficial inguinal ring between the aponeurosis of the external oblique abdominal muscles and superficial fascia.

**Clinical picture and diagnosis:** it is not difficult to recognize a formed inguinal hernia. Anamnesis is typical: the sudden appearance of a hernia at the time of physical exertion or the gradual development of a hernial protrusion, the appearance of a protrusion of the abdominal wall when straining, in the vertical position of the patient's body and repositioning of the hernia in the horizontal position of the patient. Patients are worried about pain in the hernia, in the abdomen, a feeling of discomfort when walking, dyspeptic symptoms, and dysuric phenomena occur with sliding hernias of the bladder.

Examination of the patient in an upright position gives a representation of the asymmetry of the inguinal regions. In the presence of a protrusion of the abdominal wall, the size and shape of the hernia can be determined. Palpation determined surface texture hernial vypya Chivanov, rumbling bowel percussion - percussion sound (tympanitis, blunting). Finger examination of the external opening of the inguinal canal is performed in the horizontal position of the patient after the contents of the hernial sac have been reduced. The doctor's index finger, invaginating the skin of the scrotum, enters the superficial opening of the inguinal canal, located inside and slightly higher from the pubic tubercle. Normally, the



superficial opening of the inguinal canal in men passes the tip of the finger. With the weakening of the posterior wall of the inguinal canal, it is possible to freely lead the fingertip behind the horizontal branch of the pubic bone, which cannot be done with a well-defined posterior wall formed by the transverse fascia of the abdomen. Located in the inguinal canal at the doctor's finger tussiculation patient feels re datochnye tremors viscera - cough shock symptom. Both inguinal canals are examined. It is imperative to examine the organs of the scrotum (palpation of the spermatic cord, testicle and its epididymis).

Diagnosis of inguinal hernias in women is based on inspection and palpation, since the introduction of the finger into the external opening pas by ear canal impossible.

In women, an inguinal hernia is differentiated from a cyst of the round ligament of the uterus, which passes in the inguinal canal.

Cyst of the round ligament of the uterus, unlike a hernia does not change its size in the horizontal position of the patient, perkutor ny sound on it is always stupid, and maybe over tympanic hernia. Treatment of a cyst of a round ligament of the uterus, as well as an inguinal hernia, is surgical. The operation consists in removing the cyst with subsequent plastic surgery of the inguinal canal.

**Differential diagnosis** between inguinal hernias and femoral hernias is to determine their relationship to the inguinal ligament.

An irreducible inguinal-scrotal hernia, causing an increase in the size of the scrotum, becomes similar to dropsy of the testicular membranes. With dropsy of the testicular membranes (hydrocele), fluid accumulates between the sheets of the testicle's own membrane and, as a result, the size of the scrotum increases. The difference between the dropsy of the testicular membranes from an irreducible inguinal-scrotal hernia is that the dropsy has a round or oval, not pear-shaped, dense-elastic consistency, a smooth surface. The palpable mass cannot be delimited from the testicle and its epididymis. A large dropsy of the testicular membranes, reaching the external opening of the inguinal canal, can clearly be separated from it by palpation. In an inguinal hernia, the mass palpable in the scrotum has a "leg" extending into the inguinal canal, since the hernial sac contains contents that have escaped from the abdominal cavity. The percussion sound over dropsy is dull, over the hernia may be tympanic.

Diaphanoscopy (transillumination) gives a positive result for dropsy of the testicular membranes. Transillumination is carried out in a dark room with a flashlight, tight oversight of the top Nosta scrotum. If palpable in the scrotum formation contains INH clear liquid, then it is in transmission will have a reddish color. The intestinal loops located in the hernial sac, the omentum do not transmit light rays.

With inguinal hernia has similarities varicose veins spermatic cord (varicocele), wherein the upright patient appear dull pain and arching of the sword a certain increase in the size of the scrotum. On palpation can detect the "serpentine" veins cana seed ticks.

Dilated veins collapse easily when pressed on them or when the scrotum is lifted up.

**Treatment:** surgical.

The main goal of an inguinal hernia operation is plastic surgery of the inguinal canal. The operation is carried out in stages. The first stage is access to the inguinal canal, in the groin area, an oblique incision parallel to the inguinal ligament and 2 cm higher from it, from the anterior superior iliac spine to the symphysis. Dissection of the aponeurosis of the external oblique muscle of the abdomen along the fibers. The upper flap of the aponeurosis is separated from the internal oblique and transverse muscles. The lower flap is separated from the aponeurosis se alternating cord, thus exposing the chute to the inguinal ligament Lawn Nogo protuberance.

The second stage is the isolation and removal of the hernial sac. Thr third stage of - suturing deep inguinal ring to normal size (diameter 0,6--0,8 cm). If the deep inguinal ring is not sutured, anatomical prerequisites remain for the recurrence of a hernia! Oblique inguinal hernia deep stake tso ever expanding. Strengthening of the rear wall of the inguinal canal by suturing to the normal size of the internal inguinal ring to be a mandatory step for all operations odds max inguinal hernias.

The fourth stage is the plastic of the inguinal canal. When choosing the method of plastic surgery of the inguinal canal, it should be borne in mind that the main reason for the formation of inguinal hernias is weakness rear wall pas by ear canal.

Strengthening the anterior wall of the inguinal canal with the obligatory suturing of the deep inguinal ring to normal size can be used in young men with small oblique inguinal hernias.

For direct hernias, and complex forms of inguinal hernias (skew with rectified channel moving hernias, recurrent) must but be made strengthen the rear wall of the inguinal canal.

There are several ways to repair the inguinal canal.

Girard method ensures the strengthening of the front wall pas by ear canal. Above the spermatic cord for inguinal ligament sew vayut first edge of the internal oblique and transverse muscles of the abdomen, and then separate seams - an upper flap of the external oblique aponeurosis muscle. The lower aponeurosis flap is fixed with sutures on the upper aponeurosis flap, thus forming a duplicate of the aponeurosis flaps of the external oblique abdominal muscle.

The method is a modification of the method Spasokukotsky Fat pa and differs from it only in that one to the inguinal ligament temporarily sutured internal oblique muscle and transverse together with the upper flap of the external oblique aponeurosis muscle belly In this method less injured inguinal ligament.

The Kimbarovyugo seam ensures the connection of the fabrics of the same name. With this seam edge of the upper flap of the aponeurosis of the external oblique muscle enveloped edge of the internal oblique and peppermint muscles. The first insertion of the needle is carried out at a distance of 1 cm from the edge of the upper flap of the aponeurosis of the external oblique muscle, then, after passing the needle through the edges of the muscles, the aponeurosis is stitched again at the very edge. The inguinal ligament is stitched with the same thread.

Method Bassini - strengthens the rear wall PAHO Vågå channel. After high removal of the hernial sac, the spermatic cord is pushed aside and the internal oblique and transverse muscles are sutured under it together with the transverse fascia of the abdomen to the inguinal ligament. In the medial corner of the wound hemming by vaginal fascia edge to the abdominal rectus muscle above the ossuary pubic bone in the area of the pubic tubercle. Seed ka Natick formed stack on the muscle wall. Due to the imposition of deep sutures recovery occurs weakened hydrochloric posterior wall of the inguinal canal and the internal narrowing of Verstov to its normal size. The edges of the aponeurosis of the external oblique muscle of the abdomen are sutured over the spermatic cord edge to edge. Thus, the anterior wall of the inguinal canal and the external inguinal ring are reconstructed.

In some cases, especially in high inguinal triangle, after stitching the internal oblique and transverse muscles puparto howling bundle arises considerable tension sutures, that the method exists of cutting and recurrence of hernia In such cases it is advisable to carry out laxative vaginal incision of the rectus abdominis muscle (operation Mc Vey - Venglovsky).

Kukudzhanov's method. Suggested for straight and complex forms of inguinal hernias. After suturing deep inguinal rings imposes seams between the rectus sheath and the connected Coy Cooper, from the pubic tubercle to fascial sheath under vzdoshnyh vessels If tension is planned to ovary Bani seams in the medial rectus sheath department case dissolved laxative oblique incision 2-- Then 2.5 cm coupled Noe tendon internal oblique and transverse muscles, together with the upper and lower edges of the lateral fascia dissected under Shiva to the inguinal ligament The latest joint applied at the medial edge of the deep holes of the inguinal canal.

The spermatic cord is placed on the formed back wall of the inguinal canal. Operation finish creation dublication aponeurosis of the external oblique abdominal muscles and formirova Niemi external opening of the inguinal canal.

Postempeskogo method consists in the complete elimination PAHO Vågå channel inguinal gap and the creation of the inguinal canal with an entirely new

direction. Otpreparovyyayut spermatic cord as far as possible in the lateral direction from medial hydrochloric tapered inner side cord inguinal ring. Inog yes spermatic cord to move laterally over multiple cabins internal oblique and transverse muscles, a slit is formed is placed in the spermatic cord superolateral direction lenii. Muscles are sutured under the spermatic cord so that they fit snugly against it, but do not squeeze it. Further, the wall is strengthened in the region of the inguinal canal. The edge of the rectus sheath, together with the connected tendon of the internal oblique and transverse muscles, is sutured to the pubic (Cooper) ligament. Next, the upper flap aponeurosis along with internal oblique and transverse mouse Tsami sutured to the pubic-iliac and inguinal tyazhu the connected ke. These sutures should push the spermatic cord to the limit to the lateral side (if the muscles have not been previously transected). Lower flap aponeurosis of the external oblique muscle conducted under the spermatic cord, fixed atop the upper flap apo neurosis. The newly formed "inguinal canal" with seed kana tick must pass through the musculo-aponeurotic layer in an oblique direction from back to front and from the inside to the outside so that its inner and outer holes are not opposite each other. The spermatic cord is laid on the fascia and above it on the layer-sutured the subcutaneous tissue and skin. If possible, it is advisable to place the spermatic cord between the flaps of the aponeurosis of the external oblique muscle of the abdomen

### FEMORAL HERNIA

Femoral hernias are located on the thigh in the area of the scarp triangle. Education in frequency they make up 5-8% of all abdominal hernias Femoral hernias occur less frequently and groin are mostly women among patients with femoral mi hernias women aged 30-60 years is 80%.

Nai greater incidence of femoral hernias in women account for a wider pelvis, which causes more expressions we antiplaque and vascular lacunae and less strength crural arch.

Between the inguinal (pupartovoy) ligament and the pelvic bones there is a space that is divided by the iliac-comb ligament into two lacunae muscular and Vascular. In the muscle lacuna is the iliopsoas muscle and the femoral nerve. The femoral artery with the femoral vein is located in the vascular lacuna.

Between the femoral vein and the gimbernath ligament there is a gap filled with fibrous connective tissue and the Pirogov-Rosenmüller lymph node.

This gap is called the femoral ring through which the femoral hernia exits. The boundaries of the femoral ring: from above - the inguinal ligament; below - the crest of the pubic bone; outside - the femoral vein; to the middle - Gimbernath's ligament.

Under normal conditions, the femoral canal does not exist. It is formed when a femoral hernia forms. The oval fossa on the fascia lata of the thigh is the outer opening of the femoral canal. The most common form of hernia is a hernia that emerges from the abdominal cavity through the femoral ring. The hernial sac advances the pre-abdominal tissue and the Pirogov-Rosenmüller lymph node in front of itself. Coming out from under the inguinal ligament, the hernia is located in the oval fossa medially from the femoral vein. The hernial sac is covered here with fatty tissue, superficial fascia and skin. Less commonly, a femoral hernia exits between the femoral artery and the vein. Hernia of the vascular lacuna can only be identified during surgery. Inog let out through the hernia defect zhimbernatofoy ligament. Hernias of the muscle lacuna are rarely observed, usually in the zone of passage of the femoral nerve. This hernia, due to its characteristic location lateral to the vascular bundle, can be recognized before surgery. The contents of the hernial sac are usually a loop of the small intestine, an omentum.

**Clinic and diagnostics:** femoral hernia in the formation passes through three stages: initial, channel floor and hydrochloric.

In the initial stage hernial protrusion does not exceed the pre Dela internal femoral ring. Clinically, this stage is difficult to detect. At this stage, parietal infringement of the intestine is possible.

In the incomplete (canal) stage, the hernial protrusion is located near the vascular bundle, does not go beyond the superficial fascia, does not penetrate into the subcutaneous

tissue of the Scarf triangle. In the full step femoral hernia about goes all the femoral canal, it exits through the outer opening in the subcutaneous tissue of the thigh.

The diagnosis of the initial and canal femoral hernia is difficult.

Suspect such herniation can only be based on complaints of pain in the groin, in the lower abdomen, upper thighs section, increasing with walking, physical exercise, when re Me weather. Pain occurs as a result of short-cha -particle infringing content in the narrow hernia, rigidity vnut rennem hole femoral canal. Persistent infringement is often the first clinical expression of such hernias.

Characteristic clinical features of **complete** femoral Plays yarn are hernial protrusion in the femoral-inguinal crease in the form of a hemispherical formation of small size, arranged below the inguinal ligament medially from the femoral vessels. Rarely hernial protrusion rises up and races relying on the inguinal ligament. It appears hernial bulging of when the vertical position of the body, straining at reposition disappears, sometimes with rumbling. The percussion tympanic sound over the protrusion is a sign of a hernia in which the intestine containing gas is located. An indication is also Symp hernia that cough shock, which is positive in the initial shape even hernias. With sliding hernias of the bladder, there may be dysuric phenomena.

**Differential diagnosis** is carried out mostly between ill's rennoy and inguinal hernia.

With a reducible inguinal hernia, a well-palpable inguinal ligament, especially in men who easily palpated the external opening of the inguinal canal, not a cart arises difficulty in the differential diagnosis between the femur

and inguinal hernia. Femoral hernia location with wife below the inguinal ligament, inguinal - above. In relation to the pubic tubercle, the inguinal hernia is located above and inwards, and the femoral hernia is located below and outwards (Cooper's symptom). In obese patients, in order to clarify the location of the hernial protrusion in relation to the inguinal ligament (under it or above it), one should mentally draw a line connecting the anterior superior spine with the pubic tubercle.

For a femoral irreducible hernia, lipomas located in the upper part of the Scarf triangle can be taken. Lipoma has lobed structure, not connected with the outside of the mile and a half of the femoral canal. Preperitoneal lipomas that exit through the femoral canal and have a connection with it are more difficult to distinguish from a femoral hernia, in which there may also be a preperitoneal lipoma. With a hernia and with a preperitoneal lipoma, the same type of operation is required - closing the internal opening of the femoral canal.

Enlarged lymph nodes in the region of the scarf triangle (chronic lymphadenitis, tumor metastases to lymph nodes) can simulate a femoral hernia. Limfati cal unit is possible, gripper fingers, delay and establish the absence of its connection with the femoral canal.

The similarity with the femoral hernia is aneurysmal races extension of the great saphenous vein at the confluence of it into the femoral vein. In such patients with as an effect of the vertical position of the body Wier retrograde venous filling assembly appears under pas hovoy ligament protrusion, which disappears in a horizontal position.

The appearance of swelling under the inguinal ligament in the upright position of the patient may be due to the spread of a sinus abscess along the lumbar muscle to the thigh in tuberculosis of the lumbar spine. A leaky abscess with pressure decreases in size, like a hernia. In contrast, when the hernia sinter abscess available Fluke symptom contexts that identify when tender points spine study with pressure on the vertebral spinous processes and a load on the vertebral column - pain in the lumbar region of the spine of the case. To confirm the diagnosis of tuberculosis zvonochnika necessary to produce X-rays of the spine.

**Treatment:** surgical.

Bassini's method - the incision is made parallel to the inguinal ligament and below it above the hernial protrusion. After high apportionment Nia its hernial sac is opened, is sewn as high as possible and cut. Close the hernial ring by joining PAHO howling and the pubic (Cowper's) ligaments. 2-4 sutures are applied. The femoral canal is sutured with a second row of sutures between the crescent edge of the broad fascia of the thigh and the comb fascia.

Femoral hernia surgery by the inguinal method (according to the Ruji method) - an incision is made as in an inguinal hernia. Opened upon roses external oblique abdominal

muscles. Bare inguinal Prome zhutok. The transverse fascia is dissected in the longitudinal direction. Pushing back the preperitoneal tissue, the neck of the hernial sac is isolated. Hernial sac is withdrawn from the femoral canal, vskry vayut, sewn and removed. The closure of the hernial orifice is performed by stitching the internal oblique, transverse muscles, the upper edge of the transverse fascia with the pubic and inguinal ligaments. Pay attention to the width of the inner opening of the inguinal ka Nala and, if necessary, it should be sutured to the normal size of the additional seams on the transverse fascia. The round ligament of the uterus (spermatic cord) is placed on the muscles. Plasti -ku front wall of the inguinal canal is performed by dublication aponeurosis of the external oblique abdominal muscles.

### **Umbilical hernia**

Umbilical hernia is called stepping on abdominal Lost defect through the abdominal wall in the umbilicus. When holes mum development of the umbilical ring is completely overgrown. The umbilical fascia and peritoneum are directly presented to the skin.

Zabol vaemost umbilical hernia reaches the highest point twice - the first time in early childhood, and the second time at the age of about 40 years. In women, umbilical hernia occurs twice as often than men, due to the stretching of the umbilical ring while pregnant Nost.

Umbilical hernias in children occur in the first 6 months after rye Denia, when not yet formed the umbilical ring. Various diseases associated with increased intra-abdominal pressure (whooping cough, pneumonia, phimosis, dysentery) contribute to the expansion of the umbilical ring and the formation of a hernia. Hernias in children are often small.

**Symptoms:** abdominal pain, worrying D Benke, protrusion of the navel, disappears when pressing SRI expansion umbilical ring.

Umbilical hernias in children are usually not impaired, but this complication is possible. The child's parents should be informed about the signs of infringement of hernia and do not need to explain the slow hospitalization of the child in the development of complications Niya.

**Treatment:** in young children, as the abdominal wall develops, self-healing is possible at the age of 6 months to 3 years, sometimes by 6 years. If the hernia does not bother the child, conservative treatment is used. Prescribe massage, therapeutic exercises that promote the development and strengthening of the abdominal wall.

An adhesive tape-like bandage is applied to the navel area, preventing the viscera from escaping into the hernial sac. If by 3-5 years self-healing has not occurred, then in the future, the umbilical ring will not independently heal. Thus, surgical treatment is indicated.

The indications for surgery at an earlier age are frequent partial infringement of the hernia, a rapid increase in the size of the hernia. The operation is carried out in stages: isolation and removal of the hernial sac, suturing of the umbilical ring with a purse-string suture (according to the Lexer method) or with separate sutures sewn over the edges of the defect in the longitudinal direction. For large umbilical hernia IS Method of use The navel should be preserved in children during the operation, since the absence of the navel can cause mental trauma to the child.

Umbilical hernias in adults account for 5% of all external abdominal hernias. Development of umbilical hernia is more common in women Shin older than 40 years (80%). The reasons for the development of umbilical hernias: congenital defects of the umbilical region, repeated pregnancies that have proceeded without observing the necessary regimen, neglect of physical exercises and gymnastics.

**Symptoms** gradually increasing in size vpyya Chiwan in the umbilicus, abdominal pain that occurs when physics cal load and coughing. In the study show district Loe protrusion navel diameter from 3.1 cm to 30 cm or more. For large hernia hernial ring dimensions may be significantly smaller than the actual protrusion bryush hydrochloric wall caused by a hernia.

This creates anatomical prerequisites for the development of complications such as chronic intestinal obstruction, coprostasis, and infringement. In the horizontal position of the patient, the protrusion decreases in size or disappears. Through the thinned skin covering the

protrusion, bowel peristaltic waves can be seen. With reducible hernias, the edges and size of the hernial orifice are determined.

When coughing, a cough push is clearly defined. Pupoch nye hernia often nepravimymi for large hernias hernial sac may be a multi-chamber.

**Diagnosis** pupoch GOVERNMENTAL hernia is simple, but we must bear in mind that the small lump in the navel may be ^ rtastachpm ryaka stomach to the navel. All patients with umbilical hernia should be about to drive X-ray examination of the stomach and twelve duodenum or gastroduodenoscopy to identify for bolevany accompanying hernia and causing pain in the upper abdomen.

**Treatment:** surgical only. After removing the hernial sac and suturing the parietal peritoneum, autoplasty of the abdominal wall is performed according to the Sapezhko method or the Mayo method.

Sapezhko method: two longitudinal slits okaymlyayuschi E hernia, thinned skin was excised together with the navel. Hernia stems cut through the gate up and down the white line of the abdomen to the point where it narrows and is not changed. The hernial sac is opened, the internal organs separated from the hernial sac are set into the abdominal cavity. Peritoneum is peeled from the back of the vaginal surface The hernial sac is excised, the edges are sutured. Separate sutures grippers -hand with one side edge of the abdominal aponeurosis white line and on the other hand posteromedial rectus sheath part where peritoneum otpreparovana create dublication from musculo-aponeurotic flaps "with the flap, located superficially, to the lower hem of dublication.

Mayo method: two cross-bordering hernia again cuts thinned skin excised together with the navel. From hernial ring otpreparovyvayut aponeurosis from subcutaneous adipose-stand Kamchatka in a circle at a distance of 5-6 cm. After opening the hernia sac are separated seam, soldered resecting the greater omentum, reduce a into the abdominal viscera of smallness. The hernial sac is excised, its edges are sutured in the transverse direction. Hernial extend in the transverse direction lenii two cuts through the white line of the abdomen and front wall of the rectus muscles of the vagina prior to their inner edges. U-shaped seams are used to sew the lower flap under the upper one, which is sewn to the lower flap in the form of a duplicate with separate seams.

## WHITE LINE HERNIA

The white line of the abdomen is formed by bundles of fibrous fibers of the aponeuroses of the wide abdominal muscles that are tightly adjacent to each other. There are gaps and recesses between them, which may serve as predisposing anatomic factors in Obra mations hernia linea alba. At first, the preperitoneal tissue, whether forming preperitoneal pomu and then formed hernial sac.

Linea alba hernias are rarely large, sometimes the process may be left to curl at the stage of preperitoneal lipoma.

By localization, hernia of the white line of the abdomen can be / supra-umbilical, peri-umbilical and sub-umbilical. Podpupochnye Plays Madame extremely rare. Umbilical hernia positioning the are usually on the side of the navel.

**Symptoms:** pain in the epigastric region, aggravated after eating, with increased intra-abdominal pressure. The appearance of pain in patients with hernias of white line of the abdomen Ob yasnyayut temporary or strangulated hernia, or the same tension ludka stuffing box, fixed to the hernia sac or PRESSURE Niemi nerves parietal peritoneum (hernial sac).

When a patient study show dense painful Noah degree in linea alba. With reducible hernias, it is sometimes possible to probe the slit-like hernial orifice.

Some patients with hernias are asymptomatic. A hernia of the white line of the abdomen may be accompanied by various diseases of internal organs, such as peptic ulcer of the stomach or duodenum, chronic cholecystitis, chronic pancreatitis, etc. In this regard, the patient should be carried out appropriate studies to identify diseases accompanied by pain in the epigastric region.

**Treatment:** surgical. Operation is apportionment SRI hernial sac, removing it and closing the openings in apo neurosis by placing purse-string suture or sutures separate

node. For large hernias of the white line of the abdomen, use the Sapezhko method. With a concomitant hernia of divergence of the rectus abdominis muscles, the Napalkov method is used. After isolating the hernial orifice and removing the hernial sac, the sheaths of the rectus abdominis muscles are dissected along the inner edge and first the inner and then the outer edges of the dissected sheaths are sutured. Thus, a doubling of the white line of the abdomen is created.

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### TOPIC № 3. Complication of hernias (inflammation, coprostasis, entrapment, irreducibility).

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Hernia infringement occurs more often in middle-aged people and in old people. Femoral hernias are infringed 5 times more often than inguinal and umbilical hernias. Small hernias with a narrow and scar-altered neck of the hernial sac are infringed more often than reducible large hernias. Infringement is not the fate of only a hernia, which has existed for a long time. When a hernia occurs, it can immediately manifest itself as an infringement. The frequency of certain types of hernias in adult patients with strangulated hernias: inguinal hernias - 43.5%, incisional hernias - 19.2%, umbilical hernias - 16.9%, femoral hernias - 16%, hernias of the white line of the abdomen - 4.4% ... Any organ can be impaired, the small intestine and the greater omentum are more often impaired.

**The purpose of the lecture:** To acquaint students with the various forms of complications of hernia and the possible consequences. Methods for diagnosing complications, as well as the necessary measures in case of complications.

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** To acquaint students with the mechanisms of complications, methods of their recognition, methods of their treatment, differential diagnosis, and prevention of complications.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Types of complications - 5 min.
2. Infringement of hernias. Types, mechanisms - 20 min.
3. Changes in the body with strangulated hernias - 15
4. Clinic, diff. Diagnosis, treatment of strangulated hernias - 15 min
5. Coprostasis - 10 min.
6. Hernia irreversibility - 10 min.
7. Hernia inflammation - 5 min.

### **Complications of hernias**

Complications of external abdominal hernias: infringement, coprostasis, irreducibility, inflammation. Infringement of the hernia is the most frequent and dangerous complication of hernia, requiring immediate surgical treatment. Organs released into the hernial sac are more often compressed at the level of the neck of the hernial sac in the hernial orifice. Infringement of organs in the hernial sac itself is possible in one of the chambers of the hernial sac, in the presence of cicatricial cords, squeezing the organs when organs are fused with each other and with the hernial sac (with irreducible hernias). Hernia infringement occurs more often in middle-aged and old people. Femoral hernias are infringed 5 times more often than inguinal and umbilical hernias. Small hernias with a narrow and scar-altered neck of the hernial sac are infringed more often than reducible large hernias. Infringement is not the fate of only a hernia, which has existed for a long time. When a hernia occurs, it can immediately manifest itself as an infringement. The frequency of certain types of hernias in adult patients with strangulated hernias: inguinal hernias - 43.5%, incisional hernias - 19.2%, umbilical hernias - 16.9%, femoral hernias - 16%, hernias of the white line of the abdomen - 4.4% ... Any organ can be impaired, the small intestine and the greater omentum are more often impaired.

According to the mechanism of occurrence, they distinguish between elastic, fecal and mixed, or combined, infringement. Elastic infringement occurs at the time of a sudden increase in intra-abdominal pressure during physical exertion, coughing, straining, etc. In this case, overstretching of the hernial orifice occurs, as a result of which more internal organs are released into the hernial sac than usual. The return of the hernia orifice to its previous state leads to the infringement of the contents of the hernia. With elastic infringement, the organs that have emerged into the hernial sac are compressed from the outside. Fecal infringement occurs with a weakening of intestinal motility, more often observed in older people. Due to the accumulation of a large amount of intestinal contents in the intestine, which is in the hernial sac, the outgoing loop of this intestine is compressed, then the pressure of the hernia orifice on the contents of the hernia increases and an elastic one joins the fecal infringement, thus a mixed form of infringement occurs.

Pathological anatomy: the main reason for the development of pathomorphological changes in the restrained organ is a violation of blood and lymph circulation. When the intestine is infringed due to venous stasis, extravasation occurs into the intestinal wall, into its lumen and into the cavity of the hernial sac. The fluid in the hernial sac is called hernial water. With a rapid simultaneous compression of the veins and arteries of the mesentery of the intestine, which is in the hernial sac, by the restraining ring, "hernial water" does not form, "dry gangrene" of the restrained intestine develops. At the beginning of the infringement, the intestine acquires a cyanotic color, the "hernial water" is transparent. Necrotic changes in the intestinal wall begin with the mucous membrane. The greatest damage occurs primarily in the area of the strangulation groove at the site of compression of the intestine by the restraining ring. Pathomorphological changes progress over time. The restrained intestine is blue-black in color, its serous membrane is dull, multiple subserous hemorrhages. The intestine is flabby, does not peristalsize, the vessels of the mesentery do not pulsate. "Hernia water" is turbid, hemorrhagic, and has a fecal odor. Necrotic changes are accompanied by gangrene of the intestinal wall, perforation, the development of the so-called fecal phlegmon and peritonitis. If the infringement of the intestine significantly impaired blood and lymph circulation, not only in a strangulated intestine, but also in the reducible dyaschem intestine. Due to intestinal obstruction, intra-intestinal pressure rises, the walls of the intestine are stretched, the intramural veins are compressed, and lymph circulation is impaired. The accumulation of transudate in the wall and in the intestinal cavity, its overflow with intestinal contents further aggravate circulatory disorders due to compression of the intramural arteries. First of all, the mucous membrane is damaged over a considerable extent. From the border of the altered intestinal wall visible from the outside, the damage to the mucous membrane extends proximally to another 20-30 cm. This should be taken into account when determining the level of the adductor loop resection. Due to damage to the mucous membrane, the intestinal wall becomes permeable to



microbes, which leads to the development of peritonitis. Perforation of the adductor loop in the area of the strangulation groove may occur. In the discharge loop of the restrained intestine, disorders of blood and lymph circulation occur for 10-15 cm .

Types of infringement of hernias and their recognition. Clinical manifestations of hernia infringement depend on the form of infringement, the restrained organ, the time elapsed since the infringement. The main symptoms of hernia infringement are pain in the area of the hernia and irreducibility of the hernia, which was previously freely repositioned. The intensity of the pain is different. Sharp pain can cause fainting, shock. Local signs of hernia infringement, hernial protrusion is sharply painful on palpation, dense, tense. The symptom of a cough shock cannot be detected. During percussion, bluntness is determined if the hernial sac contains an omentum, the bladder, "hernial water". Percussion sound is tympanic if there is a gut containing gas in the hernial sac. Elastic restraint. The onset of complications is associated with an increase in intra-abdominal pressure (physical work, cough, defecation, etc.). Suddenly there is severe constant pain in the area of the hernial protrusion, irreducibility of the previously reducible hernia, enlargement, sharp tension and soreness of the hernial protrusion. It should be borne in mind that infringement may be the first manifestation of a hernia that has arisen. Infringement of the intestine is a form of strangulated intestinal obstruction. In these cases, signs of intestinal obstruction are added against the background of constant acute pain in the abdomen due to compression of the vessels and nerves of the mesentery of the strangulated intestine, cramping pain occurs associated with increased peristalsis, stool and gas retention, vomiting is possible. During auscultation of the abdomen, continuous intestinal murmurs are heard. An overview fluoroscopy of the abdomen reveals stretched bowel loops with horizontal levels of liquid and gas above them ("Kloyber's bowls"). Later, peritonitis develops.

In case of intestinal infringement in the clinical course of complications, three periods can be distinguished. The first period is painful, or shock, the second period is imaginary well-being, the third period is diffuse peritonitis. The first period is characterized by acute pain, which causes shock phenomena. The pulse is weak and frequent, blood pressure is lowered, breathing becomes frequent and shallow. This period is expressed with an elastic form of infringement. During the period of apparent well-being, pain decreases, which was previously very intense. This can mislead the physician and patient into thinking that pain relief or disappearance is an improvement in the course of the disease. The decrease in pain can be explained by the necrosis of the strangulated bowel loop. However, local manifestations of hernia infringement remain. If the patient is not operated on, his condition is rapidly deteriorating, the third period of diffuse peritonitis begins. The body temperature rises, the pulse quickens. Abdominal distention increases, fecaloid vomiting appears. Puffiness in the area of hernial protrusion increases, skin hyperemia appears, and phlegmon develops.

Diagnosis: in typical cases, it is not difficult. The main signs are: acute pain and irreducibility of a previously reducible hernia. Usually, the infringement occurs in the external opening of the inguinal canal. When examining the patient, a painful, tense, irreducible hernial protrusion is found in the groin area. If the intestinal loop is strangled, symptoms of intestinal strangulation obstruction join. Possible infringement in the internal opening of the inguinal canal (parietal infringement). That is why, in the absence of a hernial protrusion, it is necessary to conduct a digital examination of the inguinal canal and not be limited to examining only the external inguinal ring. With a finger inserted into the inguinal canal, you can feel a small painful seal at the level of the inner opening of the inguinal canal Retrograde infringement. Retrograde infringement of the small intestine is more often possible; retrograde infringement of the large intestine of the greater omentum, etc. Retrograde infringement occurs when several intestinal loops (two or more) are located in the hernial sac, and the intermediate loops connecting them are in the abdominal cavity. To a greater extent, the connecting intestinal loops are subject to infringement. Necrosis begins earlier in these intestinal loops located above the pinching ring. At this time, the intestinal loops in the hernial sac may still be viable. It is impossible to establish a diagnosis before surgery. During the operation, the surgeon, having found two intestinal loops in the hernial sac, must, after

dissecting the restraining ring, remove the connecting intestinal loop from the abdominal cavity and determine the nature of the changes that have arisen in the entire restrained intestinal loop. If during the operation, retrograde infringement is not recognized, since the surgeon did not examine the intestinal loop in the abdominal cavity, the patient will develop peritonitis. The source of peritonitis will be a necrotic bowel ligament. Parietal infringement occurs in a narrow restraining ring, when only a part of the intestinal wall opposite to the line of mesentery attachment is infringed. Parietal infringement of the small intestine is observed more often in femoral and inguinal hernias, less often in umbilical hernias. Disorder of blood and lymph circulation in the restrained area of the intestine leads to the development of destructive changes to necrosis and perforation of the intestine. The diagnosis is very difficult. In terms of clinical manifestations, parietal intestinal entrapment differs from intestinal entrapment with its mesentery. No shock phenomena. Symptoms of intestinal obstruction may be absent since the passage of the contents occurs freely in the distal direction. Diarrhea is sometimes observed. There is constant pain in the place of infringement of the intestinal wall in the hernia where you can feel a small painful dense formation. The pain is mild, since the mesentery, respectively, to the restrained section of the intestine is free. It is especially difficult to recognize parietal infringement when it is the first clinical manifestation of a hernia that has arisen. In obese women, it is especially difficult to feel the slight swelling under the inguinal ligament. The general condition of the patient at first may remain satisfactory, then progressively worsens in connection with the development of phlegmon peritonitis of the tissues surrounding the hernial sac. In patients with advanced form of parietal infringement in the femoral hernia, the development of inflammation in the tissues surrounding the hernial sac can simulate acute inguinal lymphadenitis or adenophlegmon. Examination of the skin of the lower half of the abdominal wall, legs, buttocks and perineum, i.e., the areas for which the inguinal lymph nodes are regional, will reveal the entrance gate of the infection (boils, scratching wounds, cracks between the toes). If the diagnosis is unclear, the last diagnostic method is surgery. During the incision of the tissues under the inguinal ligament, either a strangulated hernia or enlarged inflamed lymph nodes are found.

Thus, during the operation, it is possible to diagnose a dangerous complication of parietal infringement and eliminate it. Thrombosis of the saphenous vein node at the place where it flows into the deep vein of the thigh can simulate an infringement of the femoral hernia. With thrombosis of the venous node, the patient experiences pain and a painful lump under the inguinal ligament is determined. Along with this, varicose veins of the lower leg are often present. An emergency operation is indicated both in the case of hernia infringement and venous node thrombosis. With a strangulated hernia, the entrapment of the organ is eliminated and plastic is performed in the area of the hernial orifice. In case of venous thrombosis, the large saphenous vein is ligated and transected at the place where it flows into the deep vein of the thigh to prevent thromboembolism and the spread of thrombosis to the deep vein of the thigh. The thrombosed vein is excised. Sudden infringement of previously unrevealed hernias. On the abdominal wall in areas typical for hernia formation, protrusions of the peritoneum (preexisting hernial sacs) may remain after birth. More often, such a prepared hernial sac in the groin area is the unsealed peritoneal-inguinal process. The reason for the sudden appearance of a hernia and its infringement is a sharp increase in intra-abdominal pressure (significant physical exertion, severe cough, straining). In the anamnesis, patients have no indications of signs of pre-existing hernias: protrusions, painful sensations in places typical for the localization of hernias. The main symptom of sudden strangulated hernias is the appearance of acute pain in typical places where hernias emerge. In case of a sudden onset of acute pain in the groin area, in the femoral canal, in the navel, it is necessary to determine the most painful areas corresponding to the hernial orifice during the examination of the patient by palpation. The hernial protrusion is small in size, which corresponds to the small size of the pre-existing hernial sac. Hernial protrusion is dense, painful.

Coprostasis (stagnation of stool) and fecal infringement. Coprostasis is a complication of a hernia when the contents of the hernial sac are the large intestine. It

develops as a result of a disorder of the intestinal motor function associated with a sharp decrease in the tone of the intestinal wall. Contributing to coprostasis is hernia irreversibility, a sedentary lifestyle, and abundant food. Coprostasis is observed more often in obese elderly patients, in men with inguinal hernias, in women with umbilical hernias. Symptoms: supporting constipation, abdominal pain, nausea, rarely vomiting. The protrusion slowly increases as the colon fills with feces.

Treatment: emptying the colon from the contents. With reducible hernias, it is necessary to try to keep the hernia in a reduced state, then it is easier to achieve the restoration of intestinal motility. Apply small enemas with hypertonic sodium chloride solution, with glycerin or repeated siphon enemas with a deeply inserted probe to the sigmoid colon. The use of laxatives is contraindicated, since the overflow of the adductor loop with the contents can cause the transition of coprostasis to the fecal form of hernia infringement. Coprostasis can, due to compression in the hernial orifice of the discharge loop, go into the fecal form of hernia infringement. Signs of obstructive intestinal obstruction are growing. The pain in the abdomen intensifies, acquires a cramping character, and vomiting becomes more frequent. In the future, due to the overflow of fecal masses of the intestine, which is in the hernial sac, the entire loop of the intestine and its mesentery is compressed by the hernial gates. There is a mixed form of intestinal entrapment. From this moment, there are signs of strangulated intestinal obstruction. Infringement of the greater omentum causes constant pain in the area of the hernial protrusion. The greater omentum is usually impaired in umbilical and large epigastric hernias. Infringement of the bladder occurs with sliding inguinal and femoral hernias, accompanied by frequent painful urination, sometimes urinary retention, decreased urine output due to a reflex decrease in kidney function. False infringement of a hernia. In acute diseases of the abdominal organs (acute appendicitis, acute cholecystitis, perforation of duodenal or stomach ulcers, intestinal obstruction), exudate, getting into the hernial sac of an unrestrained hernia, causes the development of inflammation in it. The hernial protrusion increases in size, becomes painful and tense. These signs correspond to signs of hernia infringement.

Diagnosis: a thoroughly collected history of these diseases and a purposefully conducted objective examination of the patient helps to make the correct diagnosis of acute diseases of the abdominal cavity and to exclude infringement of the hernia. First of all, it is necessary to find out the time of onset of pain in the abdomen and in the area of the hernia, the onset of pain (sudden, gradual). The primary localization of pain in the abdomen, and then the late accession of pain in the area of a reducible hernia is more typical for acute diseases of the abdominal organs than for a restrained hernia. The sudden onset of acute pain in the epigastric region with the development of peritonitis in a patient with peptic ulcer is characteristic of ulcer perforation. Primary localization of pain in the right hypochondrium with irradiation under the right scapula, into the right shoulder girdle, the greatest pain and muscle tension in the right hypochondrium, positive symptoms of Grekov-Ortner, Murphy are characteristic of acute cholecystitis. The onset of pain is primarily in the epigastric region or around the navel, followed by the movement of pain to the right iliac region, the greatest pain and muscle tension in this area are characteristic of acute appendicitis. The sequential appearance at first of signs of intestinal obstruction, then peritonitis and later changes in the hernia area make it possible to interpret pain in the hernia area, an increase in the size and tension of the hernia as manifestations of false infringement. If a false infringement is not recognized and an operation for a hernia is undertaken, it is important at this diagnostic stage to correctly assess the contents of the hernial sac (the state of the intestinal loops, the nature of the effusion). At the slightest suspicion of an acute disease of the abdominal organs (in the hernial sac, a slightly altered bowel loop, purulent or hemorrhagic exudate), a midline laparotomy should be performed to identify the source of peritonitis.

Treatment: a strangulated hernia is an indication for emergency surgery. It is necessary to eliminate the restraint and find out the viability of the restrained organs. The operation is carried out in several stages. The first stage is a layer-by-layer dissection of tissues to the aponeurosis and exposure of the hernial sac. The second stage - the opening of the hernial sac is performed carefully so as not to damage the swollen intestinal loops that fit

tightly to the wall of the hernial sac. With sliding inguinal and femoral hernias, there is a risk of damage to the wall of the colon or bladder. Having opened the hernial sac, the "hernial water" is removed. To prevent the restrained organs from slipping into the abdominal cavity, the surgeon's assistant holds them with a gauze napkin. It is unacceptable to dissect the restraining ring before opening the hernial sac, as unexamined restrained organs will move into the abdominal cavity together with the infected "hernial water". The third stage - the dissection of the restraining ring is performed under the control of vision, so as not to damage the organs soldered to it from the inside. In femoral hernias, an incision is made medially from the neck of the hernial sac to avoid damage to the femoral vein located on the lateral side of the sac. With umbilical hernias, the restraining ring is dissected in the transverse direction in both directions. The fourth stage - determining the viability of the restrained organs is the most critical stage of the operation. After dissecting the restraining ring and introducing a solution of novocaine into the mesentery of the intestine, those parts of the restrained organs that were above the restraining ring are removed from the abdominal cavity. It is impossible to tighten the intestine strongly, as a rupture (detachment) may occur in the region of the strangulation groove. If there are no obvious signs of necrosis, the strangulated intestine is irrigated with warm isotonic sodium chloride solution. It is important to remember that intestinal necrosis begins with the mucous membrane, and changes in the intestinal wall, visible from the side of its peritoneal cover, appear later. The main criteria for the viability of the small intestine: restoration of the normal pink color of the intestine, the absence of strangulation groove and subserous hematomas, preservation of pulsation of small vessels of the mesentery and peristaltic contractions of the intestine. Indisputable signs of nonviability of the intestine: dark coloration of the intestine, dull serous membrane, flabby intestinal wall, absence of pulsation of the mesenteric vessels, absence of intestinal motility. The fifth stage - the non-viable intestine must be removed. From the border of necrosis visible from the side of the serous cover, at least 30-40 cm of the adducting segment of the intestine and 15-20 cm of the abducting segment should be resected. Intestinal resection should be performed if a strangulation groove, subserous hematomas, large edema, infiltration and hematoma of the mesentery are found in the intestinal wall. In case of infringement of sliding hernias, it becomes necessary to assess the viability of that part of the organ that is not covered by the peritoneum. If necrosis of the cecum is detected, a midline laparotomy is performed and the right half of the large intestine is resected with the imposition of an ileotransverse anastomosis. The operation ends with plastic hernial orifice. In case of necrosis of the bladder wall, resection of the bladder with the imposition of an epicystostomy is necessary. In severe cases, the peri-vesicular tissue is tamponed and an epicystostomy is applied. The sixth stage - the restrained omentum is resected in separate sections without the formation of a large common stump. From a massive omentum stump, the ligature may slip and result in bleeding from the omentum's vessels. abdominal cavity. Seventh stage - when choosing the method of hernia orifice plasty, the simplest one should be preferred. For example, for small inguinal oblique hernias in young people, the Zirard-Spasokukotsky-Kimbarovsky method should be used, for direct inguinal and complex inguinal hernias - the Bassini and Postempsky methods. With a strangulated hernia, complicated by phlegmon of the hernial sac, the operation should be started with a midline laparotomy (first stage) to reduce the risk of infection of the abdominal cavity with the contents of the hernial sac. During laparotomy, the intestine is resected within the viable tissue. The ends of the resected section of the intestine are sutured. Between the adductor and discharge loops, anastomosis is applied end to end or side to side. At this stage of the operation, the peritoneal cavity can be isolated from the hernial sac cavity. For this purpose, the parietal peritoneum is dissected around the mouth of the hernial sac and dissected to the sides by 1.5-2 cm. The leading and escaping loops of the resected colon near the hernial orifice are stitched with two rows of mechanical sutures (or tied with two ligatures). Then, between the sutures (ligatures), the loops of the resected intestine are crossed and removed together with a part of their mesentery. Above the blind ends of the strangulated intestine, which is in the hernial sac, the parietal peritoneum is sutured. The edges of the dissected parietal peritoneum are sutured. Thus, the peritoneal cavity is isolated from the hernial sac

cavity. The wound of the abdominal wall is sutured tightly in layers. The second stage is the surgical treatment of a purulent focus (hernial phlegmon). Radical surgical treatment of a purulent focus consists in excision of non-viable, necrotic, infiltrated tissues. Cyanosis, sharp flushing of the skin are the harbingers of its subsequent necrosis. A reliable sign of tissue vitality is profuse capillary bleeding. The incision should be made taking into account the anatomical and topographic characteristics of the localization of the hernial phlegmon. Layer-by-layer tissue is dissected over the hernia. The hernial sac is opened, purulent exudate is removed. The hernial orifice is carefully incised so as to extract the strangulated intestine and its blind ends of the adducting and efferent segments. After removal of the restrained intestine, the mouth and neck of the hernial sac are separated from the hernial orifice. Plastic hernia orifice is not performed. Several sutures are applied to the edges of the hernia orifice in order to prevent eventration in the postoperative period. Next, the hernial sac is removed along with the altered tissues (with umbilical, epigastric hernias, this can be done in a single block). Surgical treatment of a purulent focus is completed by draining the wound. The perforated drainage is placed at the bottom of the wound, the ends of the drainage are removed from the wound through healthy tissue. The resulting conductive end connected to a drainage system, a blood transfusion with antibacterial preparations outlet end connected to a tube lowered into the jar with antiseptic. Long-term continuous "flow" washing of the wound with antibacterial drugs is carried out through the drainage. The main task of the "flow-through" method of drainage is to ensure sufficient drainage of the discharge from the wound. The use of powerful modern antiseptics (dioxidin, potassium furagin) allows to achieve complete destruction of wound microflora. Rinsing of wounds with solutions of furacilin, boric acid, sodium bicarbonate is quite effective. The advantages of this drainage method are: technical simplicity and availability. The method of active surgical treatment of acute purulent diseases includes the possible early closure of the wound surface using primary, primary delayed, early secondary sutures. The main condition for suturing a purulent wound is a full-fledged surgical treatment of a purulent wound or its cleansing with chemotherapeutic agents. A regular interrupted suture, sutured through all layers of the wound, provides a good adaptation of the edges and walls of the wound. An essential component of the complex treatment of patients should be antibiotic therapy (general and local). The choice of antibiotic should be based on the sensitivity of the pathogen to it. Postoperative mortality. The danger of hernia infringement for the patient's life increases as the time elapsed from the moment of infringement to the operation lengthens. Mortality after operations performed after the onset of infringement in the first 6 hours is 1.1%, in the period from 6 to 24 hours - 2.1%, after 24 hours - 8.2%. After operations, during which the bowel resection was performed, the mortality rate is 16%. With phlegmon of the hernial sac, when the intestine was resected by laparotomy, the mortality rate reaches 24%. Complications after self-adjusted, forcibly adjusted and operated restrained hernias. A patient with a strangulated hernia, spontaneously adjusted, should be urgently hospitalized in the surgical department. The danger of spontaneous reduction of a previously strangulated intestine is that as a result of circulatory disorders that have arisen in it, it can become a source of infection of the peritoneum and intra-intestinal bleeding. If, when examining a patient at the time of admission to a surgical hospital, peritonitis or intra-intestinal bleeding is diagnosed, the patient must be urgently operated on. Operation is srednesredinnoy laparotomy, altered bowel resection portion to maintain a sufficient level of blood flow in the adductor and abductor intestinal loops patient whose admission to the emergency department revealed no signs of peritonitis, intracolonic krovotek Nia must be hospitalized in a hospital for surgical follow-up. It is dangerous to let a sick person go home. Dynamic observation of the patient should be aimed at early detection of signs of peritonitis and intra-intestinal bleeding. The methods of dynamic examination of a patient with a spontaneously adjusted restrained hernia are as follows: Complaints: abdominal pain, dryness of the mucous membranes of the oral cavity. Inspection: skin (pallor); oral cavity (dry mucous membranes). Hemodynamic parameters: pulse, blood pressure, shock index = pulse / systolic blood pressure. Axillary and rectal temperature. Examination of the abdomen, palpation (muscle tension and local pain), percussion, local pain, auscultation, attenuation of intestinal murmurs. Examination through

the rectum, soreness with pressure on the walls of the intestine, an admixture of blood in the contents. Plain fluoroscopy of intestinal pneumatosis, free gas in the abdominal cavity. Examination of the discharge of vomit (an admixture of bile), stool (an admixture of blood in the feces). Measurement of urine output. Laboratory tests blood test (leukocytosis, hemoglobin, hematocrit). Early signs of peritonitis are the appearance of constant abdominal pain, aggravated by coughing, a feeling of dryness in the mouth, increased heart rate, local pain on palpation and abdominal percussion, the appearance of slight local tension of the muscles of the abdominal wall, leukocytosis. Early signs of intrainestinal bleeding are weakness, dizziness, pallor of the skin, increased heart rate, decreased blood pressure, decreased hemoglobin, hematocrit, blood in the feces. The appearance of signs of peritonitis, bleeding into the intestines is an indication for emergency surgery. The operation consists in a mid-midline laparotomy, resection of the altered section of the intestine to the level of the preserved sufficient blood supply in the adductor and discharge intestinal loops. A patient who, during dynamic observation, did not reveal signs of peritonitis, intrainestinal bleeding, is shown routinely hernia repair with plastic surgery of the abdominal wall in the area of the hernial orifice. Forced reduction of a strangulated hernia, performed by the patient himself, is rare. In medical institutions, forcible reduction of a hernia is prohibited. With the forcible reduction of a strangulated hernia, damage to the hernial sac and the contents of the hernia may occur, up to rupture of the intestine and its mesentery with the development of peritonitis and intra-abdominal bleeding. Peritonitis, intra-abdominal bleeding are indications for emergency surgery. The purpose of the operation is to revise the abdominal organs, stop bleeding, remove the source of peritonitis, and drain the abdominal cavity. When forcibly repositioned, the hernial sac can be displaced into the preperitoneal space along with the contents restrained in the neck of the hernial sac. When the parietal peritoneum is torn off in the area of the neck of the hernial sac, the restrained bowel loop together with the restraining ring can sink into the abdominal cavity or into the preperitoneal space. It is important to recognize in a timely manner the imaginary reign of hernia, since the patient can quickly develop symptoms of intestinal obstruction and peritonitis. There is no typical sign of infringement of a hernia, there is no tense hernial protrusion. However, anamnestic data (forcible reduction of the hernia), abdominal pain, sharp pain on palpation of soft tissues in the area of the hernial orifice, subcutaneous hemorrhages suggest an imaginary reduction of the hernia and urgently operate on the patient. Late complications observed after spontaneous reduction of strangulated hernias and developed after operations for strangulated hernias are characterized by signs of chronic intestinal obstruction (abdominal pain, flatulence, rumbling, splashing noise). They arise as a result of the formation of adhesions of intestinal loops between themselves, with other organs, with the parietal peritoneum and cicatricial strictures that narrow the intestinal lumen, the formation of cicatricial intestinal strictures occurs at the site of rejection of the necrotic mucous membrane, followed by the development of connective tissue and its scarring. Irreducibility is due to the presence in the hernial sac of fusion of internal organs with each other, as well as with the hernial sac. The development of irreducibility is due to traumatization of the organs located in the hernial sac. As a result of aseptic inflammation, dense fusion of organs with each other and with the wall of the hernial sac occurs. Irreducibility can be partial, when part of the contents of the hernia can be reduced into the abdominal cavity, and the other part remains irreducible. With complete irreducibility, the contents of the hernia are not reduced into the abdominal cavity. The development of irreducibility is facilitated by prolonged wearing of the bandage. Umbilical, femoral and incisional hernias are more often irreducible. Quite often, irreducible hernias are multi-chambered (umbilical, postoperative). Due to the development of multiple adhesions and chambers in the hernial sac, an irreducible hernia is often complicated by entrapment of organs in one of the chambers of the hernial sac or the development of adhesive intestinal obstruction in the hernial sac. Hernia inflammation occurs due to infection of the hernial sac. It can occur from the inside with acute inflammation of the appendix or Meckel's diverticulum located in the hernial sac, as a result of perforation of typhoid or tuberculous intestinal ulcers into the cavity of the hernial sac, with peritoneal tuberculosis. With inflammation of a hernia caused by infection from the abdominal organs, the general

condition of patients worsens, body temperature is high, chills, vomiting, gas and stool retention. The hernia increases in size as a result of edema and tissue infiltration, skin hyperemia appears.

Treatment: emergency surgery. In acute appendicitis in a hernia, an appendectomy is performed; in other cases, the source of infection of the hernial sac is removed. Chronic inflammation of a hernia with peritoneal tuberculosis is recognized during surgery. Treatment consists of hernia repair, specific anti-tuberculosis therapy. The source of hernia infection can be inflammatory processes on the skin of the hernia (furuncle, skin damage (maceration, abrasions, scratching)). In these cases, hernia repair can be performed only after the elimination of inflammatory processes on the skin. Prevention of complications: surgical treatment of all patients with hernias in a planned manner until their complications develop. Identification of hernia carriers is possible when carrying out a mass medical examination of the population. The presence of a hernia is an indication for surgery.

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## TOPIC № 4 . Acute appendicitis

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Acute appendicitis worried surgeons for many decades. Despite the fact that a large army of surgeons around the world is fighting against the diseases of this small organ, which has no independent significance, it is still far from complete victory.

One of the greatest Russian surgeons, I.I.Grekov, called acute inflammation of the appendix a chameleon-like disease that is not found where it is supposed, and is found where it is not thought of at all. This can be fully attributed to the treatment of appendicitis: the removal of the appendix is considered an easy operation available to 4-5 year students, but there are times when this operation requires great skill and experience of a respectable surgeon.

**The purpose of the lecture: To** acquaint students with the etiology and pathogenesis of acute appendicitis, methods of diagnosis and clinical symptoms, as well as differential diagnosis of acute appendicitis.

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Objectives of the lecture: To** acquaint students with the topographic and anatomical data of the appendix, with the etiology, pathogenesis of acute appendicitis, clinical picture and differential diagnosis.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomical and topographic data of the appendix, location options - 15 min.
2. Etiology, pathogenesis of acute appendicitis - 20 min
3. Clinic of acute appendicitis - 20 min.
4. Differential diagnosis of acute appendicitis - 20 min
5. Acute appendicitis treatment - 15 min.

**ACUTE APPENDICITIS**

Acute appendicitis is a nonspecific inflammation of the appendix, the most common surgical disease. Appendicitis has worried surgeons for decades. Despite the fact that a large army of surgeons around the world is fighting against the diseases of this small organ, which has no independent significance, it is still far from complete victory.

One of the greatest Russian surgeons, I.I.Grekov, called acute inflammation of the appendix a chameleon-like disease that is not found where it is supposed, and is found where it is not thought of at all. This can be fully attributed to the treatment of appendicitis: the removal of the appendix is considered an easy operation available to 4-5 year students, but there are times when this operation requires great skill and experience of a respectable surgeon.

**Anatomical and physiological features**

The appendix, being a small appendage of the cecum, is located in the right ileum, which is formed by the terminal ileum, the cecum with the appendix and the initial section of the ascending colon.

The cecum is the part of the intestine that is located below the confluence of the ileum. The cecum can have various forms: cone-shaped, saccular, pear-shaped, spherical, etc. The position of the cecum is very variable. It is generally accepted that in men the lower edge of the cecum is located 4–5 cm from the middle of the pupar ligament, and in women it is somewhat lower. However, there may be deviations from this position, for example, there are: 1) high (hepatic) position of the cecum, when it is in the right hypochondrium and can come into contact with the lower surface of the liver and with the kidney; 2) a low position when the cecum is in the small pelvis and comes into contact with the pelvic organs.

With the intraperitoneal position and the presence of a long mesentery, the position of the cecum is uncertain: it can be located near the navel, in the left hypochondrium, in the left iliac region. The caecum is higher in children and much lower in the elderly. The cecum occupies a high position in pregnant women, especially in the last months of pregnancy.

In most people, the cecum is covered on all sides by the peritoneum, but it can occupy a mesoperitoneal position, and then it is inactive or completely immobile.

With appendicitis, be aware of the folds and pockets of the peritoneum in the caecum. There are cases when the appendix enters the peritoneal pocket and, after an attack of acute inflammation, is blocked by adhesions, which over time acquire the appearance of the peritoneum - the appendix disappears from the abdominal cavity.

Of course, one must also remember about the possibility of a congenital absence of the appendix, but this is extremely rare.

The appendix departs from the cecum in the area of convergence of the taeniae, 2-3 cm from the confluence of the ileum. The name deciphers the shape of the appendix. Its length is 7-8 cm, but it can be 1-2 and 15-20 and more centimeters. The thickness of the appendix is from 0.5 to 1 cm. By old age, the process decreases, the walls undergo sclerotic changes, as a result of which its lumen decreases or disappears altogether.

The anterior position of the appendix, when its apex is directed to the anterior abdominal wall, is rare, and the posterior, or so-called retrocecal, position occurs in 9-25% of patients. There are three types of retrocecal position of the appendix: intraperitoneal, intramural and retroperitoneal. Knowing the possibility of such positions of the appendix in the absence of it in its usual place in the abdominal cavity necessitates a thorough revision of the posterior wall of the cecum and retroperitoneal space, for which it is necessary to dissect the parietal peritoneum near the cecum. In the retrocecal position, the appendix is often long



and can reach its apex of the kidney, liver and duodenum. The retroperitoneal process can be located at the base of the mesentery of the small intestine, on the spine, under the liver, on the ureter, near the ovary, tube, on the wall of the bladder, and even in the parametrium. In case of acute inflammation, these organs can be involved in the process and accordingly change the clinical course of the disease.

The ileocecal part of the intestine receives arterial blood supply through the ilio-colonic artery (a. ileocolica), which departs from the superior mesenteric artery. One of the branches of the ilio-colonic artery is the appendicular artery (a. Appendicularis), which usually branches off with one, less often several trunks, which supplies blood to the appendix and passes through its mesentery. The outflow of blood from the ileocecal part of the intestine occurs through the ilio-colonic vein (v. Ileocolica), which flows into the superior mesenteric vein, which is involved in the formation of the portal vein. One of the branches of the ilio-colonic vein is v. appendicularis.

The innervation of the ileocecal angle is carried out by the superior mesenteric plexus, which has a connection with the solar plexus and takes part in the innervation of all digestive organs.

The functional significance of the appendix has not yet been fully clarified. Attempts by some scientists to prove that it is a rudimentary, unnecessary organ have proved untenable. It is firmly established that the appendix : 1) secretes an alkaline juice containing amylase and lipase, and therefore, takes part in the processes of digestion ; 2) contains many lymphatic follicles (some authors call it the amygdala of the abdominal cavity), which play a protective role, absorbing microbes, and to a certain extent hematopoietic - some of the lymphocytes enter the veins of the appendix.

In addition, PI Dyakonov in experiments on rabbits showed the presence of peristaltic hormone in the vermiform process. The condition of the appendix has a reflex effect on the stomach, duodenum and other organs.

From the above information about the physiology of the appendix, one conclusion suggests itself: the appendix is a functioning organ, and it should be removed only in the presence of pathological changes.

### **Etiology and pathogenesis**

In questions of the etiology and pathogenesis of acute appendicitis, much is unclear. It is obvious, however, that acute appendicitis is a nonspecific inflammation of the appendix that develops as a result of altered biological relationships between human organisms and microbes. The causative agents of infection in acute appendicitis can be staphylococci, Escherichia coli, mixed and anaerobic flora. But there is still no answer to the questions: why some people develop acute appendicitis, while others do not, why one patient develops rapidly destructive forms, while another - catarrhal inflammation persists for several days. Or, in other words: what is the cause of appendicitis and the factor that determines its genesis?

To explain these issues, there are various theories: stagnation, helminthic invasion, angioneurotic, infectious, cortico-visceral theories linking the occurrence of acute appendicitis with angina, dysfunction of the Bauhinia valve, etc. An opinion is expressed about the role of allergy in the origin of acute appendicitis, the fact that the allergic factor plays a dominant role in the inflammatory process in acute appendicitis. It is believed that the allergic theory sheds more light on the etiology, and the neurogenic, vascular and infectious theories - the pathogenesis of acute appendicitis.

However, none of them can provide an exhaustive explanation of the etiology and pathogenesis of acute appendicitis. Each of these theories contains a rational kernel - it explains some aspects of the origin of acute appendicitis.

### **Classification**

It is difficult to systematize a disease that has a complex and varied clinical picture and various pathological changes. Many classifications of appendicitis have been proposed, none of which can be considered completely satisfactory.

Today, the following classification is used, which reflects the main forms of appendicitis and allows you to determine the features of the operation, preoperative preparation and postoperative treatment.

There are three types of acute appendicitis:

- 1) simple or catarrhal,
- 2) destructive,
- 3) complicated.

The destructive appendicitis includes phlegmonous, gangrenous and perforated. Complicated forms of acute appendicitis include those complicated by:

- 1) peritonitis,
- 2) sepsis,
- 3) infiltration,
- 4) an abscess,
- 5) pylephlebitis.

### **Pathological anatomy**

Pathological changes that develop with acute appendicitis concern not only the appendix. The range of pathological changes is large: from slight hyperemia of the serous membrane of the appendix with catarrhal appendicitis to severe, diffuse peritonitis or pylephlebitis with the involvement of all organs of the abdominal cavity in the purulent process, accompanied by profound disruption of metabolic processes and irreparable anatomical and functional changes in vital organs.

With *simple appendicitis*, the parietal peritoneum has a normal color, and there is no effusion in the abdominal cavity at all or it is small and odorless. In the cecum and omentum, changes are not found, but sometimes their serosa is slightly hyperemic. Pathological changes are concentrated in the appendix: the serosa is hyperemic throughout or in a limited area, the appendix is dense, slightly swollen.

Changes in the mucous membrane are uneven: it is partially or throughout the edematous and hyperemic. Microscopic examination shows leukocyte infiltration in the affected parts of the process, sometimes mucosal defects covered with fibrin and cellular elements are found. In most cases, the mesentery is not changed, but signs of inflammation (edema, hyperemia) may be found in it.

More expressive changes occur with *phlegmonous appendicitis*. The parietal peritoneum is thickened, hyperemic and dull. In the abdominal cavity, as a rule, there is an effusion (serous, serous-purulent, purulent or hemorrhagic), the amount and nature of which, depending on the virulence of the infection, the duration of the disease and the reactivity of the sick person's body. All organs adjacent to the appendix are involved in the process. The appendix is thickened and tense throughout or only partially. Its serous membrane is red, and with a far-reaching process, it is yellowish - due to pus. With a total defeat of the appendix, pus accumulates in the lumen of the appendix and stretches it - an empyema is formed. The process also involves the mesentery of the appendix - it is thickened, its leaves are hyperemic and edematous. Sometimes you can see the involvement of the mesenteric root in the suppurative process. Most often, signs of a purulent inflammatory process break off at the base of the process or are limited to its distal parts. In the lumen of the appendix there is a different amount of pus with an unpleasant fecal odor. The mucous membrane is partially or completely destroyed. In the tissues involved in the purulent process, it is impossible to differentiate the layers. Microscopic examination reveals purulent fusion of tissues and a violent cellular reaction of tissues that still retain their structure.

*Gangrenous appendicitis* occurs in cases where the inflammatory process immediately or gradually leads to vascular thrombosis and malnutrition of the appendix. Changes in the parietal peritoneum depend on the duration and characteristics of the course of inflammation. It may have a normal appearance or be thickened and with a purulent fibrinous bloom.

Lightning-fast developing gangrene of the appendix do not have time to cause an inflammatory reaction of the adjacent organs and peritoneum, and therefore they often

proceed without effusion. Severe inflammatory changes in the tissues and a large amount of purulent exudate occur in cases where thrombosis and necrosis of the appendix are a consequence of its phlegmonous inflammation. The appendix with gangrene throughout or partially has a black-green color; its wall is flabby, thin, easily torn, and then a fetid brownish pus flows out of the lumen. If the gangrene of the appendix is a consequence of phlegmon, then tissue tension may persist. In such cases, necrosis is limited. The prevalence of necrosis depends on the nature of the vessels involved in the process and the type of blood supply to the appendix. It is clear that thrombosis of the appendicular artery at the base of the process with the main type of its structure will cause total necrosis. Microscopic examination reveals signs of necrosis, and purulent inflammation in the tissues that have preserved the structure.

*Perforated appendicitis* is the final stage of phlegmonous or gangrenous appendicitis. The perforation can be of various sizes and is located in any part of the process. Limited necrosis or purulent fusion of the wall leads to perforation. The purulent contents of the appendix pour out into the abdominal cavity and aggravate the process. The parietal peritoneum and adjacent organs are hyperemic and edematous. Often, during perforation, the process is surrounded by an omentum, which prevents the spread of infection through the abdominal cavity. In such cases, the omentum is swollen and hyperemic. In the abdominal cavity there is a purulent or purulent-hemorrhagic effusion, but there may be no effusion. This applies to those cases when the process is quickly delimited by an oil seal. With perforated appendicitis, the appendix most often has changes characteristic of phlegmon.

The general condition of patients with acute appendicitis is satisfactory. It becomes severe in advanced cases, when a patient with destructive forms of appendicitis is delivered 24-48 hours after the onset of the disease. It should be noted that the general condition and behavior of the patient, as well as the intensity of pain, do not always correspond to the severity and nature of the inflammatory process in the appendix. Sometimes in a patient who suffered greatly from pain and seemed rather severe, catarrhal appendicitis is found during the operation.

It is very important to conduct the most detailed, consistent examination of the patient. It is necessary to remind once again that the study of the digestive organs (and with appendicitis, all the digestive organs suffer) must begin with the oral cavity, and only after that can one proceed to the study of the abdomen and perform it according to a strict scheme: examination, active movements, percussion, palpation, auscultation, symptoms, examination through the rectum or through the vagina.

Before examining the digestive organs, the general condition of the patient is determined, the temperature is measured, the pulse and the number of breaths per minute are counted.

Tongue coated with white or grayish bloom; dryness of the tongue and teeth indicates the involvement of the peritoneum in the process. It is imperative to get a clear idea of the state of the patient's teeth, throat and oral mucosa. This is necessary not so much for diagnosis as for getting an idea about the general condition of the patient and the possible detection of other diseases.

Examination of the abdomen reveals a flattening of the right half of the abdomen and its lag in breathing. The rest of the abdomen is moderately swollen. Active movements (coughing, straining, raising the head and shoulder girdle without using the hands) are accompanied by a painful reaction in the right iliac region. Sometimes this reaction is so pronounced that patients cannot perform active movements. When they cough, they cry out and grab the abdominal wall with their hands. The study of active movements gives the doctor the opportunity to determine (without touching the patient yet) the localization of the pathological process and the severity of the pain reaction. Sharp soreness in the abdomen when coughing dictates to the doctor special care for percussion and palpation.

Percussion is performed starting from areas of the abdominal wall distant from the right iliac region according to the accepted rules. In acute appendicitis, percussion pain in the cecum is noted, and in the presence of effusion or infiltration, dullness. Superficial palpation begins with both hands, determining the soreness and severity of muscle tension. These symptoms are found in the right iliac region. If percussion showed dullness, then during

palpation it is necessary to answer the question of what it is caused by: effusion or infiltration. In the latter case, a dense immobile formation is palpated. Deep palpation should not be performed, because it causes sharp pain and is difficult to perform due to muscle tension, which increases even with a slight touch of the abdominal wall. With percussion and palpation, the site of greatest pain should be determined.

Auscultation shows some weakening of intestinal murmurs and their disappearance with peritonitis. The old authors called this terrible symptom (silence on auscultation) "deathly silence".

After completing the general examination of the abdomen, you can begin to carry out special research methods - checking the symptoms characteristic of acute appendicitis.

More than 100 symptoms of acute appendicitis have been described. Knowing all these symptoms is not only unnecessary, but also harmful. Most of them are irrelevant and only confuse the doctor's thinking and delay the final conclusion about the diagnosis and treatment. Some symptoms include tapping the patient's pelvis on a hard table, tapping a fist on the X II rib, inserting a fingertip into the inguinal canal, fourfold pressure on the navel, divided into four squares, checking the symptom of peritoneal irritation in the region of the Petit triangle, etc. Described pain points of McBurney, Kummel and Lanz have no value in the diagnosis of appendicitis. It is enough to test seven symptoms: 1) Shchetkin-Blumberg, 2) Voskresensky (slip), 3) Obratsov, 4) Sitkovsky, 5) Bartomier-Mikhelson, 6) Rovzing and 7) Ivanov.

*The symptom of Shchetkin-Blumberg* is that with the rapid removal of the fingertips pressing the anterior abdominal wall, pain occurs. This symptom must be checked very carefully, and first in the left iliac region. The abdominal wall is pressed with the fingertips of the right hand, shifting it deep into the abdomen and (not very sharply, but quickly) take the hand away from the abdomen. When the peritoneum is involved in the process at this moment, the patient feels the appearance or increase in pain. Acute appendicitis, accompanied by peritonitis, can give a positive Shchetkin-Blumberg symptom in the left iliac region. The symptom is then checked in the left and right hypochondria, and last but not least in the right iliac region. If, with careful withdrawal of the hand, there is no pain, then the symptom check is repeated and the hand is withdrawn more vigorously. Naturally, the Shchetkin-Blumberg symptom will be positive for any inflammatory process in the abdominal cavity.

The symptom of "sliding" is characteristic only for acute appendicitis. It was discovered and described in 1940 by V.M. Voskresensky. The mechanism of its action, as shown by experiments, is associated with the occurrence of a reverse blood flow through the superior mesenteric vein. *The symptom of Voskresensky* is checked as follows: the shirt is pulled with the left hand and fixed on the pubis. With the fingertips of the right hand, lightly press on the abdominal wall in the region of the xiphoid process and, during exhalation, carry out a quick uniform sliding movement from here (and not from the costal arch, as they write in some books, the authors of which therefore give an incorrect interpretation of the symptom) in the direction of the right iliac region, where the hand is detained, without tearing it off the abdominal wall (so as not to get the Shchetkin-Blumberg symptom). For comparison, a similar movement is made in the direction of the left iliac region. Voskresensky's symptom is especially valuable in the initial stage of appendicitis, when the peritoneum is not yet involved in the process and the Shchetkin-Blumberg symptom is absent.

Acute appendicitis is accompanied by muscle tension in the right half of the abdomen, which shortens the distance between the navel and the right superior anterior iliac spine. This symptom is called *Ivanov's symptom*.

*Obratsov's symptom* is associated with increased pain during palpation of the cecum with tension of the lumbar-iliac muscle. When the patient is in the supine position, the most painful place in the right iliac region is felt and the fingertips are fixed in this position. The patient is asked to raise the straightened right leg to an angle of 30 °. In this case, the soreness increases. Lowering the leg is accompanied by a decrease in pain. Obratsov's symptom is especially valuable in case of retrocecal position of the appendix.

*Sitkovsky's symptom* is considered positive in the case when, when the patient is on the left side, pain appears or increases in the right iliac region. The mechanism of this symptom is

associated with the movement of the cecum, the appendix and the tension of its mesentery. In many patients, palpation on the left side of the pain increases. This *symptom* is named after *Bartomier-Michelson*.

*Rovzing's symptom* is associated with the appearance of pain in the right iliac region with jerky shaking of the abdominal wall in the left iliac region, and during the jerks produced by the right hand, the fingertips of the left hand try to press the sigmoid colon against the back wall of the abdomen. Most surgeons, as well as the author of the symptom, explain the mechanism of pain by moving the contents of the colon (feces and gases) in the opposite direction. This interpretation of Rovzing's symptom is erroneous. The onset of pain is associated with a simple concussion of the abdominal wall and internal organs. The organs affected by inflammation react with soreness. The movement of gases and feces in the opposite direction, as well as the possibility of squeezing through the abdominal wall of the sigmoid colon, is highly doubtful.

Examination of each patient should be completed with a digital examination through the rectum in men and children and through the vagina in women. We must not forget about these research methods. They will help to recognize the pelvic position of the appendix, pelvic infiltrates and resolve some issues in the differential diagnosis of acute appendicitis with pathology of the internal genital organs in women.

An indispensable condition in the diagnosis of acute appendicitis is the study of urine and blood. Leukocytosis and a shift in the white blood cell formula to the left complement the idea of the nature of the process, and changes in the urine may indicate a pathology from the urinary system. However, even with destructive forms of appendicitis, changes in the blood can be minimal, and pathological impurities in the urine can be the result of acute appendicitis. Therefore, laboratory research methods cannot be regarded as leading in deciding the question of diagnosis and surgery.

Diagnosis of acute appendicitis in most patients is not difficult. We just need to remember about the need to use all the data that we receive when examining a patient for the recognition of acute appendicitis: from complaints to local status and additional research methods. However, differential diagnosis of acute appendicitis is often difficult, especially in women. G. Mondor wrote: "A good clinician should be able to recognize the danger from the peritoneum under the most weakly expressed signs, to localize the lesion site and give it the correct name." This is true, but not always doable. The following rule should be considered more correct: in cases that are difficult to diagnose, but in the presence of a catastrophe in the abdomen, it is not always necessary to achieve accurate recognition of the cause of this catastrophe - it is necessary to open the abdominal cavity and, at the time of rendering assistance, resolve the issue of the cause of peritonitis.

**Differential diagnosis** is based on a deep and comprehensive knowledge of all the features of the clinical course of acute appendicitis and a good knowledge of the diseases that can simulate acute appendicitis. It is impossible to fully describe the differential diagnosis of acute appendicitis - the clinical picture of this disease is too many-sided. Of course, in most patients, differential diagnosis does not cause much difficulty. In difficult cases, as already mentioned above, it is necessary to decide not about the diagnosis, but about tactics: does the patient need an emergency operation with this incomprehensible clinical picture, or does his condition allow him to continue monitoring and deepen the study.

A good acquaintance with all the features of acute appendicitis shows that this disease can simulate any disease of organs located in the abdominal cavity and in the retroperitoneal space, and, conversely, a disease of any of these organs can give a clinical picture similar to acute appendicitis. It is from this simple position that one must proceed in the differential diagnosis of the "cunning king" of surgical pathology.

Therefore, acute appendicitis should be differentiated from "foodborne toxicoinfections", "typhoid paratyphoid infection", "lead colic", pleuropneumonia, pleurisy, gastritis, gastric ulcer and duodenal ulcer and its complications, various forms of cholecystitis, cholangrea colic and acute pyelonephritis, kidney and ureteral calculi, paranephritis, cystitis, tumor and tuberculosis of the cecum, intestinal obstruction and many acute and chronic diseases of the internal genital organs in women.

Differential diagnosis with all other diseases is carried out on the principle of comparing common and non-characteristic manifestations of differentiated diseases, with the indispensable consideration of all information - from complaints to laboratory and X-ray research methods. It should be borne in mind that acute perforated appendicitis with a high position of the cecum and vermiform appendix can give a clinic of perforated stomach ulcer; a stone of the ureter, lingering in the right iliac region and causing a reaction of the peritoneum, will give positive symptoms of Shchetkin-Blumberg, Obraztsov, Sitkovsky and some others, just as the revealed significant increase in the level of blood and urine amylase does not exclude acute appendicitis, because the latter can cause reactive pancreatitis and etc.

Differential diagnosis of acute appendicitis should be carried out with five groups of diseases: with diseases of the abdominal organs, retroperitoneal organs, diseases of the chest organs, infectious diseases, and diseases of blood vessels and blood vessels.

*A perforated stomach or duodenal ulcer* differs from acute appendicitis by the sudden appearance of sharp, extremely intense pain in the epigastric region, "board-like" tension of the muscles of the anterior abdominal wall, sharp pain that occurs on palpation of the abdomen in the epigastric region and right hypochondrium, the presence of abdominal cavity, which can be determined by percussion (the disappearance of hepatic dullness) or radiographically (the presence of a light crescent stripe between the liver and the right dome of the diaphragm).

The difference also lies in the fact that in the first hours after perforation (before the development of peritonitis), the patient's body temperature remains normal. The Shchetkin-Blumberg symptom with a perforated ulcer is well defined in a large area of the epigastric region and the right hypochondrium. In differential diagnosis, one should not attach too much importance to indications of a history of peptic ulcer disease. This feature is of little value, since the possibility of perforation of an ulcer in a patient without a "ulcerative" history (perforation of a "dumb" ulcer) is well known. At the same time, the presence of a peptic ulcer in a patient does not exclude the possibility of developing acute appendicitis.

*Acute cholecystitis* differs from acute appendicitis by the localization of pain in the right hypochondrium with a characteristic irradiation to the right shoulder, shoulder girdle, scapula, repeated vomiting of bile, which does not bring relief. Pain occurs most often after an error in the diet. On palpation of the abdomen, pain, muscle tension and the Shchetkin-Blumberg symptom are determined in the right hypochondrium. In addition, it is often possible to palpate an enlarged, tense gallbladder. The body temperature of patients with acute cholecystitis is usually higher than with appendicitis. It is quite difficult, and sometimes almost impossible to distinguish acute cholecystitis from acute appendicitis in the subhepatic location of the appendix. In doubtful cases, laparoscopy helps.

*Acute pancreatitis* is sometimes difficult to differentiate from acute appendicitis. In acute pancreatitis, vomiting, as a rule, is repeated, pains are usually localized in the epigastric region, they are very intense, here, on palpation, a sharp pain is clearly defined, a pronounced protective tension of the abdominal muscles. The body temperature remains normal. Pancreatitis is characterized by some bloating as a result of intestinal paresis. On X-ray examination, a gas-inflated, parietic transverse colon is visible. Soreness on pressure in the left costal-vertebral angle is a characteristic symptom of acute pancreatitis. Determination of the level of diastase in urine and blood usually makes it possible to clarify the diagnosis, its increase is a pathognomonic symptom of acute pancreatitis.

*Crohn's disease* (nonspecific inflammation of the terminal ileum) and *inflammation of Meckel's diverticulum* can produce a clinical picture similar to acute appendicitis, so differential diagnosis of these diseases before surgery is difficult. If, during the operation, changes in the appendix do not correspond to the severity of the clinical picture of the disease, the ileum should be examined for 1 m in order not to miss Crohn's disease or inflammation of the Meckel diverticulum.

*Acute intestinal obstruction* usually needs to be differentiated from acute appendicitis in cases where it is caused by intussusception of the small intestine into the blind, which is more common in children. In this case, the appearance of cramping pains is characteristic, however, there is no tension in the abdominal muscles, and the symptoms of irritation of the peritoneum

are weakly expressed. On palpation of the abdomen, a slightly painful mobile formation is determined - invaginate. In addition, there are distinct signs of intestinal obstruction - bloating, delayed discharge of stool and gas, percussion abdominal definition fissile tympanitis. Quite often, mucus with blood (the color of "raspberry jelly") is detected in the rectum.

*Acute adnexitis* can cause significant difficulties in differential diagnosis with acute appendicitis. For acute adnexitis, pain in the lower abdomen is characteristic, radiating to the lower back or perineum, and an increase in body temperature. When interviewing patients, one can establish in the past the presence of inflammatory diseases of the female genital area, menstrual disorders. On palpation, tenderness is determined in the lower abdomen, above the pubis on both sides (which may be the case with the location of the appendix in the small pelvis), however, the tension of the muscles of the abdominal wall, so characteristic of acute appendicitis, is usually absent in acute adnexitis.

Of great importance in the differential diagnosis of acute adnexitis are studies through the vagina and through the rectum, which should be performed in all women admitted to the hospital in connection with suspected acute appendicitis. In this case, it is possible to determine the soreness of the uterine appendages, tissue infiltration, soreness when pressing on the cervix. Pathological discharge from the genitals testifies in favor of acute adnexitis. A disturbed ectopic pregnancy has a number of signs that distinguish it from acute appendicitis. Already upon questioning the patient, it is possible to establish a delay in menstruation or a change in the nature of the last menstruation (amount of blood flowed out, duration of menstruation), bloody discharge from the vagina. Characterized by the sudden appearance of rather severe pain in the lower abdomen, radiating to the perineum, rectum, nausea, vomiting, fainting. On palpation, tenderness is determined in the lower abdomen, there is no tension in the muscles of the abdominal wall. With significant intraperitoneal bleeding, weakness occurs, pallor of the skin, tachycardia, a decrease in blood pressure, can be detected dullness in the sloping parts of the abdomen, a decrease in the blood level of hemoglobin and hematocrit. Examination through the vagina allows you to establish pain when pressing on the cervix, sometimes - the overhanging of the vaginal vaults.

In rectal examination, the overhang of the anterior rectal wall is determined as a result of the accumulation of blood in the small pelvis. Ovarian rupture gives a clinical picture similar to a disturbed ectopic pregnancy. Puncture of the posterior fornix of the vagina produces unchanged blood.

*Kidney stone disease* leads to the development of renal colic, which often has to be differentiated from acute appendicitis, especially with a retrocecal location of the appendix. Renal colic is characterized by the appearance of very intense, periodically intensifying, paroxysmal pain in the lumbar region, radiating to the external genital organs and the anterointernal surface of the thigh, and frequent urination.

When examining the patient, one can reveal a positive Pasternatsky symptom (pain when tapping in the lumbar region), absence or weak tension of the muscles of the abdominal wall. Unchanged erythrocytes are determined in urine. Chromocystoscopy and the Lorin-Epstein test help to clarify the diagnosis. Chromocystoscopy in renal colic allows you to establish a delay in the discharge of colored urine from the mouth of the right ureter, which does not happen in acute appendicitis. Injection of several milliliters of novocaine into the right spermatic cord (Loreen-Epstein test) leads to a rapid relief of an attack of renal colic.

*Pleurisy* and *right-sided pneumonia* can cause diagnostic errors, especially in children, as they are sometimes accompanied by abdominal pain and muscle tension in the abdominal wall. A careful examination of the patient, the data of a physical examination of the lungs allow avoiding a diagnostic error. With pleuropneumonia there is a cough, shortness of breath, cyanosis of the lips, wheezing is heard in the lungs, and sometimes the noise of pleural friction.

With *myocardial infarction*, pain in the upper abdomen sometimes occurs. The tension of the muscles of the abdominal wall is either absent or very small.

*Acute gastroenteritis* and *dysentery* are distinguished from acute appendicitis by the cramping nature of abdominal pain, repeated vomiting of food, and diarrhea. Usually, patients

indicate the intake of poor quality food. On palpation of the abdomen, it is not possible to accurately determine the place of greatest pain, there is no tension in the muscles of the abdominal wall and symptoms of irritation of the peritoneum. In a blood test, the normal number of leukocytes is determined.

With *hemorrhagic capillarotoxicosis* (Shenlein-Henoch disease), small hemorrhages may occur under the serous membranes of the abdominal organs. This leads to the appearance of abdominal pain that has no clear localization. The greatest hemorrhages are usually seen on the skin of the trunk and limbs.

**Treatment.** Currently, the only correct method of treating acute appendicitis is an operative one - appendectomy. The sooner the operation is performed, the fewer complications and the better the results. Every patient with acute appendicitis, regardless of age, sex and duration of the disease, is subject to immediate surgical treatment.

The only contraindication to surgery is the infiltrative form of appendicitis, and even then only in those cases when the process is localized and there are no signs of increasing peritonitis.

The medical literacy of the population and people's attitude to their health are of great importance. A sick person with any abdominal pain should only consult a doctor, and it is best to see an emergency doctor. Unfortunately, not always patients with abdominal pain, especially not very severe ones, immediately consult a doctor. It is not uncommon for a sick person, his relatives or neighbors, considering themselves to be quite knowledgeable in medicine, themselves take up the treatment and vigorously carry it out, using gastric lavage, enemas, abdominal massage, and sometimes throwing a pot on the stomach like a blood-sucking jar. And this "treatment is carried out until the patient becomes completely ill and the need to call a doctor becomes obvious even for home" experts "in medicine.

Almost all patients with acute appendicitis are operated on under local infiltration anesthesia according to A.V. Vishnevsky. When operating on children of the first years of life, unbalanced people, as well as with difficulties during the operation, and even in cases where these difficulties are assumed, general modern anesthesia should be applied. Recently, the indications for the use of general anesthesia began to expand.

It is recognized by most surgeons that the best access to the cecum is provided by an oblique McBurney-Dyakonov-Volkovich type incision in the right iliac region. An oblique incision is made parallel to the pupar ligament perpendicular to the line running from the navel to the right superior iliac spine, and 2 to 3 cm medially from the latter. The incision level depends on the position of the cecum. In the normal position of the cecum, a classic incision is made (1/3 incision above the line drawn from the navel to the upper spine).

It is very important to correctly determine the length of the cut. It must provide free work in the abdominal cavity. If inconveniences and difficulties arise during the operation, the incision should be immediately widened up or down.

Often, when the process spreads to the lateral canals and to the pelvic region, a mid-median laparotomy is used for a complete revision of all parts of the abdominal cavity. The Dyakonov-Volkovich-McBourney incision opens the abdominal cavity layer by layer. The caecum is most often adjacent to the wound, but often the loops of the small intestine or the omentum.

The cecum is determined by tapes taenia e , however, it must be remembered that with a long mesentery, the sigmoid colon may be in the right ileum. It is distinguished by its fatty suspensions. The adjacent organs are very carefully removed with a tupfer, the cecum is found and pushed back. A slight turning of the patient on the left side helps in finding the cecum. The dome of the cecum together with the appendix is brought out into the wound, the vessels of the mesentery are ligated, the appendix is tied at the base and cut off, and its stump is immersed with purse string and Z-shaped sutures. Check the thoroughness of hemostasis.

With destructive forms of acute appendicitis, purulent effusion and a significant amount of fibrinous-purulent overlays on adjacent organs after appendectomy, the abdominal cavity is drained.

If, with a sufficiently mobile cecum, the appendix is fixed in depth and inaccessible for removal into the wound, appendectomy is performed in a retrograde manner. The process is



squeezed at the base, tied, crossed, processed and immersed in the described way. Then the cecum is placed into the abdominal cavity and the mesentery is ligated and the process removed, performing all the manipulations deep in the abdominal cavity. In these cases, enlargement of the incision and drainage of the abdominal cavity are required.

Today, there is a tendency to switch to minimally invasive methods of intervention, using special instruments. Laparoscopic appendectomy is one of them. To perform this type of intervention, the abdominal cavity is inflated with gas - in 95% of cases, carbon dioxide is used. This is done in order to raise the domed abdominal wall above the organs and provide good visibility and access to them.

After the introduction of the laparoscope, the abdominal cavity is examined and 2 to 4 more trocars are inserted under visual control. The instruments allow, in principle, to perform all the same manipulations as with the traditional surgical technique. Bleeding from large vessels can be stopped by clipping (the imposition of titanium clips), bandaging them with suture material.

**Postoperative period.** In the postoperative period, patients do not receive special treatment. Prescribe only physiotherapy exercises and painkillers at night (if necessary). For special indications, cardiovascular and other drugs are given. The most important is physiotherapy exercises, which should be carried out for all patients. Patients can walk the next day after the operation. It is necessary to allow getting up and walking taking into account the individual characteristics and condition of the patient. The stitches are removed 5-6 days after the operation.

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#### TOPIC № 5. Complications of acute appendicitis

**The lecture is dedicated to:** *for 4th year students of the faculty*

**Substantiation of the topic:** Acute appendicitis worried surgeons for many decades. Despite the fact that a large army of surgeons around the world is fighting against the diseases of this small organ, which has no independent significance, it is still far from complete victory.

One of the greatest Russian surgeons, I.I.Grekov, called acute inflammation of the appendix a chameleon-like disease that is not found where it is supposed, and is found where it is not thought of at all. This can be fully attributed to the treatment of appendicitis: the removal of the appendix is considered an easy operation available to 4-5 year students, but there are times when this operation requires great skill and experience of a respectable surgeon.

**The purpose of the lecture:** **To** acquaint students with various forms of complications of acute appendicitis, methods of diagnosis and clinical symptoms, as well as methods of their treatment.

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** To acquaint students with the types of complications of acute appendicitis, clinical picture and differential diagnosis, as well as treatment methods.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Types of complications of acute appendicitis - 10 min
2. Appendicular infiltrate - 25 min
3. Appendicular infiltrate, treatment - 10 min
4. Appendicular abscess - 10 min
5. Pylephlebitis - 10 min
6. Peritonitis, retroperitoneal phlegmon - 5 min
7. Postoperative complications - 10 min.

Acute appendicitis is a nonspecific inflammation of the appendix, the most common surgical disease. Appendicitis has worried surgeons for decades. Despite the fact that a large army of surgeons around the world is fighting against the diseases of this small organ, which has no independent significance, it is still far from complete victory.

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**Complicated forms of acute appendicitis** have their own pathological features. The very name of these forms indicates the nature of the complications that develop in acute appendicitis. Most often, complicated forms occur with destructive appendicitis.

Diffuse inflammation of the peritoneum occurs with significant virulence of the infection and a prolonged course of acute appendicitis. In these cases, the protective reactions of the body are exhausted, and the local inflammatory process in the abdominal cavity becomes widespread - all organs of the abdominal cavity are involved in the process, and the whole body suffers heavily from increasing intoxication, dehydration and profound changes in all types of metabolism.

Sometimes, in the presence of a virulent infection and a significant decrease in the body's defenses, acute inflammation of the appendix, which is not promptly removed by surgery, can proceed as *sepsis and septicopyemia*. Such cases are rare. Most often, sepsis and septicopyemia are complicated by long-term peritonitis and abscesses.

Quite often there are *infiltrative forms of acute appendicitis*, which have a peculiar pathological picture, an unusual clinical course and require a special approach to treatment. The beginning of the infiltrative form is the destructive forms of appendicitis in cases where the process is quickly delimited by the omentum and nearby tissues and organs, which are subsequently also involved in the inflammatory process. There is a sharp edema of the cecum, loops of the small intestine and omentum, they lose the border between themselves. Inflammatory tissue infiltration transforms these organs into one continuous

conglomerate, tightly connected to the anterior, posterior or lateral walls of the abdomen. Infiltrates come in various sizes. They can be up to 5-6 cm in diameter and cannot be detected by palpation, and sometimes reach enormous sizes, occupying the entire right half of the abdomen from the small pelvis to the hypochondrium.

An infiltrate can have two outcomes: resorption or abscess formation. In the case of abscess formation, which sometimes occurs quite quickly, they speak of acute appendicitis, *complicated by abscesses*. Features of the abscess, its localization and size depend on the virulence of the infection, the position of the appendix and the reactivity of the organism. With the formation of an infiltrate, the acute process is quickly separated from the abdominal cavity and is local in nature. However, despite the formation of an infiltrate, the inflammatory process can progress and cause a clinic of increasing *diffuse peritonitis*. These forms of infiltration are of great practical importance - the tactics in their treatment are different.

*Pylephlebitis* is a very rare complication. This is a purulent thrombophlebitis that spreads up the superior mesenteric vein and passes to the portal vein and liver tissue (multiple abscesses are formed). The course is extremely severe, ending in death in most patients.

A patient with simple appendicitis, with the formation of a mucous or fecal plug obturating the lumen of the appendix, has all the conditions for the development of phlegmon or empyema of the appendix, and the phlegmonous form of appendicitis with virulent flora, tissue melting and thrombosis will turn into perforated or gangrenous. These examples not only follow from the foundations of the theory of inflammation, but are also confirmed by everyday clinical observations. Therefore, there is no reason to categorically declare that "all forms of acute appendicitis develop in the first 24 hours and are completely independent"

**Clinic and diagnostics.** The disease begins in full health, without any precursors, most often in the afternoon or at night. There are cutting or pressing pains in the epigastric region, then spreading throughout the abdomen, and after a few hours localized in the right iliac region. Sometimes the pains are cramping. The onset of pain in acute appendicitis in the epigastrium is very typical and is explained by the spread of pain from the appendix along the superior mesenteric plexus. The peculiarity of innervation explains the irradiation of pain throughout the abdomen. The pains are moderate, but sometimes very strong or weak, little bothering the patient. The intensity of pain does not always correspond to the severity of the process. Pain can occur immediately in the right iliac region and only then radiate to various parts of the abdomen. It is clear that the localization and spread of pain is associated with the position of the appendix. So, with the retrocecal position of the appendix in contact with the ureter, pain can radiate to the lower back, to the external genital organs and be accompanied by frequent urination, sometimes simulating an attack of renal colic. The high position of the appendix can give symptoms of cholecystitis with a typical spread of pain along the phrenic nerve.

In the vast majority of patients, pain radiates to the right leg and often impedes walking. The lumbosacral muscle straining when walking displaces the cecum and increases pain. The pains are accompanied by nausea and vomiting, sometimes repeated. Vomiting does not give relief, which is characteristic of acute appendicitis. The constant companions of acute appendicitis are stool retention, gas and bloating. It is very rare and predominantly children have loose stools.

The disease is accompanied by weakness, malaise, sleep disturbance and fever. The temperature rises to 38-38.5 ° and almost never reaches high numbers. The pulse quickens according to the temperature rise. The tendency to hyperthermia in acute appendicitis is found in children.

An objective study can find many symptoms that indicate the presence of acute appendicitis. The patient enters the emergency room or the doctor's office, carefully stepping on his right leg and holding the right half of the abdomen with both hands. The face is focused, you can read the periods of increased pain, coinciding with sudden movements and careless changes in body position. If the patient is offered to lie down on the couch, then he lies down slowly, carefully laying on his right side, and pulls his knees to his stomach. In this case, you can hear faint moans and light screams caused by increased pain when moving.

**Appendicular infiltration and abscesses.** The clinical picture in patients with infiltration begins with the usual attack of acute appendicitis. The infiltrate is formed 2-3 days after the attack. Consequently, this complicated form of acute appendicitis appears in patients admitted to the hospital at a later date, when the inflammatory process is localized and acquired a different form.

The general condition of the patients is satisfactory; by the time of admission to the clinic, abdominal pains become weaker. The signs of an acute inflammatory process come to the fore: high temperature (up to 38-39 °), corresponding pulse, facial hyperemia. In addition to moderate and sometimes quite severe throbbing pains and fever, patients complain of stool retention, weakness, and malaise. Tongue coated with white, moist. The abdomen is of the correct shape or protruding in the right iliac region, which is reflected in the participation of the anterior abdominal wall in breathing. Percussion reveals pain and dullness in the right iliac region, and palpation reveals a dense motionless painful formation of various sizes. The boundaries of the infiltration are usually clear. Symptoms of peritoneal irritation are absent or mild. There are no signs of inflammation of the peritoneum in other parts of the abdomen or they are insignificant. Stool is delayed, urination does not suffer. With a low location of the infiltrate, there may be tenesmus, frequent stools and frequent painful urination.

The further course of appendicular infiltration can go along three paths: 1) the progression of the process with an increase in infiltration and an increase in signs of diffuse peritonitis; 2) resorption; 3) abscess formation.

In the first case, the patient's condition worsens, the pain increases, the temperature stays at high numbers, repeated frequent vomiting joins, the tongue becomes dry, bloating appears, gases do not escape, there is no stool, the daily amount of urine decreases, pathological changes in the blood and urine increase.

With a favorable course of the disease, the pain gradually subsides, the temperature drops to normal, pathological changes in the blood disappear, intestinal function is restored, the patient's condition improves, the infiltration decreases and disappears within 10-14 days.

In some patients, abscess formation of the infiltrate occurs: with a general satisfactory condition, a high temperature remains (rises in the evenings), they are pale, sluggish, lose weight, the infiltrate does not tend to decrease, its boundaries become clearer.

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## TOPIC № 6 . Peptic ulcer of the stomach and duodenum

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Peptic ulcer of the stomach and duodenal ulcer is one of the main problems of gastroenterology. According to V.Kh. Vasilenko and I.G. Kochergin (1991), in Russia in 1985 there were 4 cases of peptic ulcer disease per 1000 population, and in 1989 - 4.3 cases.

If at the end of last and the beginning of the century was dominated by stomach ulcers and ulcers ratio 12 duodenal quiche increased considerably ki

**The purpose of the lecture: To** acquaint students with the etiology and pathogenesis of gastric ulcer and 12 p. Intestines, methods of diagnosis and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives: To** acquaint students briefly with the anatomy of the stomach and 12 p. Of the intestine, as well as the methods of their diagnosis. To acquaint them with the etiology, pathogenesis, classification, diagnosis and differential diagnosis of gastric ulcer and 12 p. Intestines. To acquaint the principles of pre- and postoperative management of patients operated on for peptic ulcer disease.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomical and topographic data of the stomach and 12 p. Of the intestine - 5 min.
2. Definition, classification of ulcer and duodenal ulcer - 5 min.
3. Etiology, pathogenesis of peptic ulcer and duodenum - 15 min.
4. Clinic YABZH and KDP - 20 min.
5. Diagnostic methods - 15 min.
6. Differential diagnosis - 15 min.
7. Surgical methods of treatment of ulcer and duodenal ulcer - 20 min.

**Anatomical and physiological features of the stomach and 12 p.intestines**

The stomach is located in the upper floor of the abdominal cavity - above the mesentery of the transverse colon. It distinguishes between the anterior and posterior walls, the lesser and greater curvature and five sections: the entrance part (cardia), the fundus, the body of the stomach, the pre-gate (antral) part and the gatekeeper or gatekeeper (pyloric canal).

The border between the stomach and duodenum is the pyloric sphincter. The duodenum 12 bends around the head of the pancreas and forms a duodenojejunal bend near Treitz's ligament. The length of this initial section of the small intestine is 25-30 cm. In the duodenum, three parts are distinguished: upper, descending and lower. In the descending part of the duodenum, on the posterior medial wall, there is a large duodenal papilla - the place where the common bile duct and the main pancreatic duct enter the intestine . The stomach receives arterial blood supply from the branches of the celiac trunk. The vessels of the stomach anastomose with each other and with the branches of the superior mesenteric artery, form a branched network of intraorgan vessels. Veins correspond to the location of the arteries and are tributaries of the portal vein. The venous plexuses in the submucosal layer around the cardia connect the portal vein system to the superior vena cava system. In portal hypertension, these anastomoses can become a source of bleeding. The study of areas of lymphatic drainage is of practical importance when performing radical operations for stomach cancer.

The innervation of the stomach is carried out by intramural nerve plexuses (submucosal, intermuscular, sub-serous), vagus nerves and sympathetic nerves. The vagus nerves with the anterior and posterior trunks extend along the esophagus to the stomach. Above the cardia, the anterior (left) trunk gives off the hepatic branch, and the celiac branch departs from the posterior (right) trunk to the celiac node. The left vagus nerve may split into two or three trunks before passing through the esophageal opening of the diaphragm . Starting from the level of the cardia, thin branches extend from the main trunks, heading along small blood vessels to the lesser curvature of the stomach. Each trunk of the vagus nerve ends, respectively, with an anterior and posterior branch of Latarget.

According to the secretory and endocrine function, there are three glandular zones in the gastric mucosa.

1. Cardiac glands secrete mucus, due to which the sliding of the food lump is provided.
2. The fundus, or main, glands are built of four types of cells. The main cells secrete the proenzyme pepsin - pepsinogen. Parietal cells (parietal) produce hydrochloric acid and

intrinsic Kestl factor. The accessory cells secrete soluble mucus that has buffering properties. Undifferentiated cells are the starting point for all other mucosal cells.

3. The antral glands secrete soluble mucus with a pH close to that of the extracellular fluid and the hormone gastrin from endocrine G-cells.

In a healthy person at rest, about 50 ml of gastric juice is secreted within an hour. The production of gastric juice increases in connection with the digestion process and as a result of the body's reaction to the action of harmful factors (mental and physical). The secretion of gastric juice associated with food intake is conventionally divided into three phases: cerebral (vagal), gastric and intestinal.

In the stomach of a healthy person, the aggressive properties of the acid-peptic factor of gastric juice are eliminated due to the neutralizing effect of food intake, saliva, secreted alkaline mucus, duodenal contents thrown into the stomach, and as a result of the influence of pepsin inhibitors.

Motor function outside the phase of digestion, the stomach is in a collapsed state. During the act of eating, due to a change in muscle tone, the gastric reservoir can hold about 1500 ml without a noticeable increase in intracavitary pressure. While the food is in the stomach, two types of movements are observed: tonic and peristaltic.

### **Special research methods**

Analysis of gastric juice. To study the secretion of gastric juice, sounding of the stomach with a thin probe is used. Before starting the study, the contents accumulated in the stomach are removed through the probe. Explore "basal" and stimulated secretion after the introduction of the stimulant. The secretion of gastric juice on an empty stomach is carried out mainly as a result of the influence on the secretory apparatus of the stomach of the vagus nerves, therefore, according to the indicators of "basal" secretion, one can indirectly judge the state of the tone of the vagus nerves. Pentagastrin, histamine, and insulin are used as stimulants of gastric secretion. Histamine is a physiological stimulator of the secretion of hydrochloric acid by the fundic glands. The use of Kay's "maximum" histamine test makes it possible to determine the maximum possibilities of acid production in the gastric mucosa. Insulin stimulates the secretory function of the stomach as a result of hypoglycemia, which causes excitation of the centers of the vagus nerves.

Normal indicators of secretion of free hydrochloric acid: "basal" secretion up to 5 mmol / h, stimulated secretion - 16-25 mmol / h.

X-ray examination is the first important method for examining the stomach and duodenum, used to identify the location, nature, extent of pathological changes and functional disorders. An aqueous suspension of barium sulfate (100 g of barium sulfate per 80 ml of water) is used as a contrast agent.

Esophagogastroduodenoscopy helps to clarify and supplement the X-ray data. This method is crucial in the diagnosis of malignant neoplasms due to the possibility of gastrobiopsy for cytological and histological examination of the material obtained. During endoscopic examination, it is possible to perform a pH meter and measure the intramural potential difference in the esophagus, in different parts of the stomach and in the duodenum.

### **Peptic ulcer and 12 duodenal ulcer**

Peptic ulcer and 12 duodenal ulcer is one of the main problems of gastroenterology. According to V.Kh. Vasilenko and I.G. Kochergin (1991), in Russia in 1985 there were 4 cases of peptic ulcer disease per 1000 population, and in 1989 - 4.3 cases.

If at the end of last and the beginning of the century was dominated by stomach ulcers and ulcers ratio 12 duodenal quiche increased considerably ki

Women suffer from peptic ulcer disease less often than men. Many researchers explain this by the biological properties of sex hormones, which is confirmed by the favorable course of peptic ulcer disease during pregnancy. Currently, the ratio of men and women with duodenal ulcer disease is 4: 1, and with gastric ulcer is 2: 1.

Peptic ulcer and 12 duodenal ulcer is a heterogeneous, chronic recurrent disease with varying frequency, with different variants of its course and progression, leading to serious complications in some patients.

Many theories have been proposed for the pathogenesis of peptic ulcer disease, but the pathogenesis of peptic ulcer disease is complex and in many respects not entirely clear. Genetic predisposition, imbalance between the factors of aggression and defense, the presence of *Helicobacter pylori* (HP) are the three main factors that are currently most often considered at the basis of the appearance of peptic ulcer disease and the occurrence of its relapses. Along with many reasons that, in isolation or in some combination, may underlie the onset and progression of peptic ulcer disease, one of the important factors determining its development is the periodic imbalance between the factors of aggression and defense.

The well-known principle of Schwartz, put forward back in 1910, "without acid, there is no ulcer" - it would seem that it has stood the test of time, but an increase in acidity alone is not yet a convincing cause of stomach and duodenal ulcers.

Among the protection factors, the most often distinguished are the resistance of the mucous membrane to the effects of aggressive factors, the presence of mucus, which is able to neutralize acid and inhibit peptic digestion, regeneration of the epithelium, sufficient blood supply, the neutralizing ability of the "mixture" consisting of the contents secreted by the duodenum, bile bladder and pancreas. Motor disorders in the gastroduodenal system are also of some importance in the pathogenesis of peptic ulcer disease.

Not excluding other etiological risk factors for peptic ulcer disease, nevertheless, according to modern concepts, HP is one of the main etiological factors for the onset and recurrence of peptic ulcer disease in most people. The main thing in ulcerogenesis is a change in signaling systems caused by HP. Usually, as the age of patients increases, the frequency of contamination by HP of the gastric mucosa appears and increases. However, with the emergence and progression of atrophy of the gastric mucosa, which is often observed in elderly and senile patients, the frequency of HP contamination begins to decrease: the conditions for the existence of HP gradually decrease or disappear (primarily due to excretion of the gastric mucosa).

The appearance of hypoxia is one of the main conditions for the formation of so-called senile ulcers. Tissue hypoxia with subsequent disturbance of bioenergetics and oxidative processes is one of the important pathogenetic mechanisms of development and chronicity of peptic ulcer disease, especially in elderly and senile patients.

Localization: chronic duodenal ulcer in 94% of patients is localized in the intestinal bulb (bulbous ulcer). There can be two ulcers at the same time on the front and back walls ("kissing ulcers"). Rarely, ulcers develop below the bulb (extrabulbous ulcers). The diameter of the ulcer usually does not exceed 1.5 cm.

Clinical picture and diagnosis: duodenal ulcer disease begins, as a rule, at a young and middle age. Mostly men get sick. The leading symptom of duodenal ulcer is pain in the epigastric region. Analysis of the anamnestic characteristics of the pain syndrome allows us to make a fairly reasonable assumption about the presence of duodenal ulcer disease. Characterized by the periodicity of the course of the disease with seasonal exacerbations (in the spring-autumn periods), the daily rhythm of pain, the connection of pain with food intake. Patients with peptic ulcer disease of the duodenal ulcer develop late pain - 1/2 - 3 hours after eating, night and hunger pains. Pain usually subsides after eating, vomiting, and taking antacids. Heartburn is one of the most common symptoms, it can turn into a burning pain sensation, it has a daily rhythm of occurrence.

Vomiting occurs at the height of the pain, brings relief to the patient. Vomit has a sour taste, a large amount of gastric contents without food admixture is observed with hypersecretion of gastric juice.

An objective study of patients does not reveal pathognomonic signs. Patients with asthenic constitution predominate. Nutrition of patients is normal, often increased due to frequent meals. Less often, weight loss is noted as a result of the development of

complications (stenosis, bleeding, debilitating pain during the penetration of the ulcer, sleep disturbance during night pain). Tongue coated with white bloom. On palpation of the abdomen, soreness and muscle tension in the right upper quadrant is determined, in the same area, a zone of percussion pain is found.

Esophagogastroduodenoscopy is the most informative research method that allows diagnosing duodenal ulcer and associated lesions of the esophagus and stomach (esophagitis with and without cardia disturbances, gastritis, bulbitis, combination of ulcers with erosions).

The next special research method used to diagnose duodenal ulcer is X-ray. Direct radiological signs of an ulcer: "relief-niche" or "niche", the radial convergence of the folds of the mucous membrane to the ulcer, cicatricial deformation of the duodenal bulb.

In case of duodenal ulcer disease, hypersecretion, high rates of acid production on an empty stomach and after stimulation with histamine are often found.

**Differential diagnosis:** the diagnosis of duodenal ulcer with typical clinical manifestations is not difficult - the seasonal frequency of the disease, the daily rhythm of pain associated with food intake are characteristic of this disease. However, it must be borne in mind that the pain syndrome characteristic of a duodenal ulcer can be observed with the localization of an ulcer in the stomach, as well as with the development of a primary ulcerative form of stomach cancer.

The clinical course of duodenal ulcer in cases where paroxysmal pain is localized in the right hypochondrium may resemble cholelithiasis, chronic cholecystitis. However, with peptic ulcer disease there is a seasonality of exacerbation of the disease lasting 3-4 weeks, a daily circadian rhythm of pain, disappearance of pain after vomiting, while hepatic colic occurs sporadically after taking fatty fried foods, the pain does not disappear after vomiting. During an attack, patients are restless, looking for a comfortable position, attacks are short-lived. The use of antispasmodics relieves pain. For the differential diagnosis, the results of an X-ray examination of the stomach, duodenum and cholecystography are important.

Chronic pancreatitis, in which increased pain in the upper abdomen is associated with food intake, may have similarities with duodenal ulcer disease. However, in chronic pancreatitis, the pain often takes on a shingles in nature, does not disappear from taking antacids, and may increase after vomiting.

Treatment: the general principles of conservative and surgical treatment of duodenal ulcer are based on eliminating the action of the acid-peptic aggressive factor on the mucous membrane of the duodenum. Conservative treatment includes nutritional therapy, drugs that inhibit acid production, antacids, drugs that improve the state of the protective barrier of the mucous membrane, increase the regeneration of the mucous membrane, sedatives. In the early stages of the disease in 70% of patients, complex medication and spa treatment provides a lasting positive effect.

Indications for surgical treatment of a patient with duodenal ulcer are: failure of complex conservative treatment, frequent exacerbations of the disease, which reduce the patient's ability to work; callous ulcers, penetrating; multiple ulcers with high acidity of gastric juice; a history of repeated bleeding; recurrence of peptic ulcers after suturing a perforated ulcer in the anamnesis.

The purpose of the surgical treatment of duodenal ulcer is to protect the patient from life-threatening complications from ulcer perforation, profuse bleeding, stenosis, and to ensure the prevention of recurrence of the disease.

Surgical treatment of duodenal ulcer should be aimed at reducing the production of hydrochloric acid. This can be achieved in various ways: extensive distal gastrectomy, vagotomy. When resecting the stomach, the antrum, which produces gastrin, is removed, and a significant part of the body of the stomach, which is an acid-producing zone, inevitably intersects the branches of the vagus nerves when mobilizing and crossing the stomach along the lesser curvature. After gastrectomy continuity gastrointestinal reduced with



gastrodoudeno-anastomosis by Method-I or Billroth gastrojejunal anastomosis by Method Billroth-I I .

The advantage of the Billroth-I method is the preservation of the passage of food through the duodenum. However, this method is not always feasible due to the presence of infiltration, cicatricial deformity of the duodenum, because of the possibility of anastomosis tension and the danger of suture divergence.

Relapses of ulcers occur in 1-7% of patients. Postoperative mortality is 3-5%. In the first year after gastric resection, about half of the operated patients are disabled. In 10-15% of those who underwent gastric resection, post-gastro-resection syndromes develop, the severity of which often significantly exceeds the manifestations of peptic ulcer disease and is the cause of repeated operations and disability. To reduce acid production by the gastric glands, vagotomy is used. The vagus nerves are the secretory and motor nerves of the stomach.

The secretory branches innervate the acid-producing zone of the mucous membrane of the body and fundus of the stomach, the motor branches innervate the antral-pyloric section of the stomach.

Currently, the following types of vagotomy are common in clinical practice:

- a) bilateral trunk vagotomy,
- b) bilateral selective gastric vagotomy,
- c) proximal selective gastric vagotomy.

With stem and selective gastric vagotomy, along with a decrease in the secretory function of the stomach, its motor function is disrupted, therefore, to prevent stagnation in the stomach, they must be supplemented with a draining stomach operation (pyloroplasty according to Heinecke-Mikulich, according to Finney, according to Judd, as well as gastroduodenostomy according to Zhabuli).

### STOMACH ULCER

Distinguish ( Johnson , 1965) three types of gastric ulcers: type I — ulcers of lesser curvature; II type - combined peptic ulcer of the stomach and duodenal ulcer; Type III - prepyloric ulcers. Ulcers of the lesser curvature of the stomach occur 4 times less often than duodenal ulcers, mainly in people over 40 years old. It accounts for 57% of all gastric ulcers.

Pathogenesis. Etiological moments are duodenogastric reflux, stasis in the antrum, damage to the mucous barrier. Sometimes factors such as rough food, alcohol, smoking are important . In the development of mediogastric ulcer, the weakening of the protective mechanisms of the gastric mucosa against the action of the acid-peptic factor is of predominant importance . Duodenogastric reflux is one of the causes of chronic antral gastritis and stomach ulcers. Under physiological conditions, the antrum and the pyloric sphincter prevent the reflux of duodenal contents into the stomach. The mechanism of development of duodenogastric reflux is associated with impaired antroduodenal motility. With insufficiency of the pyloric sphincter, an excess amount of duodenal contents enters the stomach. Prolonged contact of bile and pancreatic juice with the gastric mucosa leads to the development of gastritic changes in the mucous membrane with intestinal metaplasia of the epithelium. Bile releases gastrin and histamine from the mucous membrane, which stimulate the secretion of hydrochloric acid and pepsin. The harmful effect of bile on the gastric mucosa is due to the fact that bile washes mucus from the surface of the mucous membrane, causing cytolysis of epithelial cells .

Clinic, diagnosis: ulcer of the lesser curvature of the stomach begins more often in people over 40 years old. The main symptom of the disease is early pain in the epigastric region. Pain occurs immediately after eating or after 15-45 minutes. The closer the ulcer is to the cardia , the shorter time after eating the pain occurs. The intensity of the pain is different, aching, pressing pain, as in gastritis, or rather intense forcing the patient to take a half-bent position, press the abdominal wall with his hand. Heartburn, sour belching often occurs. Occasionally vomiting occurs at the height of pain .

Endoscopic examination with biopsy gives an accurate diagnosis in 95% of cases, cytological examination in 70% of cases. However, false-negative results (5-10%)

are possible when the lesion is malignant, and the histological examination of the biopsy does not reveal it.

X-ray examination. A direct radiological sign of an ulcer is a "niche" against the background of the stomach wall in the form of a crater filled with barium or a "relief niche" in the form of a barium spot. The folds of the mucous membrane converge to the location of the "niche" .

Treatment: persistent cure of stomach ulcers with conservative measures is quite rare. Recurrence of the disease and various complications (bleeding, malignancy) occur in 75-80% of patients.

Surgical treatment is indicated for patients: a) with a benign ulcer, which does not heal, despite the complex conservative treatment for 8 weeks; b) old age with reduced gastric secretory function, especially in the presence of relapses and complications in the anamnesis; c) with chronic recurrent ulcer in the antrum of the stomach; d) if an ulcer is suspected of malignancy.

The choice of the method of operation is determined by the peculiarities of this localization of the ulcer (atrophic changes in the mucous membrane, normal or even reduced production of hydrochloric acid, the possibility of cancerous transformation). Distal resection of half of the stomach with removal of the antrum and excision of the ulcer with gastroduodenostomosis according to Billroth-I is the most common method of treatment.

Combined gastric ulcer and 12 duodenal ulcer. Most often, duodenal ulcer disease first appears and, after a few years, stomach ulcer disease (in 93% of patients). The level of acid production is high in pathogenetic and clinical terms, combined ulcers are similar to duodenal ulcers. With duodenal ulcer complicated by stenosis, gastric ulcer develops in 6-18% of patients

Clinical course: two periods - in the first period, signs of duodenal ulcer appear, and then, when a stomach ulcer occurs, the symptoms change. Pain syndrome is pronounced, persists for a long time, the period of exacerbation is lengthened, ulcers are slowly scarred, there is no periodicity and seasonality of exacerbation, complications often occur (in 60% of patients).

Endoscopic examination can more effectively reveal flat defects of the mucous membrane, produce a biopsy for cytological and histological examination of biopsy specimens.

Difficulties in X-ray diagnostics are due to the inability to exclude the primary ulcerative form of gastric cancer, which develops in the form of an ulcer that has clinical symptoms of peptic ulcer.

Treatment: conservative is ineffective, and in the presence of duodenal stenosis, it is futile. Apply a resection of the stomach with the removal of ulcers of both localizations.

### **ACUTE GASTRODUODENAL ULCERS**

Changes occurring in acute ulceration of the mucous membrane are described in the literature as hemorrhagic gastritis, acute ulcers, and ulcerative erosive gastritis. Acute ulceration of the mucous membrane of the stomach and duodenum 12 is caused by various factors. The causes of gastroduodenal ulcers are varied. 1. Acute ulcers can develop against the background of stressful situations (the so-called stress ulcers). 2. Bleeding erosion may be the result of the damaging effect of drugs (drug ulcers). 3. The development of acute ulcers is observed in somatic diseases such as cirrhosis of the liver, diseases of the heart and lungs with circulatory disorders and respiratory failure, chronic or acute renal failure.

Acute stress erosions and ulcers. Typical manifestations of acute ulcers are gastroduodenal bleeding. Among the causes of acute bleeding from the upper digestive tract may be hemorrhagic gastritis (17%) and acute ulcers (about 5%).

Diagnostics: when establishing the diagnosis of hemorrhagic gastritis, acute ulcers, the main method is - esophagogastroduodenoscopy. The differential diagnosis is made between alcoholic erosive gastritis and secondary drug erosive gastritis. Treatment: 1) hemostatic therapy; 2) correction of volumetric violations. If in acute ulceration, manifested by

massive bleeding, hemostatic therapy is ineffective, it is necessary to resort to surgical stopping of bleeding.

**Stress ulcers.** Stressful situations, in which the development of acute ulcers is possible: shock, severe trauma or surgery (long-term, traumatic), mental stress, brain injury, myocardial infarction, sepsis, infections, exposure to radiation energy, hard physical work, sharp fluctuations in the temperature of the external environment ... The most common type of stress ulcer is ischemic ulcer. It develops in the stomach and duodenum due to ischemia of the mucous membrane. Of greatest importance in the genesis of stress ulcers is a decrease in the resistance of the gastroduodenal mucosa due to a violation of its blood supply and general disorders of metabolic and trophic processes caused by the underlying disease.

**Clinical picture and diagnosis:** the main clinical manifestation of stress ulcers is bleeding of varying intensity. Bloody vomiting and bloody stools with previous hemodynamic disturbances occur between 2 and 10 days after the first stressor action (surgery, etc.). At esophagogastroduodenoscopy detect multiple bleeding ulceration of the mucous membrane, usually in the proximal stomach. Possible ulceration in the area of the antrum and in the duodenum 12.

**Treatment and prevention of acute stress ulcer during stressful situations** include the same means that are used in the treatment of peptic ulcer (anticholinergics, blockers of  $H_2$  receptors of histamine, antacids, sedatives).

**Medicinal ulcers.** Medicinal ulcers have different pathogenesis. The term "steroid ulcers" combine the heterogeneous genesis of ulceration. In a number of patients, glucocorticoids cause activation of the preceding peptic ulcer. In other pathological conditions, glucocorticoids have a permissive effect, promoting the realization of ulcerogenic abilities associated with the underlying disease. The greater the severity of the underlying disease, the more often it is accompanied by a complicated course of steroid ulcers - bleeding, penetration and perforation. Then there are actually steroid ulcers associated with the use of steroid drugs (acetylsalicylic acid (aspirin), butadion, indomethacin, atophan).

**Ulcerogenic endocrine diseases.** The cause of the development of peptic ulcers in the stomach and duodenum 12 may be multiple endocrine adenomatosis, characterized by the defeat of various endocrine organs. There are two types of multiple endocrine adenomatosis syndrome. The first type is damage to the pituitary gland, parathyroid glands and pancreas; accompanied by the development of peptic ulcers of the gastrointestinal tract. In the second type, the adrenal gland, thyroid and parathyroid glands are affected. **Diagnosis:** presents difficulties, special research methods are required (determination of the level of ionized calcium in the blood, radioimmunochemical methods for determining the content of various hormones in the blood, ultrasound scanning, computed tomography, angiography).

**Treatment.** Removal of the parathyroid adenoma leads to a decrease in the secretion of hydrochloric acid and ulcers heal, but not always. Primary hyperparathyroidism in some patients contributes to the development of Zollinger-Ellison syndrome. Zollinger-Ellison syndrome can be one of the manifestations of multiple endocrine adenomatosis. The main characteristic of Zollinger-Ellison syndrome is massive hypersecretion of hydrochloric acid due to hypergastrinemia.

**X-ray signs:** on an empty stomach, the stomach contains a significant amount of fluid, the folds of the stomach are sharply hypertrophied. Ulcers in the esophagus and stomach are rare, more often ulcers are localized in the bulb of the duodenum. The lower the ulcer is localized, the more reason to suspect Zollinger-Ellison syndrome. A peptic ulcer in the jejunum is pathognomonic for Zollinger-Ellison syndrome. The folds of the mucous membrane of the small intestine are edematous, the tone and motility of the intestines are increased. The most reliable method for preoperative diagnosis of Zollinger-Ellison syndrome is radioimmunochemical determination of gastrin in blood plasma. In a healthy person, 1 ml of plasma contains 50-200 pg of gastrin (1 pg-10-12 g). Patients with Zollinger-Ellison syndrome have gastrin levels above 500 pg / ml.

**Treatment:** for type I syndrome, gastrectomy is indicated, for type II - gastrectomy. Gastrectomy eliminates the possibility of recurrent ulcers.

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## TOPIC № 7. Complications of stomach ulcer and duodenal ulcer (bleeding, pyloroduodenal stenosis).

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** One of the formidable complications of gastric ulcer and duodenal ulcer is gastrointestinal bleeding and pyloroduodenal stenosis, accounting for up to 30%. Bleeding and pyloroduodenal stenosis as a direct cause of death in patients with peptic ulcer disease is in the first place. Mortality from severe complications such as gastrointestinal bleeding and pyloroduodenal stenosis make the problem of peptic ulcer treatment a social problem.

In this regard, it is of great importance for students to acquire solid and solid knowledge and acquire practical skills in the diagnosis and differential diagnosis of gastric ulcer and duodenal ulcer complicated by bleeding and pyloroduodenal stenosis.

**The purpose of the lecture:** To teach students methods of examination, diagnosis, differential diagnosis, the choice of methods of treatment of gastric ulcer and duodenal ulcer, complicated by bleeding in the example of supervised patients. To analyze the etiology, pathogenesis, clinic, course and general principles of treatment of gastric ulcer and duodenal ulcer complicated by gastrointestinal bleeding and pyloroduodenal stenosis.

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Objectives of the lecture:** To acquaint students with the complications of gastric ulcer and duodenal ulcer. To disassemble the clinic, diagnosis and differential diagnosis of peptic ulcer disease complicated by bleeding. The doctor's tactics in this case. Types of surgical interventions. To disassemble the clinic, diagnosis and differential diagnosis of peptic ulcer complicated by pyloric stenosis. Parse indications for surgery. Principles of pre- and postoperative management of patients operated on for peptic ulcer complicated by stenosis.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Concepts of gastrointestinal bleeding (GI bleeding) and pyloroduodenal stenosis (PDS) 10 min.
2. Etiology and pathogenesis of GCC 5 min.
3. Classification of housing and communal services 5 min.
4. Clinic and diagnostics of the HCC 10 min.
5. HCC treatment 20 min.
6. Etiology and pathogenesis of PDS 10 min.
7. Clinic and diagnosis of PDS 10 min.
8. PDS treatment 20 min.

With a peptic ulcer, bleeding is latent and obvious (moderate and massive). Sources of bleeding are arteries, veins, capillaries. Blood loss from the capillaries per diapedesis can be detected by chemical tests in the contents of the stomach and in the feces, latent bleeding) With small (small) blood loss (less than 50 ml), the formed feces have a black color. With blood loss of more than 50 ml, liquid black stool takes on a tarry appearance (melena).

Chronic loss of small amounts of blood gradually leads to the development of anemia, manifested by general symptoms, a decrease in the number of red blood cells, hemoglobin. Differential diagnosis is carried out with other types of anemia; chronic bleeding with unsuccessful conservative treatment of peptic ulcer disease makes the indications for surgical treatment of the patient especially urgent in connection with the possibility of acute bleeding.

Causes of bleeding: peptic ulcer of the duodenum, stomach, postoperative ulcer of the jejunum (55 - 75%), hemorrhagic erosive gastritis (17%); Mallory-Weiss syndrome (11%), esophageal varicose veins with portal hypertension, stomach tumors; diverticula of the esophagus, stomach, duodenum; paraesophageal hernia; blood diseases, etc.

The frequency of complications of peptic ulcer disease with acute bleeding reaches 20%. Bleeding as a direct cause of death of patients with peptic ulcer disease is in the first place.

Acute blood loss is accompanied by hypovolemia. Knowledge of these autoregulatory patterns of protective and compensatory reactions of the body to blood loss facilitates the diagnosis of volumetric disorders and is the basis for therapeutic measures.

Under normal conditions, circulating blood volume (BCC) and cardiac output are constant. With blood loss, autoregulatory neurohumoral mechanisms of adaptation and protection are activated. The amount and rate of blood loss matters.

Loss of 10-15% of blood mass volume does not cause severe hemodynamic disturbances. BCC deficiency is compensated by a decrease in the capacity of the vascular bed due to spasm of the capacitive vessels of the skin, abdominal organs, and the opening of arteriovenous shunts.

"Centralization of blood circulation" ensures normal blood supply to vital organs (myocardium, brain). With a loss of more than 15% of the BCC, blood pressure decreases by 15-30% (up to 90/85/45/40 mm Hg). The protective reaction is manifested by a generalized spasm of blood vessels, a transition to the vascular bed of interstitial fluid (spontaneous hemodilution), as well as blood from natural depots and lymph from lymphatic vessels, an increase in the number of heart contractions.

Spasm of capacitive and arterial vessels sharply reduces tissue perfusion, as a result, cell metabolism due to lack of oxygen is anaerobic, and the amount of "non-volatile acids" in the blood increases, the buffer capacity of the blood decreases (metabolic acidosis). Posthemorrhagic hypotension causes increased secretion of corticosteroids, aldosterone, antidiuretic hormone (ADH). Under the influence of these hormones, the reabsorption of sodium and water in the renal tubules increases, and diuresis decreases. The consequence of these adaptive and compensatory reactions is an increase in the BCC, an increase in the cardiac output, normalization of blood pressure, and improvement in tissue perfusion.

If the deficiency of the BCC is not compensated, the depletion of the protective mechanisms aimed at combating hypovolemia occurs. Blood pressure drops to a critical level - 50-60 mm Hg, Art. Decompensation of blood circulation in the microvasculature sets in. Erythrocyte aggregates are formed in the parietal capillaries, organ blood flow stops, necrotic processes develop in organs and tissues. In the liver, kidneys, irreversible changes may occur, in the intestine, mucous membrane is rejected. In connection with a sharp hypoxia of the myocardium, cardiac arrest occurs.

Compensatory capabilities and a protective response to blood loss are purely individual; they are reduced in patients over 60 years of age. The blood poured into the intestines is a source of toxic products that cause intoxication. Hydrolysis products (ammonia, etc.) are formed from the blood under the action of enzymes and bacteria in the intestine, which enter

the liver through the portal vein. In a normally functioning liver, urea is formed from ammonia, which is excreted in the urine. In patients with peptic ulcer disease, liver functions are often impaired, due to bleeding, they are aggravated and therefore the synthesis of urea from ammonia is difficult. With reduced urine output, the level of ammonia in the blood can reach high concentrations. Signs of intoxication: mental disorders, anxiety, coma. The main disorders that develop with bleeding:

- 1) hypovolemic shock due to a decrease in the volume of circulating blood;
- 2) renal failure due to decreased filtration and hypoxia of the renal parenchyma;
- 3) liver failure due to a decrease in hepatic blood flow and hypoxia,
- 4) oxygen starvation of the myocardium - myocardial infarction;
- 5) cerebral hypoxia - cerebral edema;
- 6) intoxication with the products of hydrolysis of blood proteins, poured into the intestines.

Clinic, diagnostics, treatment. Early signs of bleeding are general signs of anemization: weakness, dizziness, palpitations, fainting. Later, there is bloody vomiting when the stomach is full of blood, and then melena. The nature of the vomit when the source of bleeding is localized in the stomach: scarlet blood and dark cherry-colored clots, coffee grounds liquid. Bloody vomiting may be absent with slight bleeding from the stomach, when the blood has time to evacuate from the stomach. Bloody vomiting can also be observed when the source of bleeding is localized in the duodenum due to the throwing of the duodenal contents into the stomach. Repeated vomiting with subsequent addition of abundant liquid tarry stools is observed with massive bleeding. Vomiting that recurs at short intervals is an indicator of ongoing bleeding. Long intervals between vomiting are a sign of renewed bleeding.

With profuse bleeding, blood contributes to the rapid opening of the pylorus, acceleration of intestinal motility and an involuntary act of defecation with blood - or feces with an admixture of little changed blood. Patients have a history of ulcers of varying duration, but bleeding may be the first sign of an asymptomatic or acute illness.

The source of bleeding in young patients is often a duodenal ulcer, in patients over 40 years of age - a stomach ulcer. Patients with peptic ulcer disease before the onset of bleeding often note an increase in pain in the epigastric region, and from the moment of the onset of bleeding - a decrease or disappearance of pain. Blood reduces or eliminates peptic pain due to the fact that, as a buffer, it binds hydrochloric acid.

Physical examination data. The patient is frightened, restless. The skin is pale and cyanotic, moist, cold. The pulse is quickened. Blood pressure can be normal, low, low. The shock index (the ratio of pulse to systolic blood pressure) is more than 0.5 - an indicator of a decrease in the volume of circulating blood. With a BCC deficit of up to 30%, the shock index is increased to 1 (pulse rate and systolic pressure are about 100), the shock index, equal to 2.0, corresponds to a circulating blood volume deficit of up to 70%. Breathing is quickened.

With significant blood loss, the patient is thirsty (a sign of cellular dehydration), notes dryness of the mucous membranes of the oral cavity. The tension of the muscles of the abdominal wall can be during the penetration of the ulcer outside the organ. Diuresis is reduced.

At the prehospital stage of the examination, the severity of the patient's condition is determined on the basis of data from questioning and physical examination. A patient with gastroduodenal bleeding should be urgently hospitalized in the surgical department. The patient must be given a horizontal position. During the transportation of the patient in the resuscitation machine, if there are indications, they immediately begin the intravenous infusion of blood substitutes. Early infusion therapy can prevent or reduce the possibility of developing blood flow disorders in the microcirculation system.

When a patient with bleeding from the upper part of the digestive tract is admitted to the surgical department, the doctor must, along with diagnosing a disease complicated by bleeding, correct volemic disorders and hemostatic therapy. These diagnostic and therapeutic measures must be performed synchronously. In the admission department, a general clinical examination of the patient is carried out.

When collecting anamnesis, the possible causes of bleeding (duodenal ulcer, gastric ulcer, anticoagulant treatment, acetylsalicylic acid, butadione, steroid drugs, etc.) are directed. Determine the hemodynamic parameters (pulse, blood pressure, electrocardiogram). At the same time, a study of hematological parameters (hemoglobin, hematocrit, blood group and Rh affiliation, coagulogram, acid-base state, electrolytes, creatinine, urea) is carried out.

In severe post-hemorrhagic anemia and ongoing bleeding, the patient should be examined with simultaneous transfusion of blood and other hemostatic agents (epsilon-aminocaproic acid, fibrinogen, etc. ).

Take the following actions immediately:

- 1) catheterization of the subclavian vein, replenishing the deficit in circulating blood volume, measuring central venous pressure;
- 2) gastric sounding, gastric lavage with cold water;
- 3) emergency esophagogastroduodenoscopy;
- 4) oxygen therapy
- 5) autotransfusion (leg bandaging);
- 6) cardiotherapy;
- 7) determination of the degree of blood loss;
- 8) continuous catheterization of the bladder.

With severe arterial hypotension, the main task of first aid is to replenish the BCC. Transfusion therapy begins with intravenous administration of blood substitutes (preparations of dextran, starch, gelatin, polyvinyl compounds).

Blood transfusion is performed after determining the blood group and Rh factor. Probing of the stomach and washing it with cold water ( 3-4 liters ) is performed for diagnostic and hemostatic purposes. The introduction of the probe into the stomach allows diagnosing bleeding from the upper digestive tract and determining the amount of blood that was in the stomach. Gastric lavage to obtain clean water creates the necessary conditions for a thorough examination of all its parts during endoscopic examination.

The next diagnostic measure is an emergency esophagogastroduodenoscopy or X-ray examination. EGDFS is the most informative diagnostic method (the efficiency of detecting the localization of the bleeding source and the cause of bleeding at the height of bleeding reaches 98%). The data obtained during endoscopic examination allow not only diagnosing the disease, but also predicting to some extent the possibility or failure of stopping bleeding by conservative measures. During endoscopy, local therapeutic measures can be carried out aimed at stopping bleeding (diathermocoagulation or laser coagulation of the bleeding source, exposure to hemostatic and vasoconstrictor drugs, the use of film-forming aerosol drugs and biological glue).

The sources of bleeding detected during endoscopy for peptic ulcers are different. Arrosion of the wall of a large vessel at the bottom of the ulcer is usually accompanied by profuse bleeding. The resulting fresh blood clots do not provide reliable hemostasis. The repetition of bleeding in these cases is due to the fact that in the callous ulcer the walls of the arrosed vessel are inflammatory, compacted, low-elastic, surrounded by scar tissue and therefore do not subside. The newly formed blood clots have a digestive effect of gastric juice.

Bleeding is more often complicated by ulcers located on the posterior wall of the duodenum, penetrating into the head of the pancreas, into the hepatoduodenal ligament. In these cases, bleeding arises from a . gastroduodenalis , a . duodenopancreatica superior . With the localization of ulcers in the stomach, bleeding arises from a.gastrica sinistra, a.gastrica dextra. In case of arrosion of a large vessel in the bottom of a callous ulcer, conservative measures cannot provide a persistent hemostatic effect.

Bleeding from damaged capillaries and venous vessels of the granulation tissue surrounding the ulcer is rarely massive. Conservative treatment usually produces a hemostatic effect. Diffuse bleeding from the gastric mucosa, duodenum with hemorrhagic gastroduodenitis, combined with bleeding or chronic ulcers, can be moderate or profuse. It

may be an indication for emergency surgery in case of ineffectiveness of conservative treatment.

Acute ulcers are sometimes accompanied by profuse bleeding. The cause of sudden bleeding may be a longitudinal rupture of the mucous membrane of the cardioesophageal zone (Mallory-Weiss syndrome). The appearance of bleeding is preceded by profuse vomiting, more often after drinking alcohol.

An objective assessment of the severity of the patient's condition and the amount of blood loss is possible when taking into account clinical data in combination with indicators of the BCC and its components, in particular globular volume. The severity of bleeding (according to V.I. Struchkov, E.V. Lutsevich).

Grade 1 - bleeding causing minor changes in hemodynamics. The general condition is satisfactory. The pulse is somewhat quickened, the blood pressure is normal. BCC deficit is no more than 5% of the due. Hemoglobin above 100 g / l (10 g%). Capillaroscopy: pink background, 3-4 capillary loops with fast homogeneous blood flow.

Grade II - severe bleeding. General condition of moderate severity, lethargy, dizziness, fainting. Pallor of the skin. Significant increase in heart rate. Decrease in blood pressure up to 90 mm Hg. Art. A patient with a single, non-abundant vomiting or tarry stools. BCC deficiency 15% of the due, hemoglobin 80 g / l (8%). Capillaroscopy: pale background, decreased number of capillaries. The blood flow is fast, its homogeneity is disturbed.

Grade III - the general condition is severe. The skin is pale, covered with cold sweat. The mucous membranes are pale. The patient yawns, is thirsty. The pulse is fast and threadlike. Blood pressure is reduced to 60 mm Hg. Art. BCC deficiency is 30% of the due, hemoglobin 50 g / l (5g%). Capillaroscopy: the background is pale, on it there are 1-2 loops with hardly distinguishable arterial and venous parts. Frequent vomiting, tarry stools. Bleeding is accompanied by fainting.

Grade IV - profuse bleeding with prolonged loss of consciousness. The general condition is extremely difficult, bordering on agonal. Disappearance of pulse and blood pressure. BCC deficit is more than 30% of the due. Capillaroscopy: gray background, no open capillary loops are visible.

After the endoscopic examination, in the absence of indications for emergency surgery, conservative treatment and observation of the patient are continued. The activities are as follows:

- 1) intravenous replenishment of circulating blood deficiency (plasma, albumin, blood, crystalloid solutions);
- 2) oxygen therapy;
- 3) constant sounding of the stomach;
- 4) cardiotherapy;
- 5) autotransfusion (leg bandaging);
- 6) suppression of gastric secretion (histamine H2 receptor blockers), antacids;
- 7) low head position;
- 8) cleansing enemas to remove outflowing blood from the intestines;
- 9) prevention of heat loss (but not warming with heating pads);
- 10) catheterization of the bladder.

It is necessary to monitor hemodynamic parameters (pulse, arterial and venous pressure, shock index, ECG) and blood test indicators (hemoglobin, hematocrit, acid-base state, electrolytes, creatinine, urea, coagulogram).

Indications for blood transfusion, its volume and rate of administration are determined depending on the degree of hypovolemia, the time elapsed after the onset of bleeding. Blood of the same group should be transfused. For every 400-500 ml of injected donor blood, 10 ml of a 10% calcium chloride solution should be injected to neutralize sodium citrate. With massive blood transfusions, the toxic effect of nitrate blood is possible. With the infusion of blood from several donors, immune conflicts and the development of a fatal homologous blood syndrome are possible. Blood loss within 10% of the BCC does not require compensation with blood and blood substitutes. With a loss of BCC (20%) and a hematocrit of 30%, it is sufficient to administer blood preparations (plasma, albumin, etc.). Blood loss up



to 1500 ml (25-35% BCC) is compensated with erythrocyte mass (half of the volume) and a double volume of blood substitutes (colloidal and crystalloid solutions) is injected.

Massive blood loss (about 40% of the BCC) is a great danger to the patient's life: whole blood is used, after replenishing the globular volume and plasma blood volume in the next 24 hours, the deficiency of extracellular fluid is compensated for with an isotonic solution of glucose, sodium chloride and lactasol (to reduce metabolic acidosis). Transfusion therapy should be carried out taking into account changes in the BCC and its components at different periods after bleeding. In the first 2 days, hypovolemia is observed as a result of a deficiency of the BCC and the volume of circulating plasma. Transfusion of whole blood and blood substitutes is indicated. On the 3-5th day, oligocythemically normo- or hypovolemia is observed, therefore it is advisable to transfuse the erythrocyte mass. After 5 days, transfusion of erythrocyte mass and whole blood is indicated.

Correction of volumetric disorders should be carried out under the control of measuring the central venous pressure (CVP). Treatment of patients with gastroduodenal bleeding is carried out in the intensive care unit. Surgical tactics for gastroduodenal bleeding include: determination of indications for surgery, the duration of the operation, the choice of the method of operation. Treatment of all patients with gastroduodenal bleeding begins with a complex of conservative measures.

The means of conservative therapy are aimed at stopping bleeding and correcting volumetric disorders. They include: local physical impact (gastric lavage with cold water, introduction of vasoconstrictors into the stomach, endoscopic methods of stopping bleeding), rapid replenishment of the BCC deficit while maintaining colloid-osmotic pressure, the permissible level of oxygen capacity, replenishment of the rheological and coagulating properties of blood, drugs that reduce secretion of hydrochloric acid, taking antacids.

In the absence of indications for emergency or urgent surgery, further therapeutic measures should be aimed at reducing the likelihood of recurrence of bleeding and complex antiulcer treatment. Patients with signs of hypocoagulation are shown intravenous administration of solutions of calcium chloride, epsilon-aminocaproic acid, intramuscular injections of vicasol.

In patients with a tendency to arterial hypertension, controlled hypotension is performed for several days. To prevent lysis of a thrombus with gastric juice, nutritional mixtures (chilled milk, cream, protein preparations, Bourget mixture) are administered through a permanent gastric tube, which also serves to control the recurrence of bleeding.

Indications for urgent surgical intervention: hopelessness or failure of conservative treatment (bleeding cannot be stopped or after stopping there is a threat of its recurrence); massive blood loss; localization of ulcers in hazardous areas with abundant blood supply; adverse endoscopic signs (deep ulcer with exposed or thrombosed vessels); old age of the patient. The operation should be performed at the optimal time for the patient. Emergency surgery is indicated in patients: in a state of hemorrhagic shock; with massive bleeding when conservative measures are ineffective; with a relapse of bleeding that occurred after it stopped as a result of conservative treatment in a hospital.

It is advisable to perform an urgent operation within 24-48 hours (the period of time required for preparation) in case of massive bleeding, when, despite the transfusion of 1500 ml of blood, the patient's condition does not stabilize, the BCC and hemoglobin remain at the same level or decrease, urine is released 60 - 70 ml / h.

Especially urgent should be indications for urgent surgery in patients over 60 years of age, in whom the autoregulatory mechanisms of adaptation to blood loss are reduced, and the source of bleeding is more often large callous ulcers localized in the area of large vessels. When choosing an operation method, it is necessary to take into account the peculiarities of the clinical situation that determine the degree of operational risk: the amount of blood loss, the patient's age and concomitant diseases, intraoperative technical conditions (ulcer localization, ulcer penetration), and the surgeon's personal experience.

The purpose of the operation is, firstly, to stop bleeding and save the patient's life, and secondly, to cure the patient from peptic ulcer disease.

Methods of surgery For duodenal ulcer: suturing of a bleeding vessel (or excision of an anterior wall ulcer) in combination with pyloroplasty and vagotomy. With combined duodenal ulcers and stomach - vagotomy with pyloroantrumectomy.

In case of gastric ulcer: 1) gastric resection with removal of a bleeding ulcer in patients with a relatively low degree of operational risk; 2) in elderly patients with a high degree of operational risk - excision of the ulcer in combination with pyloroplasty and vagotomy, or through the gastrotomy opening, suturing a bleeding vessel in a high-located ulcer in combination with vagotomy and pyloroplasty.

In a severe clinical situation, during operations at the height of bleeding, sparing operations aimed at saving the patient's life can be used: gastrotomy with stitching of a bleeding vessel, wedge-shaped excision of an ulcer.

Severely ill patients with an excessive risk of surgery produce embolization of a bleeding vessel during angiography. If hemostatic therapy is effective, the bleeding has not resumed, patients with indications for surgical treatment of peptic ulcer disease are operated in a planned manner after preoperative preparation for 10-12 days.

Patients with a short history of peptic ulcer disease or without it, with bleeding of I - II degrees, after stopping the bleeding, conservative therapy is indicated.

The cause of pyloroduodenal stenosis is more often duodenal ulcers, less often prepyloric ulcers and ulcers of the pyloric canal. Narrowing of the lumen with varying degrees of obstruction of the narrowed area occurs as a result of periulcerous infiltrate, edema, spasm and ulcer scarring. The final judgment on the degree of cicatricial narrowing can be made only after the course of antiulcer treatment, when the periulcerous infiltrate, edema, spasm disappear.

The development of cicatricial stenosis is preceded by a history of ulcers of varying duration. The progressive decrease in the lumen of the narrowed area makes it difficult to evacuate from the stomach. First, the emptying of the stomach from the contents is carried out by increasing the contractions of the hypertrophied muscles of the stomach. Subsequently, the contractility of the muscles weakens and the stomach expands (gastroectasia).

Clinical picture and diagnosis: in the clinical course of stenosis, three stages are distinguished: compensated, subcompensated and decompensated.

The compensated stage does not have any pronounced clinical signs, since the stomach relatively easily overcomes the difficulty of passing food through the narrowed area. The general condition of the patients is satisfactory. Against the background of the usual symptoms of peptic ulcer disease, patients note a feeling of fullness and heaviness in the epigastric region, mainly after an abundant meal, somewhat more often than before, there is heartburn, sour belching and occasionally vomiting of gastric contents with a pronounced sour taste. After vomiting, pain in the epigastric region disappears. On X-ray examination, the stomach is normal in size or slightly enlarged, its peristalsis is enhanced, the pyloroduodenal canal is narrowed. Evacuation from the stomach is timely or slowed down for up to 6-12 hours.

In the stage of subcompensation in patients, the feeling of heaviness and fullness in the epigastric region increases, belching with an unpleasant smell of rotten eggs appears due to prolonged retention of food in the stomach. Patients are often disturbed by sharp colicky pain associated with increased gastric motility. These pains are accompanied by transfusion, rumbling in the abdomen. Almost daily there is profuse vomiting, bringing relief, so patients often induce vomiting artificially. The vomit contains an admixture of food taken long before vomiting. The stage of subcompensation is characterized by general weakness, rapid fatigability, weight loss, impaired water-salt metabolism and acid-base state. Physical examination reveals a "splash noise" in the stomach on an empty stomach. In thin patients, undulating peristalsis of the stomach is visible, changing the contours of the abdominal wall. On x-ray examination, the stomach is dilated, on an empty stomach contains fluid, its peristalsis is weakened. The pyloroduodenal canal is narrowed. A pronounced slowdown in the evacuation of the contrast mass, after 6-12 hours there are remnants of the contrast mass in the stomach, after 24 hours the stomach does not contain the contrast mass.

The stage of decompensation is characterized by a feeling of fullness in the epigastric region, profuse daily vomiting, sometimes many times. In the absence of self-vomiting, patients are forced to induce vomiting artificially or resort to gastric lavage through a tube. Vomit contains fetid, decomposing food debris from many days ago. After emptying the stomach, relief comes, for several hours, thirst arises, urine output decreases as a result of dehydration. Insufficient intake of food and water into the intestines is the cause of constipation. In some patients, diarrhea occurs due to the flow of fermentation products from the stomach into the intestines. Patients with decompensated stenosis are severely depleted, dehydrated, adynamic. The skin is dry, easily folds, the skin turgor is reduced. The tongue and mucous membranes of the mouth are dry. Through the abdominal wall, the contours of a distended stomach, overflowing with contents, are visible; at times, convulsive peristalsis of the stomach can be noted. A jerky shaking of the abdominal wall by the hand causes a "splash noise" in the stomach. On X-ray examination, the stomach is significantly expanded, with a large amount of fasting contents. The adopted aqueous suspension of barium sulfate (sulfate) accumulates in the lower part of the stomach in the form of a bowl with a wide upper horizontal level, above which a layer of liquid stomach contents is visible. The lower pole of the stomach is low, sometimes at the level of the pubic articulation. Stomach peristalsis is weakened. At the time of the study, there was no entry of the contrast mass into the duodenum. The evacuation of the contrast mass from the stomach was delayed for more than 24 hours.

With the progression of decompensation, further expansion of the stomach leads to a sharp thinning of its wall, to the loss of the possibility of restoring the motor-evacuation function of the stomach. Along with this, microbial colonization of the gastric mucosa occurs due to putrefactive fermentation of stagnant food.

With subcompensated and decompensated stenosis of the exit from the stomach, metabolic disorders occurring in the body are due to the impossibility of adequate nutrition through the mouth, the loss of large amounts of gastric juice containing electrolytes with vomit. These factors lead to progressive exhaustion, dehydration, electrolyte imbalance, and acid-base disorders.

The consequence of a violation of the water-electrolyte balance can be a decrease in the volume of circulating fluid in the vascular bed, blood thickening, "centralization of blood circulation", hypokalemia, hypochloremia, metabolic alkalosis. Signs of volemic disorders: dizziness and fainting when getting up in bed; fast pulse, lowering blood pressure, tendency to collapse: pallor and coldness of the skin; decreased urine output.

Hypokalemia ( $K^+$  concentration below 3.5 mmol / l) is clinically manifested by muscle weakness, paresis and paralysis. A decrease in the level of  $K^+$  in plasma to 1.5 mmol / l leads to paralysis of the intercostal nerves, paralysis of the diaphragm and respiratory arrest are possible. With hypokalemia, there is a decrease in blood pressure (mainly diastolic), disturbances in the rhythm of heart contractions, expansion of the heart, and systolic murmur at the apex. Heart block, cardiac arrest in systole, may occur. Changes in the electrocardiogram with hypokalemia: lengthening of the Q - T interval, decrease in amplitude and flattening of the T wave, the appearance of the U wave. Hypokalemia is associated with dynamic intestinal obstruction, manifested by flatulence.

As a result of violations of the water-electrolyte balance and emerging volemic disorders, renal blood flow decreases, glomerular filtration decreases, urine output decreases, and azotemia appears. Due to renal failure, "acidic" metabolic products are not excreted from the blood, the pH of the blood decreases, and alkalosis turns into acidosis. With alkalosis in plasma, the level of ionized calcium decreases due to the addition of  $Ca^{++}$  to albumin. As a result of dyselectrolithemia, neuromuscular excitability changes and in severe cases gastrogenic tetany develops. Signs: general convulsions, trismus, clenching of the hands ("obstetrician's hand" - Trousseau's symptom), twitching of the facial muscles when tapping in the area of the facial nerve trunk (Khvostek's symptom). Hypochloremic and hypokalemic alkalosis, combined with azotemia, in the absence of proper treatment, can become incompatible with life.

Differential diagnosis: carried out between pyloroduodenal stenosis of ulcerative origin and stenosis due to cancer of the outlet of the stomach. It is necessary to take into account the differences in the dynamics of the disease. Patients with peptic ulcer disease have a long (over several years) history of chronic recurrent disease. In patients with stomach cancer, the history is usually short, and exhaustion sets in faster. On palpation of the abdomen, a tumor is sometimes determined. In the case of cancerous stenosis, X-ray examination can reveal a filling defect in the outlet of the stomach, the absence of significant expansion of the stomach and pronounced peristalsis.

The presence of an ulcer history does not exclude a cancerous lesion of the gastric mucosa. The most informative diagnostic method is gastroscopy with biopsy. However, it is not always possible to establish the etiology of stenosis. The next diagnostic step should be surgery. The presence of organic pyloroduodenal stenosis is an absolute indication for surgery.

Treatment: for cicatricial stenosis of the outlet of the stomach, regardless of the severity of clinical manifestations, the degree of expansion of the stomach and the delay in evacuation revealed by X-ray examination, surgical treatment is indicated. Patients with signs of active ulcers need to undergo a course of antiulcer therapy (2-3 weeks), as a result of which edema, periulcerous infiltration will disappear, and ulcers may even heal.

With compensated stenosis, patients can be operated on after a short (5-7 days) preparation period (antiulcer treatment, systematic, 1-2 times a day, aspiration of stomach contents).

Patients with subcompensated and decompensated stenosis, who have pronounced disorders of the water-electrolyte balance and acid-base state, need a comprehensive preoperative preparation, which should include the following measures.

1. Treatment of volemic disorders (administration of solutions of dextran, albumin, protein, isotonic sodium chloride solution). To correct violations of the water-electrolyte balance and acid-base state, it is necessary to introduce crystalloid solutions containing  $K^+$ ,  $Na^+$ ,  $Cl^-$ . Attention! Potassium preparations can be administered only after diuresis is restored. To maintain water balance, the patient should receive an isotonic glucose solution of 500 ml every 6-8 hours. Monitoring the treatment: assessment of the patient's general condition, hemodynamic parameters (pulse, blood pressure, shock index, hourly urine output), BCC and its components, indicators acid-base state, plasma electrolytes, hemoglobin, hematocrit, creatinine, urea.

2. Parenteral nutrition that provides the daily caloric requirements.

3. Antiulcer treatment.

4. Systematic decompression of the stomach (aspiration of gastric contents through a tube 2-3 times a day).

The choice of the method of operation. The purpose of the operation for cicatricial stenosis of the outlet of the stomach is the elimination of obstruction and the creation of conditions for the restoration of the motor-evacuation function of the operated stomach, cure for peptic ulcer disease.

When choosing the method of operation, it should be borne in mind that the clinical manifestations of stenosis and radiological signs of the severity of violation of evacuation from the stomach are not closely related to the degree of narrowing of its outlet section.

Selective proximal vagotomy can be performed with compensated stenosis with sufficient patency of the pylorobulbar zone. If a thick gastric tube cannot be passed through the pylorobulbar region during surgery, selective proximal vagotomy should be complemented by a gastric drainage operation. Vagotomy with gastric drainage operations is indicated for subcompensated stenosis.

Resection of 2/3 of the stomach or pyloroantrumectomy with vagotomy are indicated for: a) decompensated stenosis, b) combined form of peptic ulcer disease, when along with pyloroduodenal stenosis there is a stomach ulcer, c) the presence of intraoperative signs of duodenostasis.

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## **TOPIC № 8. Complications of gastric ulcer and duodenal ulcer (perforation, penetration, stenosis)**

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Peptic ulcer of the stomach and duodenal ulcer is one of the main problems of gastroenterology. According to V.Kh. Vasilenko and I.G. Kochergin (1991), in Russia in 1985 there were 4 cases of peptic ulcer disease per 1000 population, and in 1989 - 4.3 cases.

If at the end of last and the beginning of the century was dominated by stomach ulcers and ulcers ratio 12 duodenal quiche increased considerably ki

**The purpose of the lecture: To** acquaint students with the complications of gastric ulcer and 12 p. Intestines, methods of their diagnosis and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives: To** acquaint students with the complications of gastric ulcer and 12 duodenal ulcer, in particular, with perforation, penetration, stenosis, as well as their clinical

manifestations, methods of their diagnosis. To acquaint the principles of pre- and postoperative management of patients operated on for complications of peptic ulcer disease.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Perforation of gastric ulcer and 12. p. Intestine - 5 min.
2. Clinical picture, diagnosis, differential diagnosis of ulcer perforation - 25 min.
3. Perforated ulcer treatment methods - 25 min.
4. Penetration, clinic, diagnostics, methods of treatment - 20 min.
5. Malignancy, clinic, diagnostics, treatment methods - 15 min.

**Ulcer perforation**

Perforated more often ulcers of the anterior wall of the duodenum (2/3 of cases), then - prepyloric ulcers. Ulcers of the anterior body wall of the stomach are rarely complicated by perforation into the free abdominal cavity. Ulcers in the back of the stomach may perforate into the omentum. Multiple perforation of several simultaneously existing ulcers is possible. The diameter of the hole formed is different - from 2 mm to 2 cm .

Perforated acute and chronic ulcers. Ulcer perforation occurs during an exacerbation of peptic ulcer disease, but can occur in people who have not previously had symptoms of peptic ulcers (the frequency of "silent ulcers" is about 20%). The danger of open perforation of the ulcer is associated with the outflow of the contents of the stomach into the abdominal cavity, which acts on the peritoneum as a physical, chemical and bacterial irritant. Ulcer perforation quickly leads to the development of peritonitis.

Clinical manifestations are due to the body's reaction to sudden irritation of the peritoneum by the escaping gastroduodenal contents and the subsequent development of peritonitis. In the clinical course of complications, three periods are conventionally distinguished: the first period is the primary shock, the second period of "imaginary well-being", the third period of diffuse peritonitis.

The first period is the period of primary shock (lasts 3-6 hours). Its duration depends on the size of the hole formed, the degree of filling the stomach with the contents at the time of ulcer perforation.

The first symptom of perforation of the ulcer is pain, extremely sharp, constant, "dagger" arises suddenly in the epigastric region. Patients characterize the pain as "stabbing", "boiling water burn". The pain is so severe that the patient remains chained to the place where the perforation of the ulcer caught him. The pain causes severe abdominal shock.

Initially arising in the epigastric region or in the right hypochondrium, the pain spreads to the right half of the abdomen and quickly captures the entire abdomen, following the spread of outflowing fluid and exudate from the subhepatic space along the right lateral canal of the peritoneum into the right iliac fossa and other parts of the abdominal cavity. With perforation of ulcers localized on the anterior wall of the body of the stomach, the contents flowing from the stomach accumulate under the left dome of the diaphragm and spread downward along the descending intestine. Pain in these cases from the epigastric region extends to the left half of the abdomen, and then to the entire abdomen.

Irradiation of pain under the right or left scapula, into the supraclavicular region occurs as a result of irritation of the endings of the phrenic nerve. Vomiting or retching is a fickle symptom. Vomiting may precede ulcer perforation. The appearance of the patient in the first hours after the perforation of the ulcer is characteristic: the face is pale, expresses fright, covered with cold sweat. The position of the patient is forced on the back or more often on the right side with the hips adducted to a sharply tense abdomen. At the slightest movement of the patient, the pain in the abdomen increases. The body temperature is lowered or normal. Pulse at the beginning of good filling, slowed down to 50-60 per minute (vagal pulse) or moderately quickened (80 per minute), blood pressure is reduced.

The type of breathing is chest, breathing is shallow, quickened. The tongue and mucous membranes of the mouth are moist. The abdomen is retracted, has a scaphoid shape due to the sharp tension of the muscles of the abdominal wall. In young thin people, the rectus abdominis muscles are well contoured in the form of longitudinal shafts, divided in the transverse direction by tendon bridges. Constant tonic tension of the muscles of the abdominal

wall is characterized by the figurative expression - "the stomach is like a board". Such tension of the abdominal muscles, as happens with the perforation of an ulcer, is not observed in any other acute disease of the abdominal organs. A sharp tension of the muscles of the abdominal wall is observed in 95-98% of patients with perforation of the ulcer.

Protective muscle tension arises as a result of the visceromotor reflex - the transmission of irritation from the peritoneum along the sensory fibers of the intercostal nerves that innervate it through the spinal cord to the corresponding intercostal motor nerves.

In old people and in people with a flabby abdominal wall, the tension of the muscles of the abdominal wall may not be pronounced. It may not be present in persons under the influence of alcohol. In obese people, the tension of the muscles of the abdominal wall is masked by the abundant subcutaneous fatty tissue on the abdominal wall. Palpation of the abdomen is sharply painful. Blumberg-Shchetkin's symptom is positive. Free gas in the abdominal cavity (pneumoperitoneum) is a characteristic sign of perforation of an organ containing gas. Leaving through the perforation in the ulcer, gas accumulates under the liver, under the diaphragm. To identify free gas in the right subphrenic space, it is necessary to perform percussion along the right mid-axillary line in the position of the patient on the left side. Instead of the usually detected dullness over the liver area, the percussion sound will be tympanic - a positive symptom of Spizharsky (detected in 65-70% of patients).

The presence of gas in the abdominal cavity depends on the size and location of the hole formed in the wall of the organ, the time elapsed since the perforation of the ulcer. With perforation of duodenal ulcers, the disappearance of "hepatic dullness" is observed less frequently than with perforation of gastric ulcers. Preservation of dullness of percussion sound over the liver region does not exclude the presence of ulcer perforation. The disappearance of "hepatic dullness" can be detected in the absence of perforation, when, due to intestinal distention, the transverse colon is located in front of the liver.

Free fluid in the abdominal cavity can be determined by percussion (dullness of the percussion sound in the lateral abdomen). Peristaltic noises are heard and may be attenuated. Digital rectal and vaginal examinations can reveal soreness of the pelvic peritoneum in case of leakage into the small pelvis of fluid poured into the abdominal cavity, and exudate.

X-ray examination shows a restriction of the mobility of the diaphragm and free gas in the abdominal cavity (in 75-80% of patients). When examining a patient in a standing position, free gas is determined under the diaphragm in the form of a crescent stripe of enlightenment. When examining a patient on a lateroscope in the supine position, an accumulation of gas is seen in the form of a strip under the liver or in front of the liver; in the patient's position on the left side, the enlightenment strip is located on the side of the liver.

Red and white blood counts may be normal. The diagnosis of perforation of the ulcer in typical cases in the early period is not difficult. This complication is characterized by the sudden onset of very acute persistent pain in the epigastric region, "board-like tension" of the muscles of the abdominal wall, the disappearance of dullness of the percussion sound over the liver region, in most patients there is an ulcerative history. However, ulcer perforation may be similar to other acute diseases (see Differential Diagnosis).

The second period is the period of "imaginary well-being" (after 6 hours). As a result of adaptation to aggression, dilution of hydrochloric acid in the abdominal cavity with exudate, the action of endorphins, pronounced symptoms are smoothed out, the patient's well-being improves, and abdominal pain decreases.

The insidiousness of the period of "imaginary well-being" is that the improvement of the patient's condition can mislead both the patient and the doctor. However, when analyzing clinical data, it is possible to identify an increase in signs of developing peritonitis (increased heart rate, increased body temperature, intestinal paresis, leukocytosis).

The patient's face takes on a normal color. Breathing is free, but quickened. Body temperature is normal or subfebrile. The pulse is moderately quickened (70-80 per minute), blood pressure is normal. The patient is euphoric. Nausea, vomiting, dry mouth, gases do not go away. The tongue and mucous membranes of the mouth are dry. The abdomen is swollen, the tension of the muscles of the abdominal wall weakens, flatulence, sluggish

peristalsis. Palpation of the abdomen is painful, a positive Blumberg-Shchetkin symptom. The frequency of detecting free gas in the abdominal cavity is increasing. Free fluid in the abdominal cavity is determined. Examination through the rectum reveals tenderness of the pelvic peritoneum. X-ray data are the same as in the first period of the clinical course of the complication, intestinal pneumotosis appears. Moderate leukocytosis. There may be a shift in the white blood formula to the left.

The third period is the period of peritonitis (begins after 6 hours, lasts 12 hours or more). The patient's condition is serious. Self-reliant abdominal pain is moderate. Repeated vomiting. The body temperature is lowered or high (38-40 ° C). The pulse is significantly increased (110-120 per minute), weak filling. Blood pressure is lowered, collapse.

Due to dehydration and intoxication, facial features are sharpened, the eyes lose their shine, become dull. Breathing is shallow, frequent. The skin is dry. The tongue and mucous membranes of the mouth are dry. The abdomen is swollen due to intestinal paresis, the abdominal wall is stretched and tense (elastic tension), painful on palpation and percussion. Blumberg-Shchetkin's symptom is sharply positive. Peristalsis is absent. There is free fluid in the abdomen.

The accumulation in the small pelvis of a large amount of exudate can be detected by digital examination of the rectum (overhanging and soreness of the anterior intestinal wall), by examination through the vagina (flattening and tenderness of the vaginal arches).

Decreased urine output due to dehydration resulting from vomiting, deposition of fluid in the intestines and in the abdominal cavity. Laboratory data: high leukocytosis with a shift in the white blood count to the left, increased hemoglobin and hematocrit (the result of dehydration), hyperkalemia, metabolic acidosis. X-ray examination reveals a high standing of the diaphragm and restriction of its mobility, free gas in the abdominal cavity, pneumotosis of the small and large intestine.

During the period of progressive peritonitis, the differential diagnosis is carried out between ulcer perforation and all acute diseases of the abdominal organs, complicated by peritonitis (acute destructive cholecystitis, destructive pancreatitis, destructive appendicitis, intestinal obstruction, thrombosis of mesenteric vessels).

Differential diagnosis: perforation of the ulcer in the early period, complications have to be differentiated from acute diseases in which acute pain occurs in the epigastric region.

Perforation of the stomach tumor. Patients are usually over 50 years of age. A history of symptoms characteristic of a stomach tumor: decreased appetite, weakness, weight loss, preceded by atrophic gastritis. The clinical manifestations of tumor perforation are similar to those of ulcer perforation. The assumption of tumor perforation is confirmed if the patient has a tumor in the epigastric region.

Acute cholecystitis is more common in obese women. The pain occurs after eating fatty fried foods, is localized in the right hypochondrium, radiates under the right shoulder blade, in the right shoulder girdle. The pain is constant, accompanied by repeated vomiting, which does not bring relief. History of repeated attacks of hepatic colic or acute cholecystitis with fever, sometimes with jaundice. For an attack of acute cholecystitis, from the very beginning, an increase in pulse rate, high body temperature, and leukocytosis are characteristic.

Palpation of the abdomen reveals muscle tension in the right upper quadrant of the abdomen, which never reaches such severity as when an ulcer perforates. You can feel an enlarged painful gallbladder, reveal a positive Ortner-Grekov symptom (soreness with slight tapping of the right costal arch with the edge of the palm), a positive phrenicus symptom (soreness when pressed in the right supraclavicular region, between the legs of the sternocleidomastoid muscle).

Hepatic colic, more often observed in obese patients, among whom women predominate. The pain is acute, cramping in the epigastric region or in the right hypochondrium, is quickly stopped by antispasmodic drugs. Not accompanied by an increase in body temperature. Examination of the abdomen shows no signs of acute inflammation.

Acute pancreatitis begins with a sharp persistent pain in the epigastric region, which takes on a girdle character. The onset of pain is preceded by the use of abundant fatty foods, alcohol. Characterized by repeated vomiting of gastric contents, then duodenal contents,



which does not bring relief. There is no "board-like" tension of the muscles of the abdominal wall, there is bloating due to intestinal paresis. Palpation is painful in the area of the projection of the pancreas onto the abdominal wall, while a weakening of the pulsation of the abdominal aorta due to pancreatic edema (Voskresensky symptom) can be detected. Painful palpation in the left costal-vertebral angle (Mayo-Robson symptom).

Acute appendicitis. Differentiating ulcer perforation from acute appendicitis can be difficult in those patients who, at the time of ulcer perforation, pain in the epigastric region is not pronounced, and gastroduodenal contents, flowing through the right lateral canal into the right iliac fossa, cause pain and muscle tension in the abdominal wall in the right lower quadrant belly. Acute appendicitis often begins with epigastric pain that then travels to the right iliac region. It should be noted that with perforation of the ulcer, the greatest severity of pain and tension in the muscles of the abdominal wall will be in the upper abdomen, where the inflammatory process began earlier than in the right iliac region. The disappearance of "hepatic dullness" and radiographically detectable free gas in the abdominal cavity are typical for ulcer perforation. On x-ray examination during ulcer perforation, there is also a limitation of the mobility of the right dome of the diaphragm. In acute appendicitis, the maximum severity of symptoms is determined in the right iliac region and there is no sharp muscle tension in the epigastric region. X-ray examination reveals pneumatosis of the cecum and terminal ileum.

The similarity of the dynamics of pain syndrome in a perforated ulcer with the clinical course of acute appendicitis, underestimation of the detected symptoms, errors in the clinical study of the patient lead doctors to an erroneous diagnosis of acute appendicitis, for which an operation is being undertaken. It must be remembered that the operation is always a diagnostic step. During surgery, ulcer perforation should be suspected if the appendix is not altered or slightly hyperemic, and there is a turbid effusion coming from the upper abdominal floor. The exudate may contain an admixture of bile, food debris.

Thrombosis and embolism of mesenteric vessels is a complication of cardiovascular diseases. The contingent of patients is mainly elderly people. Characterized by the sudden onset of severe abdominal pain without a specific localization. The patient is restless, changes position. The examination reveals a heart defect with atrial fibrillation. The pulse is frequent, collapse develops rapidly. The body temperature is lowered. Vomiting is rare, more often - loose stools mixed with blood. The abdomen is swollen, soft. Single peristaltic noises are heard. A rectal examination may detect blood in the rectum. High leukocytosis.

Aortic dissecting aneurysm occurs in the elderly. Suddenly there is severe pain in the upper abdomen. Examination reveals a motionless, painful, pulsating formation in the abdomen, over which a rough systolic murmur can be heard. There is marked tension in the muscles of the abdominal wall. The pulse is fast, the blood pressure is low. The pulsation of the iliac and femoral arteries is weakened.

Renal colic is characterized by the sudden onset of acute pain in the right or left lumbar region with irradiation to the groin area, genitals, accompanied by dysuric phenomena. The patient is restless, rushing about, screaming in pain. The abdomen is somewhat swollen and tense, "hepatic dullness" is preserved, there is no free fluid in the abdominal cavity, peristaltic murmurs are heard. In urine tests, unchanged erythrocytes are found. Plain radiography can reveal shadows of stones in the projection of the kidneys and ureters. The urogram shows pathological changes in the pyelocaliceal segment, in the ureters. With chromocystoscopy, the diagnosis of urolithiasis, renal colic is confirmed by a delay in the release of methylene blue from the orifice of the ureter.

Myocardial infarction (gastralgie form) is similar to the clinical manifestations of ulcer perforation. The onset of the disease is characterized by the occurrence of acute pain in the epigastric region, radiating to the region of the heart, between the shoulder blades. The patient's condition is grave, he tries to maintain a motionless position, more often - half-sitting. The pulse is fast, arrhythmic, and blood pressure is low. The borders of the heart are expanded, the heart sounds are muffled. On the electrocardiogram, fresh focal violations of the coronary circulation are found. Tongue moist. Abdomen is soft, painful in the epigastric

region. "Hepatic dullness" is preserved. Peristaltic murmurs are heard. Myocardial infarction occurs more often in elderly people who have had a history of angina attacks.

Basal pneumonia and pleurisy. Pain in the upper abdomen occurs acutely, increases with breathing, coughing. Breathing is shallow, with auscultation it is possible to detect pleural friction noise, wheezing in the lower parts of the chest. The body temperature is increased to 38-40 ° C. The pulse is fast. The tongue is moist. The abdomen may be moderately tight in the epigastric region. "Hepatic dullness" is preserved. Peristaltic sounds are heard. High leukocytosis (leukocyte count  $20 \cdot 10^9 / l$ , or 20,000 or more) with a shift in the white blood count to the left. X-ray examination of the lungs confirms the diagnosis of pneumonia.

Spontaneous pneumothorax is a complication of bullous pulmonary emphysema. Characterized by the sudden onset of acute pain in the right or left side of the chest with irradiation to the epigastric region. Breath is not auscultated over the corresponding lung. X-ray examination reveals air in the pleural cavity and a collapsed lung.

During the period of purulent peritonitis, which developed as a result of ulcer perforation, the clinical course is similar to the clinical manifestation of peritonitis, of any origin. Urgent midline laparotomy is shown in order to identify the source of peritonitis and treat peritonitis (see "Peritonitis").

Covered ulcer perforation is a variant of the clinical course of ulcer perforation into the free abdominal cavity, in which the resulting hole in the duodenum or in the stomach, some time after perforation, is covered with fibrin films, a neighboring organ (liver, greater omentum, etc.), sometimes it is closed from the inside with a piece of food or a fold of the mucous membrane. More often, covered perforation is observed when the ulcer is localized on the anterior wall of the duodenum.

At the beginning of the complication, typical signs of ulcer perforation into the free abdominal cavity appear - suddenly there is a sharp pain in the epigastric region, "board-like" tension of the muscles of the anterior abdominal wall of the abdomen. Then acute phenomena subside in connection with the delimitation of the inflammatory process.

The diagnosis is based on the presence of slight muscle tension in the right upper quadrant of the abdomen, preceding this attack of acute pain in the epigastric region in people with a history of peptic ulcer disease. The diagnosis is confirmed by x-ray, in which a small amount of gas can be found under the diaphragm. If less than 2 days have passed since the moment of perforation, the patient is given a sip of water-soluble contrast agent to confirm the diagnosis. If the patient's condition is satisfactory and more than 2 days have passed since the moment of perforation, one should refrain from giving a contrast agent.

Perforation of the ulcer of the posterior wall of the stomach. The contents of the stomach are poured into the omentum. Acute pain that occurs in the epigastric region is not as sharp as when the contents enter the free abdominal cavity. With an objective examination of the patient, soreness and tension of the muscles of the abdominal wall can be found in the epigastric region. Free fluid in the abdominal cavity is not detected. "Hepatic dullness" is preserved; free gas in the abdominal cavity is not detected by X-ray examination. An abscess forms in the omental bursa. With the timely identification and opening of the abscess, recovery occurs. When the contents of the omental bursa flow out through the omental (Winslow) opening into the free abdominal cavity, peritonitis develops. If a patient with signs of ulcer perforation is operated on and the ulcer is not found, the surgeon should open the gastro-colonic ligament, examine the posterior wall of the stomach and the omental bursa.

Treatment: perforation of the ulcer into the free abdominal cavity is an absolute indication for emergency surgery. The earlier the diagnosis is made and the operation is performed, the more chances for the patient to recover.

In the prehospital period, the doctor, having diagnosed the perforation of the ulcer, is obliged to organize the fastest transportation of the patient to the surgical department. The introduction of narcotic drugs is categorically contraindicated. They can obscure the clinical manifestations of a dangerous complication and thereby disorient the surgeon. The main goal of surgical treatment of a perforated ulcer is to save the patient's life. Surgery should be minimal. ,

Suturing of the ulcer should be performed with widespread peritonitis, a high degree of operational risk (severe concomitant diseases, advanced age of the patient); in young patients with a "fresh" ulcer without morphological signs of a chronic process and an ulcer history, with perforation of stress and medicinal ulcers.

It is necessary to suture the perforated hole in the transverse direction in relation to the longitudinal axis of the stomach or duodenum with separate serous-muscular sutures, introducing the needle outside the infiltration zone. The line of seams is covered with a strand of a large gland, which is fixed with several seams.

The criteria for resolving the issue of the possibility of performing operations aimed at curing an ulcer should be: a long-term ulcerative history, less than 6 hours of perforation, the patient's condition allowing for a longer operation than suturing the ulcer; sufficient qualifications of the surgeon, the availability of the necessary instruments, equipment and medical personnel.

Vagotomy with excision of a perforated ulcer and pyloroplasty is indicated for localization of a perforated ulcer on the anterior wall of the duodenal bulb or pyloric stomach, not accompanied by a large infiltration, sharp cicatricial deformation of the outlet of the stomach. Of the methods of vagotomy in an emergency operation, preference should be given to the simplest one - trunk vagotomy. Excision of the ulcer is performed together with the anterior semicircle of the pylorus. Two main methods of pyloroplasty are used - the Heinecke-Mikulich method and the Finney method. Vagotomy with drainage surgery on the stomach is a low-traumatic intervention that adequately reduces gastric secretion.

Piloroanthrumectomy with vagotomy can be performed in patients without a pronounced degree of operational risk in the presence of signs of duodenostasis (sharply expanded and atonic duodenum) or in the combined form of peptic ulcer disease, when duodenal ulcer perforation and chronic gastric ulcer are found.

Economical gastric resection is indicated for chronic gastric ulcer perforation. The final stage of operations for a perforated ulcer should be a thorough toilet of the abdominal cavity (aspiration of residual exudate and gastroduodenal contents, washing with antiseptic solutions) (see "Peritonitis").

Therapeutic tactics for covered ulcer perforation is different depending on the time elapsed since the cover, the patient's condition. When a patient is admitted to the hospital in the first 2 days from the moment after the ulcer is covered, an urgent operation is indicated, regardless of the patient's condition and the severity of clinical manifestations. If, after 2 days from the moment of covering the ulcer, the patient's condition is satisfactory and local phenomena are decreasing, one can count on good delimitation from the free abdominal cavity and reliable cover of the perforation site. The immediate threat to the patient's life has passed, so it is more expedient to refrain from the operation and treat the patient conservatively. If an operation is performed during this period, a dense massive infiltrate is found in the gastroduodenal region, bleeding profusely when the adhesions are separated. During the operation, damage to the organs soldered into the infiltrate is possible - the duodenum, large intestine, gallbladder, etc.

Conservative treatment is carried out in extreme cases when there are no conditions for the operation. Treatment includes constant aspiration of gastric contents through a tube, prescription of medications that reduce gastric acid secretion, administration of large doses of broad-spectrum antibiotics (7-10 days), anti-shock measures, correction of water electrolyte balance, parenteral nutrition. Before removing the probe, the patient is given a water-soluble contrast and radiographically determine whether there is a leakage of contrast beyond the contours of the stomach or duodenum

## **PENETRATION OF THE ULTRA**

In the development of ulcer penetration, three stages are distinguished: intra-wall penetration of the ulcer, the stage of fibrous fusion, and complete penetration into a neighboring organ. Most often, ulcer penetration occurs into the lesser omentum, into the head of the pancreas, into the hepatoduodenal ligament. Penetration of the ulcer into the liver, into the gallbladder, into the transverse colon and its mesentery is possible. Clinical

manifestations depend on the stage of penetration and the organ into which the ulcer has penetrated. First of all, it is noted: the loss of the rhythm of epigastric pain (the pain becomes constant), the increase in the intensity of the pain syndrome, not amenable to therapeutic measures, irradiation of pain.

The appearance of back pain, pain of a shingles nature is observed when the ulcer penetrates into the pancreas. For a penetrating ulcer of the body of the stomach, pain radiates to the left half of the chest, to the region of the heart. The development of jaundice occurs when the ulcer penetrates into the head of the pancreas, into the hepatoduodenal ligament.

When examining the patient, the tension of the muscles of the abdominal wall (viscero-motor reflex), local pain are revealed. In a blood test, there may be leukocytosis, an increase in ESR. An X-ray sign of ulcer penetration is the presence of a deep "niche" in the stomach or in the duodenum that extends beyond the organ (with complete penetration).

Penetration of the ulcer into the hollow organ leads to the formation of a pathological fistula (fistula) between the stomach (duodenum) and the organ into which the ulcer penetrated.

The formation of a fistula is often preceded by a period of severe pain syndrome, accompanied by subfebrile body temperature, leukocytosis with a neutrophilic shift of the white blood count to the left.

In the presence of an anastomosis with a gallbladder or with a common bile duct, pain radiates from the epigastric region under the right scapula, to the right supraclavicular region, vomiting with an admixture of a significant amount of bile, belching of a bitter taste. If the contents of the stomach or duodenum enter the bile ducts, the gallbladder can cause the development of acute cholangitis, acute cholecystitis. During an X-ray examination, it is possible to detect in the projection of the gallbladder a horizontal level of liquid with gas above it (aerocolia), filling the gallbladder and bile ducts with a contrasting mass.

As a result of the formation of a fistula between the stomach and the transverse colon, food from the stomach enters the large intestine, and fecal matter from the intestine enters the stomach. Most often, such a fistula occurs with postoperative peptic ulcer of the jejunum. Signs of gastrointestinal fistula: vomiting with an admixture of feces (fecal vomiting), belching with fecal odor, defecation soon after eating with unchanged food in the stool, weight loss. X-ray examination reveals the penetration of the contrast mass from the stomach through the fistula into the large intestine (see "Recurrence of peptic ulcers").

Penetration of ulcers in the tissue of the retroperitoneal space occurs when ulcers are localized in places not covered by the peritoneum (cardiac stomach, posterior wall of the duodenum). The symptomatology of this type of complication is characterized by the development of retroperitoneal phlegmon, with the formation of congestion in the right lumbar region, on the lateral surface of the chest, in the right groin region. Signs of a severe purulent septic process are expressed: high body temperature, intoxication.

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<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **THEME number 9 . Diseases of the thyroid gland**

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Justification of topics:** Although Uzbekistan as a hotbed of endemic Cretaceous goiter known since the last century, the study of thyroid diseases, their treatment and prevention, and the development of goiter surgery, were carried out only in the middle of the twentieth century. In this, an important contribution was made by domestic scholars: SA Masumov, R. K. Islombekov, Y. the X. Turakulov and others. In particular, they organized numerous expeditions in the area of the endemic focus of goiter in Uzbekistan, carried out scientific research work on their study, and also developed a number of important therapeutic and preventive measures to prevent them.

Despite this, today in our country there are more than 15 endemic foci of goiter and more than 10-20% of the population has an increase in the thyroid gland of various sizes. First of all, this is due to a lack of iodine in the environment, which plays a major role in thyroid hyperplasia and the occurrence of endemic goiter.

**The purpose of the lecture:** To acquaint students with the etiology and pathogenesis of thyroid diseases, especially endemic goiter. Methods of its diagnosis and diff. diagnostics. Review treatment options.

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** To acquaint students with the topographic and anatomical data of the thyroid gland, physiology. To give a definition of goiter, To disassemble the classification, etiology and pathogenesis of goiter. Treatment methods. To acquaint the principles of pre- and postoperative management of patients operated on for goiter.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomical, topographic, physiological data of the thyroid gland - 10 min.
2. Types of thyroid diseases - 5 min.
3. Endemic goiter - 25 min.
4. Thyrotoxicosis - 25 min.
5. Treatment - 20 min
6. Inflammatory diseases of the thyroid gland - 10 min.

## **DISEASES OF THE THYROID GLAND**

For the first time, brief information about the thyroid gland was given by Galen, and in 1543 Vesalius described its anatomical structure in more detail. Later, Wharton (1656) called this organ the thyroid gland because of its resemblance to the shield. The assumption about the role of this organ as an endocrine gland of the body was put forward by King in 1836. Later (1896) Baumann established that iodine is an element that specifically concentrates in the thyroid gland.

Despite all this, it was only in the second half of the last century that the leading biological significance of this gland for the human body became known. One of the significant contributions to the surgery thyrotoxic goiter, is the development of surgical technique subtotal ney subkapsulyar Noah strumectomy and proposed OV Nikolaev fired in 1951 year.

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Despite this, today in our country there are more than 15 endemic foci of goiter and more than 10-20% of the population has an increase in the thyroid gland of various sizes. First of all, this is due to a lack of iodine in the environment, which plays a major role in thyroid hyperplasia and the occurrence of endemic goiter.

### **Anatomical and physiological features**

The thyroid gland (glandula thyroidea) is located on the front of the neck and consists of two lobes and an isthmus. Both lobes of the gland are located at the level of the thyroid and cricoid cartilages, as they reach the lower pole V-VI tracheal stake ca. The mass of the thyroid gland in an adult is  $\approx 25-30$  g. Sometimes it can be detected more (aberrant) thyroid lobe, which may be placed on the tongue to the aortic arch.

Thyroid covered with two sheets of the fourth fascia neck, consisting of a thin inner and outer sheet is more powerful. Between these leaflets about walking arterial and venous vessels. From the capsule into the gland, connective tissue layers spread, which divide the gland into lobules, consisting of follicles, the walls of which are lined with single-layer cuboidal epithelium. The follicles are filled with a colloid consisting of a liquid containing ribonuclein, proteins, thyroglobulin, iodine, cytochrome oxidase, and other enzymes.

The blood supply to the thyroid gland is carried out by two main paired arteries: two upper thyroid (a thyroidea superior) extending from the external carotid artery and two lower thyroid arteries (a thyroidea inferior), which originate from the thyroid subclavian artery. Sometimes there is an additional - the fifth unpaired artery (a thyroidea ima), extending from the unnamed artery or from the aortic arch. The lower thyroid arteries pass side by side, and sometimes intersect with the recurrent nerve, which should be remembered when performing surgery; when ligating the lower thyroid artery, the recurrent nerve may be damaged. According to the arteries, there are paired veins, the branches of which form powerful plexuses. The innervation of the thyroid gland is carried out by the sympathetic and parasympathetic nerves.

The thyroid gland secretes iodinated hormones - thyroxine (T<sub>4</sub>) and triiodothyronine (T<sub>3</sub>), as well as non-iodized hormone - thyrocalcitonin. The main components for the formation of hormones are iodine and the amino acid tyrosine. Iodine enters the body with food, water, air in the form of organic and inorganic compounds. The balance of iodine in the body is subject to significant fluctuations and, with its excess amount in the body, is excreted from the body in the urine (98%) and bile (2%).

In the blood, organic and inorganic iodine compounds form potassium and sodium iodides. Under the action of oxidative enzymes peroxidase and cytochrome oxidase, iodides are converted to elemental iodine. In the thyroid gland nachtsya iodine attachment to the protein (organification) and iodine atoms included in tyrosyl (a tyrosine amino acid residue). The iodinated tyrosines: monoiodotyrosine (MYT) and diiodotyrosine (DYT) have no hormonal activity, but is a substrate for the formation of iodinated thyroid hormones tirok sina, tetraiodothyronine (T4) and triiodothyronine (T3).

Triiodothyronine is 5-6 times greater than the activity of thyroxine and 2-3 times the speed of the circuit in the body, its formation occurs mainly not in the thyroid gland and in peripheral tissues and is carried out by partial Nogo deiodination of thyroxine, losing one iodine atom. Thyroxine from the thyroid gland into the vascular bed binds to serum proteins, as a result of which the concentration of protein-bound iodine (PSI) in the blood is often used as an indicator of thyroid secretory activity. Regulation of synthesis and secretion of thyroid hormones is carried out by the central nervous system through the hypothalamic-pituitary system. Hypothalamic mus-secreted ruet thyrotropin-releasing hormone (TRH) which is falling in the pituitary gland, stimulates the production of thyroid stimulating hormone (TSH). TSH reaches the thyroid gland through the bloodstream and regulates its growth and function.

Feedback exists between the central nervous system, the pituitary gland and the thyroid gland. With an excess of iodine-containing hormones, the thyroid-stimulating function of the pituitary gland decreases, and with their deficiency, it increases. Increasing produk tion TTG leads not only to increased thyroid function, but also to its diffuse or nodular hyperplasia.

Thyroxine and triiodothyronine stimulate oxidation processes and increase oxygen consumption in tissues, which is necessary for normal body growth, play an important role in salt and water metabolism, and stimulate protein synthesis. They increase the absorption of glucose and galactose in the intestine and their consumption in cells; increase the breakdown of glycogen and reduce its content in the liver, have a significant effect on fat metabolism. The thyroid hormone, thyrocalcitonin, together with the parathyroid hormone of the parathyroid glands, regulates the exchange of calcium and phosphorus.

### **Research methods**

Objective data on the shape, size, texture and thyroid mobility of Even a slight increase in thyroid examination allows weary twist the presence of goiter, its localization tion, mobility during swallowing motion-niiyah.

With a retrosternal goiter, swelling of the veins of the neck and the anterior surface of the chest is often visible. Furthermore, inspection already allows to reveal symp toms characteristic of thyroid disorders (restless behavior of the patient, eye symptoms, tremor of hands and others.).

Palpation of the thyroid gland can be done in two ways:

1) in the position of the patient sitting with his back to the doctor, with his head slightly tilted forward and down. In this position, the neck muscles relax and iron becomes camping more accessible to research. Four fingers of each hand are placed on the gland, and the thumbs wrap around the back of the neck.

2) in the position of the patient standing facing the doctor. In this case, four fingers of each hand cover the back of the neck, and the thumbs of both hands palpate the thyroid gland.

During palpation of the prostate patient asked to make swallowing motions - zheniya that help to identify the mobility of cancer and the nature of hyper - plastic process (diffuse , nodular, mixed crop).

Basal metabolism is a guiding test in the diagnosis of thyroid dysfunction. It is determined by the power of my continuous-calorimetry, based on the calculation of the amount of absorption of acid-type and formation of carbon dioxide. Normally, the basal metabolic rate is  $\pm 10\%$ .

The level of protein-bound iodine (BSY) in blood reflects dei ity of the functional state of the thyroid gland. In zdo rovyh human blood BSY is 3.5-7.5 mg.

The use of radioactive isotopes ( $J^{131}$  et al.) For the study of thyroid function OAPC wish to set up study phase iodine exchange, to judge the peripheral point iodine and hormone metabolism. Normally, the accumulation of ( $J^{131}$ ) in the thyroid gland after 2 hours ranges from 5 to 10%, after 24 hours 20-30%.

At elevated function shchito prominent glands (hyperthyroidism) is considerably higher.

Scintigraphy to determine the contours and dimensions shchito prominent gland, to identify tumor formation and metastasis, aberrant thyroid tissue. With nodular goiter increased accumulation ( $J^{131}$ ) node points to its functional hydrochloric hyperactivity ("hot" node). A non-absorbing node ( $J^{131}$ ) is called a "cold" node. Such nodes are often of a malignant nature. Do not accumulate ( $J^{131}$ ) as cysts, calcifications, hemorrhage and teaching stki fibrosis thyroid.

The study of hormones produced by a Mr. dioimmunynh methods. Wagon possible definition Thyrox to (T4), the coefficient active syvo thyroxine in blood ROTKO, These studies help mustache thanes correlation function tion of pituitary and thyroid gland.

Ultrasound examination of the thyroid gland today is an important non-invasive diagnostic measure, which allows you to identify the degree of hyperplasia of the thyroid gland, the presence of foci and determine the nature of the increase.

Computed tomography - being a more advanced research method, it can be used for retrosternal forms of goiter, when it is necessary to clearly define the boundaries of the enlarged gland, its relationship with the surrounding tissues.

A biopsy of the thyroid gland is required in all patients, not only in cases of suspected thyroid cancer, but also for the whole com nodular goiter. It should be carried out before the operation, by percutaneous puncture of the prostate or intraoperatively as the results tat biopsy may be used yt, in some cases, the determining factor in choosing the volume and tactics of surgical intervention, as well as the distance Nation treatment.

Laryngoscopy should be performed in every patient with goiter, even in the absence of voice changes. Results of the research can reveal hidden vocal cord paralysis due to involvement in Patolo logically process the recurrent nerve.

#### ENDEMIC AND SPORADIC GOITER

Goiter is a limited or diffuse enlargement of the thyroid gland, which is based on hyperplastic or degenerative changes. By origin, two types of goiter are distinguished: endemic and sporadic.

**Goiter** - a disease that affects people in the geo graphical areas (endemic - the defeat of the population of a specific geographic area), which is poor in iodine biosphere. Insufficient Noah intake of iodine in the body leads to a decrease in expression Botko thyroid hormone, which is inevitably accompanied by compensatory hyperplasia of the thyroid gland and leads to way vaniyu goiter. This hyperplasia first compensates for the lack of thyroid hormones.

Goiter endemic is susceptible in most cases, people living in mountainous areas and goiter endemic is characterized by almost equal incidence of men and women.

**Sporadic goiter** - occurs in people living outside paradise ones endemic goiter (Sporades - single, random, or specific to a certain geographic area). At the heart of its origin, the leading place is occupied by a strong overexcitation of the patient's nervous system - neuropsychological stress. In particular, most patients associate the onset of the disease with the loss of loved ones (accident, catastrophe, etc.) or some other shock, after which the development of the disease was observed. Sporadic goiter observed in female Shin 8-10 times more often than men.

**The existing classifications of thyroid diseases can be summarized as follows :**

- Thyroid malformations (congenital)
- Damage to the thyroid gland ,
- Inflammatory diseases of the thyroid gland :
  - thyroiditis ( Hashimoto's goiter ),
  - with trumit s ( goiter Ridel I).



- Endemic goiter :
  - diffuse,
  - nodal,
  - mixed .
- Sporadic goiter :
  - diffuse,
  - nodal,
  - mixed .
- Diffuse toxic goiter (Graves disease , thyrotoxicosis ) ,
- Toxic adenoma (nodular toxic goiter) ,
- Tumors of the thyroid gland :
  - benign ,
  - malignant .

**According to the degree withdrawn cheniya** thyroid distinguish 6 degrees:

About the degree - the gland is not visible and not palpable;

I degree - the gland is not visible, but the isthmus is palpable and visible during swallowing movements;

Grade II - during swallowing visible and well protruding INDICATES thyroid gland, but the neck shape is not changed;

Grade III iron is noticeable by eye on examination, changes the contour of the neck, giving it the appearance of a "thick neck";

Grade IV - a pronounced goiter violating configuration of neck;

Degree V - increased iron reaches a huge scale trench that is often accompanied by compression of the esophagus, trachea impaired swallowing and breathing.

According to the functional state, the goiter can be:

- a) hyperthyroid - the function of the thyroid gland is increased;
- b) euthyroid - the function of the thyroid gland is not impaired;
- c) hypothyroid - the function of the thyroid gland is reduced.

### **Clinic and diagnostics**

The main symptom of endemic and sporadic goiter is an enlarged thyroid gland. Examination and palpation can determine the degree of enlargement of the thyroid gland. Localization distinguishes cervical, retrosternal, partially retrosternal, postoesophageal goiter and goiter of the tongue root.

In patients with thyroid dysfunctions, in endemic areas, people living in places of severe endemic goiter, a disease sometimes occurs with symptoms of hypothyroidism. In these patients, slowed reaction to external stimuli, reduced mental and physical performance. Patients note lethargy, chilliness. The study reveals bradycardia, decreased reflexes. In severe hypothyroidism, there is delayed development. Chretien emerged that characteristic sharp delay physical and mental development.

**Symptoms:** The most common patients report "embarrassment" in the anterior neck when driving, buttoning the collar, Su Hoi cough, hoarseness of voice, difficulty in breathing. The latter may be due to tracheomalacia - thinning of the wall of the trachea due to standing pressure goiter with impaired nervous regulation of trachea and larynx during their displacement in the direction. On breathing, often (especially with retrosternal goiter), patients complain of a state of heaviness in the head when the body bends. On examination of these patients can be identified neck veins, typical "jellyfish head" area in the upper part of the chest wall. Respiratory failure causes the development of features such as "goiter heart." Compression of sympathetic ganglia causes Horner syndrome (ptosis, miosis, enophthalmos) change sweating half body side compression. With a hyoid goiter, breathing is impaired due to the crowding of the epiglottis. With a goiter located behind the esophagus, swallowing is difficult, especially when the head is turned. X-ray study allows you to set a delayed contrast at aberrant goiter, esophagus anteversion or laterally.

Aberrant goiter - an abnormality of the extra soup tovidnaya iron, is often subjected to malignant reborn NIJ. Often, metastases of thyroid cancer to the lymph nodes of the neck are mistaken for aberrant goiter.

Treatment: with small diffuse goiters appoint dash oidin. With a large diffuse goiter, causing impaction tra HEI and vessels shown resection of the thyroid. In all forms of nodular goiter, if we consider the possibility of malignancy nodes, surgery is necessary - resection shchito prominent gland followed by frozen section explores vaniem which defines the further strategy. Prevention of endemic goiter is the use of iodized at Varenna salt, a complex of sanitary and hygienic measures.

### **Diffuse toxic goiter**

Diffuse toxic goiter (Basedow disease, hyperthyroidism, goiter classically-tireotok) - endocrine disease, which is caused by elevated hydrochloric secretion of thyroid hormones and is accompanied by severe impairments in various organs and systems.

**Etiology.** Causes diffuse toxic goiter are upraised Corollary exogenous factors (acute or chronic trauma, infection) in the body by the presence of predisposing konstitutsional-tion and genetic factors, disorders of the organs of the endocrine system. In patients with hyperthyroidism in the blood it was found a long-acting stimulant LATS, koto ing activates thyroid function. LATS has been proven to be a thyroid-specific antibody. The antigen to which thyroid-stimulating autoantibodies arise are thyrotropin receptors localized in the plasma membrane of thyrocytes. Consequently LATS causes the same thyroid excitation as a dash-tropin, since binds to the same receptors as for Latter. Increasing accumulation Ts and T4 in the body breaks about the processes of oxidative phosphorylation in the tissues, which is manifested etsya disorders of all types of metabolism, functions of the central nerve of Noah, heart and other organs.

Diffuse-toxic goiter is more common in women aged 20 to 50 years. The ratio of female patients and male makeup wish to set up 10: 1. The high incidence of the disease in women is explained by their more frequent violations of the normal relationship of the functions of the gonads and the hypothalamic-pituitary system, which is accompanied by increased synthesis of thyroid hormones.

**Clinic and diagnostics.** The manifestations of hyperthyroidism can be characterized-Terni for all three pathological forms goiter: diffuse (diffuse toxic goiter) node, to tory can be multisite or characterized razras taniem follicular epithelium as a single unit (as in binding thyrotoxic adenoma) and mixed goiter. Multinodular toxic goiter is usually the result of transformation ("basedowification") of a long-standing multinodular euthyroid goiter.

The enlargement of the thyroid gland in thyrotoxicosis can reach varying degrees, its size does not correspond to the severity of clinical manifestations. Sometimes the enlargement of the thyroid gland is not detected at all. The most pronounced clinical about the phenomenon of hyperthyroidism have been reported with diffuse toxic goiter. The main symptoms of thyrotoxicosis are changes in the nervous and cardiovascular systems. Disorders of the central nervous system manifest elevated hydrochloric mental irritability, anxiety, unmotivated oscillations of mood, irritability Flow rate and whining Stu. The sharp increase in the activity of the sympathetic nervous ICU theme is accompanied by sweating, tremor of the whole body and especially the fingers (Marie symptom). Sometimes the face reddens, covering INDICATES red spots, which spread to the neck and chest. Body temperature is constantly subfebrile. Tendon reflexes are vivid and hyperkinetic. Hair falls out, their color changes, brittle nails are noted. The pulse is labile, it becomes more frequent with the slightest mental and physical exertion. Changes in blood pressure are observed - systolic pressure increases due to an increase in cardiac output and circulating blood volume, and diastolic pressure decreases due to a decrease in vascular tone as a result of adrenal insufficiency. In severe odds swing in heart muscle disease occur pronounced nye changes that lead to cardiac decompensation figure Nost, which is accompanied by tachycardia, atrial fibrillation, enlarged liver, the appearance of edema. Congestion in went FIR cause shortness of breath. An early sign of hyperthyroidism is weakly muscular Bost which patients regard as

fatigue or general weakness. These signs of thyrotoxic myopathy are often caused by metabolic and energy metabolism disorders. Patients often note marked changes in the function of the gastrointestinal tract. They are manifested by bouts of abdominal pain, vomiting, unstable stools with a tendency to diarrhea. The sexual function is weakened. Women disturbed menstrual power cycle up to amenorrhea, can occur hypoplasia egg Cove, uterus, mammary glands atrophy. Often these changes lead to infertility. Disturbances of adrenal function CNI lead to zheniyu vascular tone, the appearance of pigmentation around the eyes (Jellinek symptom). An increase in metabolic processes in thyrotoxicosis leads to an increased breakdown of proteins and fats, as a result of which a decrease in body weight progresses, despite an increased appetite. Disorders of water metabolism (increased urine output and increased sweating), impaired function podzhel zling gland (latent diabetes) cause excessive thirst. Some of the patients have "eye symptoms".

Exophthalmos due swelling and proliferation of retrobulbar Ms rovoy tissue influenced ekzofthalmiruyuschey substance, about dutsiruemoy anterior pituitary. Replacement of retrobulbar tissue with fibrous tissue leads to irreversible ophthalmopathy.

When expansion is observed exophthalmos canthus with at occurrence of white stripes between the iris and the upper lid (Delrimplya symptom).

Slow flashing age (symptom Shtelvaga) - explain the decrease Chuv-ity of the cornea -. Weak convergence, ie, loss of ability to stare at close range (Mobius symptom), is associated with a weak Stu eye muscles.

Lagging upper eyelid of the iris during fixation sight slowly moved downward object, and therefore between the upper eyelid and the iris osta etsya white stripe sclera (Graefe's symptom), due to increased muscle tone, lifting the upper eyelid.

In contrast to the Graefe symptom, the Kocher symptom is determined by the separation of the upper eyelid from the iris when the vision is fixed by an object slowly moving upwards, where a white stripe of the sclera is also observed between the upper eyelid and the iris.

With MPPI Moebius and - the loss of the possibility of observing objects at very close range ( violation of convergence and ).

With MPPI Melikhova - "ustraschyayuschy look human."

With Rosenbach's impulse - eyelid trembling when closing.

With the sign of Zenger a - protrusion of the eyelids due to their puffiness and their puffiness.

With the Dalmedy impulse - the frozen look "amimia". As a result of an increase in the tone of the muscles of the face, while maintaining other movements, inhibition of facial expressions occurs.

Exophthalmos in thyrotoxicosis must be differentiated from zlokachest - governmental exophthalmos, which is associated with a lesion intermediate accurate brain and excessive production of thyroid stimulating hormone anterior pituitary. Malignant exophthalmos is observed mainly in middle-aged people, it can be unilateral and bilateral. Protrusion of the eyeball reaches a ste penalty that is its dislocation from orbit. Patients bespo koyat strong in orbit pain, diplopia and limitation of eye movements. The presence of conjunctivitis and especially keratitis with a tendency to ulceration and decay of the cornea is characteristic. A change in intraorbital pressure leads to changes in the optic nerve up to its atrophy.

Special research methods. Basal metabolism tireotoksi with goat-raised and tyazhe mated forms may exceed + 60%. On Absorption of iodine schitovid Noah gland sharply Uwe licheno than normal, especially in the lane stems hours of research. In the blood of patients with higher but T3 content, T4 and TSH.

Scintigraphy shows Vaeth distribution on the accumulation and the isotope makes it possible to conduct differential diag ERA between diffuse toxic zo bom toxic adenoma and at which is detected a "hot junction".

According to the severity of the course of thyrotoxicosis, 3 degrees are distinguished:

- mild degree,
- medium,

- severe course.

**A mild form of thyrotoxicosis** - the phenomena of neurasthenia (feeling of fatigue, irritability, tearfulness, resentment) are mildly expressed. Against the background of a slight increase in the thyroid gland, a labile pulse - from 80 to 100 per minute, a weak tremor of the hands. Some weight loss may be observed. Decreased ability to work in the afternoon. Basic metabolism does not exceed + 30%.

**Thyrotoxicosis average weight** - expressed disorder of the central nervous system (mild anxiety, once drazhitelnost, tearfulness). Pulse rate 100-120 per minute, increase in pulse pressure, expansion of the heart with heart failure I degree according to Lang. A significant decrease in body weight against the background of a relatively increased nutrition, a decrease in working capacity during the day. Basal metabolism increased to + 60%.

**Severe form of hyperthyroidism** - along with nervous system disorders, characteristic tireotoksicheskoza medium ro penalties gravity, developing a sharp muscle weakness, severe violations of the cardiovascular system, degenerative disorders in parenchymal organs. Tachycardia can reach 120-140 beats per minute, often accompanied by atrial Arita Mia, cardiac insufficiency II-III degree by Lang. Bases hydrochloric exchange + 60% or more, a considerably higher power, body weight drops sharply. Trudeau ability is lost.

**Treatment:** There are three main treatments for diffuse toxic goiter: drug therapy, radioactive iodine treatment, and surgery.

To reduce the thyroid hormone function not traversed the use of iodine in combination with drugs thyreostatics (Mercazolilum), which is administered in doses of 40-60 mg / day; is set upon the occurrence of remissions under hered dose of 5-10 mg / day of the drug. When preoperative Noah preparation or at the time-who tireotoksiches crisis, with adrenal insufficiency are using corticosteroids, koto rye block the peripheral effects of thyroxine and delay its excretion.

Mercazolil is a synthetic antithyroid drug. Prepa-rat accelerates the removal of the thyroid lezy iodides, inhibits the activity of the enzyme systems involved boiling in the oxidation and conversion of iodide to iodine, which inhibits and delays the iodination of thyroglobulin conversion of diiodotyrosine to thyroxine. Small doses of iodine have an inhibitory effect on the formation of TSH in the anterior pituitary gland.

Reserpine reduces neurovegetative disorders and slows down the pulse.

The above therapy is used in the treatment of diffuse-toxic goiter, preparation for surgery or treatment with radioactive iodine.

**Impact J<sup>131</sup>** under the influence of beta particles leads to death adhesive current thyroid follicular epithelium and their replacement by connective tissue. Indications for radioisotope therapy J<sup>131</sup>: thyrotoxicosis flowing with mental excitations extremely heavy (cachectic) form of the disease, hyperthyroidism in elderly people with infarction, and heart failure NOSTA, with irreversible changes in the kidneys and liver forms diffuse toxic goiter without goitre ... Upon receiving large doses of J<sup>131</sup> possible development of thyrotoxic turbulent reaction fatal occurrence of standing, severe myxedema, difficult to treat, once vitie malignant tumors of the thyroid gland, gonads change functions increase exophthalmos.

**The indications for surgical intervention:** diffusive current classically struma moderate and severe forms, the nodal toxic goiter (thyrotoxic adenoma), large struma, compressing neck organs regardless of the severity diffuse toxic goiter. Before surgery necessarily tion necessary to bring thyroid function in euthyroid state.

**Contraindications to surgical intervention:** mild forms of diffuse toxic goiter in older malnourished patients due to the high operational risk in patients with irreversible measurable neniya liver, kidney, cardiovascular and mental health for bolevaniyami.

In diffuse toxic goiter and multisite produce duplex subfascial subtotal resection schitovid hydrochloric gland OV Nikolaev, in toxic adenoma - resection of the corresponding conductive proportion of cancer.

**Postoperative complications.** Intraoperative complications lines: The bleeding, air embolism, recurrent nerve damage, removal, or damage to parathyroid glands after blowing development hypoparathyroidism. If the damage is both recurrent nerves in a

patient must have acute asphyxia and only immediate tracheal intubation or tracheostomy may save the patient.

In patients with hyperthyroidism in the postoperative period is more dangerous complication - the development of thyrotoxic crisis. The first sign of thyrotoxic crisis - a rapid increase in body temperature to 40 ° C, accompanied by increasing tachycardia. Blood pressure first increases and then decreases, neuropsychiatric disorders are observed. The development of the crisis plays a major role in insufficiency function of adrenal cortex due to operational stress. Crisis treatment should be aimed at combating adrenal insufficiency, cardiovascular disorders, hyperthermia and oxygen deficiency.

**Tracheomalacia.** When long-existing goiter, especially when retrosternal, postdissectional postdissectional and its location, as a result of constant pressure on the trachea occur. Degenerative proliferative changes in the tracheal rings and their thinning - tracheomalacia. After removing the clamp immediately after extubation trachea or in the immediate postoperative period, can exhibit radiate its bend portion in softening or convergence of the walls and luminal narrowing. Acute asphyxia sets in, which can lead to the death of the patient, if an urgent tracheostomy is not performed.

**Postoperative hypothyroidism** - deficiency functions of thyroid gland due to a complete or nearly complete its removal during surgery, occurs in 9-10% of the operated GOVERNMENTAL patients. Hypothyroidism is characterized by general weakness, on stand the feeling of fatigue, apathy, drowsiness, general lethargy patients. The skin becomes dry, wrinkled, edematous. Hair starts to fall out, there are pains in the course of sexual function weakens.

**Treatment:** prescribe medications and other thyroidin synthetic prominent gland. With the development of microsurgical techniques and surgical immunology began to carry allotransplantation of thyroid gland using a graft on a vascular pedicle. Primary thyroid replanting and free thyroid tissue slices under the skin, into the muscle, but these operations are usually given a temporary effect, so in practice used mainly replacement therapy.

#### INFLAMMATORY THYROID DISEASE

The inflammatory process that develops in the previously unchanged thyroid gland is called thyroiditis, and that developing against the background of goiter is called strumitis. The cause of the development of thyroiditis and strumitis is an acute or chronic infection. Acute thyroiditis or strumitis begins with increasing the body temperature, headache and severe pain in the thyroid gland. The pain radiates to the occipital region and ear. A swelling appears on the front of the neck, which is displaced by swallowing. A serious complication of thyroiditis is the development of purulent mediastinitis. Sometimes sepsis develops. Therefore, all this pain syndrome, hospitalization for active treatment.

Treatment: antibiotics are prescribed; when an abscess is formed, its opening is shown in order to avoid the spread of a purulent process to the neck and mediastinum. Nonsuppurative thyroiditis (de Quervain-Craik's granulomatous thyroiditis) is caused by a viral infection. The clinical manifestations of the disease are similar to purulent thyroiditis. It is noteworthy the fact that the skin over the gland is not changed in the period of exacerbation. There are signs of hyperthyroidism (increased BSY). Treatment: appoint adrenal cortex hormones (20-30 mg prednisone per day for 4-6 weeks). With repeated relapses, X-ray therapy for the thyroid gland is indicated. Prognosis: Usually good. The disease quickly Zakan Chiva recovery.

**Chronic lymphomatous Hashimoto's thyroiditis.** The disease is considered to be organ-specific autoimmune pathological processes in which the antibody produced in the body, specifically with respect to the components of one body. Hashimoto's thyroiditis when under the influence of unknown causes thyroid gland starts to produce changes in hormonal-inactive thyroglobulin different from thyroglobulin. Penetrating into the blood, they become antigens and form antibodies against the acinar cells of the thyroid gland and thyroglobulin. SEQ of inactivated thyroglobulin. This leads to disruption of the synthesis of normal thyroid hormones, which causes prolonged secretion of TSH from the pituitary and

thyroid hyperplasia. In the later stages of the disease thyroid gland function by nizhena accumulation of iodine drops.

Clinical picture and diagnosis: Hashimoto's thyroiditis occurs more often in women over the age of 50. The disease has developed INDICATES slowly (1 to 4 years). The only symptom on against a prolonged time is enlargement of the thyroid gland. It is dense to the touch, but not welded to the surrounding tissues and is mobile on palpation. In the future, there are uncomfortable symptoms of hypothyroidism Regional lymph nodes do not increase licheny. Of great importance in the diagnosis of a detection in syvo ROTKO patient antithyroid autoantibodies Asker obtained by needle biopsy.

Treatment: conservative, includes the appointment of thyroid and glucocorticoid hormones. The dose of the thyroid hormone izbi rayut individually thyroidin average daily dose of 0.1 to 0.3 g. The daily dosage of prednisolone 20-40 mg over 1.5-2 months with at a reduction rate If there is a suspicion of malignant transformation, with compression of the neck organs with a large goiter, an operation is indicated. Subtotal resection of the thyroid gland is performed. After surgery, optionally walk treatment tireoidinom result inevitably developing Xia hypothyroidism.

**Chronic fibrous Riedel's thyroiditis.** The disease is characterized ized growth of the thyroid gland connective tissue replacement of its parenchyma, involving in the process of surround boiling fabrics. The etiology of the disease has not been established. Clinic and diagnostics. Thyroid diffusely increased stony density soldered to surrounding TCA nyami. There are moderate signs of hypothyroidism. Pressure on the esophagus, trachea, blood vessels and nerves causes the corresponding symptoms.

Treatment: it is almost impossible to exclude a malignant tumor of the thyroid gland before the operation, therefore, surgical intervention is indicated for Riedel's thyroiditis. The maximum possible excision of the fibrosing thyroid tissue is performed, followed by replacement therapy.

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## Topic number 10: Chronic cholecystitis, clinic, diagnosis and treatment

**The lecture is dedicated to:** *for 4th year students of the Faculty of General Medicine* **Substantiation of the topic:** Cholelithiasis is the most common disease of modern society and one of the main problems of today's medicine. It is known that about 10% of the world's population suffers from gallstone disease. At the same time, over the age of 70, JCB occurs in every third person. The prevalence of gallstone disease among people of the white race reaches 30%. Huge funds are spent on the treatment of such patients.

**The purpose of the lecture: To** acquaint students with the etiology and pathogenesis of gallstone disease, to disassemble the general factors of stone formation, the symptoms of gallstone disease and general principles of treatment.

**Educational goals:** To acquaint students and teach the correct communication with patients with gallstone disease.

**Objectives of the lecture:** To acquaint students with the historical data of the development of the theory of gallstone disease, with the works of scientists who have made a great contribution to the development of biliary surgery. To acquaint with the etiology, pathogenesis, classification, clinic, diagnosis of gallstone disease. To acquaint the methods of pre and postoperative management of patients, methods of treatment of these patients.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Historical data
2. Etiology and pathogenesis
3. General data (definition of concept)
4. Common factors of stone formation
5. Symptoms and general principles of treatment

**Demo material:** tables, slides

**Questions to the audience to establish feedback:**

1. Give a definition of the concept of ZhKB.
2. Anatomy of the biliary system?
3. What is a predisposing factor for stone formation?
4. What is cholecystocholedocholithiasis?

**Anatomical and physiological features**

The outflow of bile from the liver parenchyma is carried out by the bile ducts of its segments (ducts of the III order), which, merging, form sectoral ducts (ducts of the II order). When the latter are connected (Fig. 1), ducts of the liver lobes are formed - the *right and left hepatic ducts* (ducts of the 1st order). Both lobar ducts immediately after leaving the liver at its gate merge into one large *common hepatic duct* (ductus hepaticus comm.). From the confluence of the common hepatic duct with cystic about current begins bile duct (the ductus choledochus).

There are four parts to the bile duct. Positioning the first part is installed above the upper horizontal part of the duodenum (pars supraduodenalis). It runs along the right edge of the hepatoduodenal ligament and is 0.3-3.2 cm long. The second part (pars retroduodenalis) is located behind the horizontal part of the duodenum. Its length is 1.8 cm. To the left of this part of the bile duct passes the gastro-duodenal artery (a. Gastroduodenalis). The third part of the bile duct length of 2.9 cm extends behind either of agile pancreas, either through its thickness (pars retropancreatica). The fourth part of the bile duct (pars intramuralis) is 1.6 cm long. It passes through the posterior wall of the duodenum in an oblique direction, usually in its vertical part, at a distance of 8-12 cm from the pylorus. The final part of the bile duct drainage usually is a C main pancreatic duct in ampullar enlargement of the major duodenal papilla, on top of which communicates with the lumen of the duodenum.

The *gallbladder* (vesica fellea) is pear-shaped. It is divided into two parts by a circular constriction: a large, anterior lateral - the *body* and a smaller, gradually tapering, posterior medial - the *neck*. The blind end of the gallbladder body is called the *bottom*. Gall bladder capacity ranges from 30 to 70 ml, length - 07.10 cm, nai large width - 4.3 cm.

The body of the gallbladder lies in a shallow fossa of the lower surface of the liver and is connected with the liver by loose connective tissue, small vascular branches and lymphatic vessels. At this point on surface of the gallbladder is not covered by the peritoneum. On all other surfaces, it is covered with a peritoneum, which is a continuation of the peritoneal lining of the liver. Speaking about the relationship of the gallbladder to the Pec new, it should be remembered that it is reinforced by the penetration of its walls into the interior of the branches of the liver cystic artery. In addition, there are additional bile ducts that connect the intrahepatic zhelch nye moves with the lumen of the gallbladder.

The *cystic duct* (ductus cysticus) lies in the thickness of the hepato-duodenal ligament at its right edge, to the right of the hepatic duct and is closed with a thick layer of subserous tissue and fat. Its length at an average of 3.9 cm in diameter - 0.4 cm cystic proto Aperture. Ka is located 2.5 cm below the confluence of the right and left hepatic ducts. However, the length,

form of discharge from the neck of the gallbladder, the direction and nature of the course of the cystic duct are subject to great fluctuations.

*Arterial blood flow* to the liver, gallbladder and bile ducts (Figure 2) is made of the common hepatic artery (a. Hepatica comm.), which is a branch of the celiac artery (a. Coeliaca), the right hepatic artery (a. Hepatica propria). The latter at the gate of the liver is divided into two branches - the right and left hepatic arteries.

Gallbladder supplied with blood through the cystic artery (a. Cystica), which is 90% of the leaves from right hepatic artery and with cystic and common hepatic duct forms a triangular nick Calot.

*The lymphatic system of the biliary tract* is represented by an extensive network of lymphatic vessels. Large lymphatic plexus located under the mucous membrane of the gallbladder. Lymph away through lymph node located at the neck of the gallbladder (lymphoglandulae Mascagni). All lymph from the biliary tract system enters the thoracic lymph nodes, and then - in the chest lymphatic flow. In addition, there is a close connection between the lymphatic vessels of the gallbladder and the lymphatic vessels of the pancreas.

Innervation Biliary carried branches to wandering autonomic and sympathetic nerves coming from the front and rear units of the solar plexus.

The bile produced by the liver enters the extrahepatic bile ducts. The average bile flow rate by the liver is 40 ml / min. Due to the fact that the sphincter of Oddi, located in the ampulla of the large duodenal papilla, is closed between meals, bile enters the gallbladder, where it is concentrated. A food irritant acting on the duodenal mucosa causes relaxation of the sphincter of Oddi and contraction by the wall of the gallbladder. The result is the release of bile in the duodenum. As the food masses are evacuated from the duodenum, the muscles of the sphincter of Oddi contract, and bile again begins to fill the gallbladder. Up to 1 liter of bile enters the intestines per day.

### **CALCULOUS CHOLECYSTITIS**

Calculous cholecystitis is a clinical manifestation of gallstone disease, characterized by the formation of gallstones in the lumen of the gallbladder.

Currently, the problem of formation of stones in the bile duct is finally resolved. It's hard to explain just personal character stones, it remains unclear what determines the number, shape and other features of forming gallstones. According to the classical theory of formation of cholelithiasis it is a consequence of latent gall stone diathesis. If you adhere to this point of view, we find ourselves powerless in the treatment of gallstones, because after removal of the gallbladder patients suffer a relapse. Therefore, a more correct to assume that stone formation is associated with the development of the inflammatory process in the gall bladder and the timely removal promotes the recovery of patients with gallstone disease characterized.

**Etiopathogenesis of the formation of gallstones.** Among the factors contributing to the formation of gallstones, play a major role: biliary tract infection, metabolic abnormalities in the body and the presence of the standing of bile in the biliary tract.

*Biliary tract infection.* Meckel von Hemsbach (1856) believed that the development of inflammation in the wall of the gallbladder and bile stagnation therein decomposes secretions emitted mucosa of the gallbladder. As a result, bile becomes acidic, which leads to the decomposition of sodium bile salts and to the precipitation of cholesterol. One temporarily insoluble compounds are formed which, together with calcium carbonate to promote the precipitation of pigment precipitate.

Thudichum (1862) associated the cause of stone formation in the biliary tract with the process of putrefaction, which occurs as a result of the ingestion of pus from the intestinal tract into the biliary tract, which causes decomposition of bile and precipitation of cholesterol. Naunyn (1892) and many other experimenters have revealed that formation of stones in the gallbladder promotes inflammatory process, rather than the presence of a bacteria. Bacterial-inflammatory process causes fusion epithelium desquamation of gallbladder, which is the main condition for gallstones. That stone formation promotes



an inflammatory process, rather than the bacterial factor that suggests that through circumstances in that the gallstones often do not find mikroorganizmov.

Metabolic disorders in the body are shown disrupt Niemi of cholesterol, bile pigments and calcium metabolism.

Even in 1862 g. Thiidichum observed that the precipitation of cholesterol prevents precipitate taurocholic acid, as well as a balance between the content in the bile cholesterol and bile acids. The content of bile acids in the human body depends on protein metabolism. Decrease of content of bile acids occurs during fasting, and decreases when the total amount of bile secreted by the liver, and also in toxic liver injury.

Normally, in the gall bladder is increased concentration bile 4-6 times, accompanied by an increase in the amount of cholesterol therein to 400 mg% with simultaneous increase in the amount contained in the bile to a bile acids 1-10 g%. A decrease in the amount of bile acids in bile while maintaining a high concentration of cholesterol in it contributes to stone formation. The fact that the withdrawn cholesterols concentrations occur in the gallpuzyre, explains the formation of gallstones in the gallbladder is.

In 1972 Admirand, the Small, who studied patofiziologicheskie mechanisms of formation of cholesterol stones, showed that contributes to the formation of gallstones saturation of bile with cholesterol and a decrease in its content of bile acids and phospholipids as defined etiology as an increase in "lithogenicity" hepatic bile.

In favor of the fact that the formation of gallstones is optionally goes the presence of metabolic disorders, said the discovery of hyperbilirubinemia in patients with wasps nova gallstones were pigmented lesions.

*Bile stasis* is an important factor contributing to conductive education-NIJ gallstones. This clearly dock Zano works Aschoff (1906), which noted that in all cases in the presence of stones in the gall bladder was on the outside wall of the inflammatory process in the gall bladder, which leads to a violation of its contractile function, and the stagnation of bile in it. At the same time, in the literature there is a decree Niya that gallstones are found in patients with preserved contractile function of the gallbladder.

**Morphogenesis of calculous cholecystitis.** It is now well known that morphologically "primary acute cholecystitis" meeting etiology like casuistry, and where the clinical picture is consistent with acute mu cholecystitis, microscopic examination is almost always reveals the presence of exacerbations of chronic inflammatory processes flowing sa. It was also found that the development of pathological changes in zhelch prefecture promote bubble age-related changes in the blood vessels of its wall.

To study the morphogenesis of gallbladder in the lobby calculous cystitis were examined gallbladder corpses of people who do not suffer Shih cholecystitis and gall bladder removed during the operation and containing concretions (VV Vinogradov, S.I.Levina, 1970) ... At the same time, attention was paid to changes in the wall of the gallbladder, depending on the age of the patient.

The data of histological studies showed that in the area of the neck of the gallbladder, which does not contain calculi, there is no muscle layer. Its mucous membrane does not have mucous glands, it does not have the so-called Rokitansky - Aschoff sinuses, and the outer fibrous layer is more pronounced than the muscular one.

With age, patients in the absence of cholelithiasis in the wall of the gallbladder show an increase in collagen fibers of the middle layer, trophic changes appear in the muscle layer, which is expressed by the formation of fibrosis in the form of fibrous layers. Moreover, the older the patient's age, the more pronounced dystrophic changes in the wall of the gallbladder. These changes undoubtedly contribute to the disruption of the motor function zhelch Nogo bladder, bile stagnation therein, as well as creating the background to the development of inflammation in the wall of the gallbladder and the formation of concretions in it.

Histological examination of the gallbladder in patients of different WHO gain in contrast groups not suffering from gallstone disease, showed as well that with age, significant changes are detected and suck Distin gallbladder system: arterial, venous and limfaticheskoy. And if we consider that gallstone disease occurs mainly in the elderly, then

we can assume that the changes occurring in the vascular system of the gallbladder are the background for stone formation.

Gallbladder wall study in patients with gallstone disease showed that the bladder neck areas appear as antiplaque elements described by Liitkens and became known as sphincter of Liitkens. The appearance of these muscle elements during inflammation of the gallbladder can be considered as a compensatory-adaptive response to maintain the contractile function of the gallbladder, which is disturbed during inflammation.

The study of biopsy material from gallbladder in cholelithiasis revealed that morphological changes of its wall, typical of calculous cholecystitis, develop long-term. Therefore, cases are usually treated as acute cholecystitis should refer to an exacerbation of chronic cholecystitis and should be regarded as a complication in the course of the disease. Since the pronounced morphological changes in the wall of the gallbladder that are present in calculous cholecystitis do not depend on the type and nature of gallstones, it is more correct to assume that gallstones are not the cause, but the consequence of cholecystitis. This provision is of a fundamental nature. Considering the reason for the formation of stones in the gallbladder inflammation is, not cholelithiasis, we should recognize that the full recovery of patients with calculous cholecystitis and eliminating the possibility of suffering a relapse can be achieved by the timely and correct execution of the operative intervention.

Based on the above, three stages of the course of gallstone disease can be distinguished:

*The first stage is physical and chemical.* At this stage the product produced by liver and bile supersaturated in cholesterol, with decreasing its content of bile acids and phospholipids (lithogenous bile). There are no clinical manifestations.

*The second stage is latent asymptomatic stone carriage.* This stage is characterized by the same physicochemical changes in the composition of bile as in the first stage, as well as the formation of stones in the gallbladder. Stone formation process at this stage is connected not only with the physical and chemical changes of bile, but with the development of conditions for stagnation of bile in the gallbladder, changing its permeability of mucosa, as well as with the occurrence of inflammation about the processes in the gallbladder. Clinical manifestations of the disease in this stage are not available, and gallstones are found only during preventive examinations or patients at autopsy.

*The third stage is pronounced clinical manifestations.* At this stage, there are clinical signs associated with the development of complications of calculous cholecystitis: acute inflammation in the gallbladder, choledocholithiasis, stenosis of the large duodenal papilla, acute cholangitis, acute pancreatitis. Symptoms of acute inflammation may be expressed as pain and to flow poorly in the form of light attacks "biliary colic," which characterizes chronic cholecystitis calculosa.

**The clinical picture of calculous cholecystitis.** In surgical practice, have to deal with patients with the third stage of gallstone disease, occurring in the form of chronic calculous cholecystitis or its complications.

**Chronic cholecystitis** usually begins with the presence of discomfort or constant, aching pain in the right upper quadrant. In some cases, there are recurrent attacks of pain in the right upper quadrant associated with use of fatty or fried foods. However, these attacks are short-term, often go away on their own and do not bother the patient much.

Often, the clinical picture of chronic calculous cholecystitis expressed symptoms characteristic of the stomach or bowel diseases (gastritis, colitis). Patients complain of bitterness and burping air, sickening, flatulence, constipation or diarrhea.

Notable among patients with chronic cholecystitis is the leading symptom of spasmodic pain characterized by localization behind the sternum and radiating to the left shoulder and the shoulder girdle, which is called "reflexivity of the secondary angina." Patients with cardiac form of cholecystitis are usually treated for chronic coronary insufficiency, as pain during an attack on an electrocardiogram revealed signs of myocardial supply. These changes take place after the disappearance of pain, and great care must be taken in the collection of medical history and examination of the biliary system can diagnose calculous cholecystitis.

Painful forms of chronic calculous cholecystitis occur with typical attacks of pain in the right hypochondrium (biliary colic), often radiating to the right shoulder and to the area of the right scapula, as well as to the neck. These pains usually occur after errors STI in the diet and are accompanied by nausea and vomiting. In this case, the gallbladder develops catarrh, with purulent process no signs.

Biliary colic occurs due to an increase giving Lenia in the lumen of the gall bladder or in all of the biliary system, caused by a sudden blockage of the neck of the gallbladder and the cystic duct stone, as well as sharp SIS IOM muscle sphincter of Oddi or obstruction of the bile duct in papillary small stones by passing it into the duodenum.

Patient examination reveals tenderness and mild muscular defense in the right upper quadrant palpation Mrs. Vaught. With a soft stomach during biliary colic, it is possible to palpate an enlarged, tense and painful gallbladder. Effleurage on the right costal arch causes an increase in abdominal pain (positive *simptom Ortner - Grekov*). There are no signs of peritoneal irritation, and the body temperature usually does not rise.

After an injection of antispasmodic drugs, an attack of biliary colic subsides, the patient's condition improves.

Outcomes of chronic calculous holetsi Stith. Chronic inflammation of the gall bladder, flowing against the background of the blockade of the neck of the gall pu Zira or cystic duct in violation of absorptive functions of the mucosa of the gallbladder, may for result in the development of *dropsy of the gall bladder*.

As a result of frequent exacerbations of chronic inflame tion process in the gallbladder wall is sharply thickened, cartilaginous consistency takes himself zhelch ny bubble shrinks, its cavity is reduced. All this contributes to the formation of *sclerotic gall pu Zira*.

5-7% of patients suffering from chronic calculous cholecystitis develop *gallbladder cancer*.

**Diagnosis calculous cholecystitis and oslozh neny** based on a comprehensive examination of the patient with the help of special methods of research used in the preoperative period and during surgery.

Recently, a special method uc main sequence for detection of a pathological process in the gall bladder, in extrahepatic bile ducts in the pancreas and is **ultrasonic tomogra raphy**. With the help of this study can be found in the gall bladder calculi and set the shape PLAYBACK Lenia gallbladder. It reveals of pathological sky process, localized in the liver-gall proto ke, in a large duodenal papilla and pancreatic same Leze. To reveal the pathological process in the gallbladder and the bile duct by using the *X-ray examination*, which is performed by the customer, CMV several techniques:

#### **I of . Indirect contrasting of the biliary system.**

1. Plain plain radiography of the liver and extrahepatic bile ducts.
2. Excretory cholecystocholangiography: a) oral; b) intravenous.

#### **II . Direct contrasting of the biliary system.**

1. Percutaneous cholecysto-cholangiography under laparoscopic control.
2. Percutaneous transhepatic cholangiography under radiological control.
3. Percutaneous transhepatic cholangiography under ult razvukovym control.
4. Endoscopic retrograde cholangiography.
5. Fistulocholecystocholangiography.
6. Operating cholecystocholangiography.

X-ray techniques, based on indirect (excretory) contrasting bodies des chevvyodyaschey system is now almost does not apply because of their informative value is small. With respect to X-ray techniques, which are based on direct contrasting bodies biliary system, they are used in patients with mechanical tion obstruction of the biliary tract (with obstructive jaundice). In applying as contrast agents are 25-30% solutions of water-soluble iodine prep comrade (kardiotrast, Diodon, biligrafin, bilignost et al.).

Percutaneous puncture of organs biliary system, followed by conducting them in the contrast solution may be carried out under laparoscopic control (*chre skozhnaya transvesical holetsishtoholan-giografiya*)

Under radiological or ultrasound guidance (*percutaneous transhepatic cholangiography*). Direct contrasting of extrahepatic bile ducts may be

retrograde introduction therein contrasting races creates at endoscopy dvenadtsatiperst hydrochloric intestine (*endoscopic retrograde cholangiography*).

In those cases where the preoperative period not udaet camping clearly define the status of the extrahepatic bile about currents for identifying choledocholithiasis and papillary stenosis of the extrahepatic bile ducts of follow during operation - *operating cholangiography*.

During the operation, the bile duct can be examined using special fibroscopes (*choledochoscopy*). This examination reveals inflammatory about the processes in the wall of the bile duct (***cholangitis***), and Detect live not deleted when holedoholitotomii concretions.

### **Treatment of calculous cholecystitis and its complications.**

In identifying the need to calculous cholecystitis hundred vit question about the indications for surgical treatment. Tactics performing early surgery for calculous cholecystitis is based on the fact that even with uncomplicated forms of slaughtering Levan morphological changes in the wall of the gall pu Zira indicate the duration of the existence of patho logical process. In addition, 30-40% of patients with calculous cholecystitis in the pathological process vovle repent extrahepatic bile ducts, large duodeno onal papilla and pancreas. Against the background of chronic Skog inflammation in the gallbladder may develop a malignant tumor. Therefore, the earliest opera tion intended to prevent the development of complications of calculous cholecystitis.

Hitherto surgeons not formed consensus about the timing of the operation at oslozh nennyh forms calculouse cholecystitis (acute Sun Singe gall bladder). Some of them believe optionally go to perform surgery in the early hours of receipt of the patient in the hospital. Others recommend dissolved operate patients after subacute inflammatory phenomena and perform readjustment preoperative biliary ducts. This point of view in terms of use Remote Control razvukovogo research that allows us to observe the dynamics of the inflammatory process in the wall of the gall pu Zira under the influence of anti-inflammatory therapy should be considered more rational. Emergency operation trace is only performed in those cases when the hall acute cystitis detected pattern of peritonitis.

If the timing of performing the surgery, surgeons argue that for surgical treatment of their opinions is one - in the surgical treatment of patients with calculous cholecystitis need to remove the gall pu zyr and eliminate all the complications of the bile duct and major duodenal papilla.

Gallbladder removal (*cholecystectomy*) In progress dissolved as a wide laparotomy and using minimally invasive interventions -

*Laparoscopic holetsi stektomiya* or *cholecystectomy from mini-approach*.

To eliminate the pathological processes in the extrahepatic bile ducts, the lumen of the bile duct is usually opened (*choledochotomy*). Most often, the lumen of the bile duct is opened by a longitudinal section of its wall in the supraduodenal section. After opening the lumen of bile duct con removed therefrom the increments (*holedoholitotomiya*) and produce eliminating stenosis papillary (*transkholedohealnaya papillosphincterotomy*). After confirming complete Ustra nenii pathological processes biliary tract, bile duct wall wound was sutured tightly with ispol'uet mations unresponsiveness suture applying Preetz Zeon suture technique (stapled tissue wall of the bile duct, the duct positioned above the mucous sheath). In some cases choledochotomy can be completed either *external drainage* of bile duct slops schyu T-shaped latex drainage or formation *biliodigestive anastomosis* (holedohoduodeno-ledohoeayunoanastomoza or Ho).

In cases where there is a stenosis of large Duodo tional papilla or stone is restrained in its vial, you suppl *transduodenalnym papillosphincterotomy* followed by removal of the stone.

The introduction of endoscopic surgery into surgical practice has significantly changed the surgical tactics for calculous cholecystitis and its complications. Currently, the operation of choice when calculous cholecystitis YaV wish to set up a laparoscopic cholecystectomy. During paw macroscopic cholecystectomy may be made and holedoholitotomiya which ends superposition Glu Hogoev duct seam on the wound.

To eliminate choledocholithiasis or stenosis of major duodenal papilla in the preoperative period vypol nyayutsya endoscopic transduodenalnym papillosphincterotomy and lithoextraction.

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## **TOPIC № 11: Acute cholecystitis and its complications.**

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** The problem of treatment of acute cholecystitis over the past years is an urgent problem of urgent surgery. This pathology is one of the most common diseases, the specific gravity of which ranks second after acute appendicitis and reaches up to 30-35% in the structure of acute surgical pathology of the abdominal organs.

**The purpose of the lecture:** **To** acquaint students with the etiology and pathogenesis of acute cholecystitis, to analyze the general factors, symptoms and general principles of treatment.

**Educational goals:** **To** acquaint students and teach the correct communication with patients with acute cholecystitis.

**Objectives of the lecture:** **To** acquaint students with the historical data of the development of the theory of gallstone disease, with the works of scientists who have made a great contribution to the development of biliary surgery. To acquaint with the etiology, pathogenesis, classification, clinic, diagnosis of gallstone disease. To acquaint the methods of pre and postoperative management of patients, methods of treatment of these patients.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Historical data - 10 min
2. Etiology and pathogenesis - 20 min
3. General data (definition of concept) - 5 min
4. Clinic - 15 min
5. Treatment tactics - 20 min
6. Complications - 20 min

**Questions to the audience to establish feedback:**

1. What is the definition of acute cholecystitis?
2. The pathogenesis of acute cholecystitis?
3. Clinic of acute cholecystitis?
4. What complications of acute cholecystitis do you know?
5. Features of the course of acute cholecystitis in elderly patients?

### **Acute cholecystitis**

Acute inflammation of the gallbladder is one of the most common complications of calculous cholecystitis. Main causes development of acute inflammation in the wall of the gallbladder lumen presence microflora in bladder and bile outflow violation. The microflora enters the gallbladder by an ascending route from the duodenum, less often by a descending route from

the liver, where microbes enter with the blood flow, lymphogenous and hematogenous. In chronic cholecystitis bile contains germs, but there is an acute inflammatory process is not at all the pain GOVERNMENTAL. The leading factor in the development of acute cholecystitis is a violation of the outflow of bile from the gallbladder, which occurs when the gallbladder neck or cystic duct is occluded by a stone. Secondary importance in the development of acute inflammation has on Rushen perfusion gallbladder wall at atherosclerotic visceral branches of the abdominal aorta and the damaging effect of pancreatic juice to the mucosa of the gallbladder at reflux pancreatic secretion in bile ducts. Clinical forms of acute cholecystitis: catarrhal, phlegmonous and gangrenous (with or without gallbladder perforation). Catarrhal cholecystitis is characterized by intense constant pain in the right upper quadrant and epigastric region with irrationality Diaz in the lumbar region, right shoulder, shoulder girdle, great -hand half of the neck. At the beginning of catarrhal cholecystitis pain can wear paroxysmal in nature due to enhanced contraction of the gallbladder wall, aimed at liquidation of the bladder neck or cystic duct. Fuss often repeats vomiting, gastric and duodenal contents then, does not bring relief to the patient. The body temperature rises to subfebrile. Moderate tachycardia up to 100 per minute, sometimes a slight increase in blood pressure. Tongue moist, mouth to be coated whitish bloom. The abdomen participates in the act of breathing, there is some lag in the right half of the abdominal wall (in the upper parts) in the act of breathing. On palpation of the abdomen, there is a sharp pain in the right hypochondrium, especially in the projection of the gallbladder. There is no tension in the muscles of the abdominal wall or it is not very pronounced. Positive symptoms Ortner-Grekov, Murphy, George Musso- evskogo. Sometimes you can palpate enlarged, moderately bolez nenny gallbladder. In a blood test, moderate leukocytosis is  $10-12 \times 10^9$  liters or 10000-12000). Catarrhal cholecystitis, biliary colic, and how, in the majority -OPERATION patients provoke errors in diet. Unlike colicky attack of acute catarrhal cholecystitis a continuation in habitants (to several days) and is accompanied by nonspecifically mi symptoms of the inflammatory process (hyperthermia, leukocyte inos, increased ESR). Phlegmonous cholecystitis has more pronounced clinical symptoms. The pain is much more intense than in the catarrhal form of inflammation. The pains are worse when breathing, coughing, re mene posture. Most nausea and frequent vomiting, deteriorating general condition of the patient, the body temperature reaches febrile, tachycardia increases to 110-120 in a mine that. The abdomen is somewhat swollen due to intestinal paresis, while breathing, the patient spares the right half of the abdominal wall, intestinal noises are weakened. On palpation there is a sharp pain in the right upper quadrant, denominated muscular defense, often can be defined to divide the inflammatory infiltrate or enlarged painful gallbladder. Shchetkin's symptom is positive in the upper right quadrant of the abdomen. Positive symptoms Ortner Gre- kov, Murphy, of St. George Musso. In the blood test, leukocytosis (up to  $20-22 \times 10^9$  liters, or up to 20,000-22000) with a shift in the blood formula to the left, an increase in ESR. Grossly gallbladder increased in size, the walls ka it thickened, purple-bluish color, covering his abdomen fibrinous plaque in the lumen of purulent exudate. If bluetongue form acute cholecystitis microscopic examination point only initial signs of inflammation (edema gallbladder wall, flushing), when phlegmonous hall cystitis reveal pronounced infiltration wall gall ny Zira leukocytes impregnation purulent exudate, sometimes with the formation of ulcers in the wall of the gallbladder. Gangrenous cholecystitis is characterized by a rapid clinical course is usually a continuation of the abscess stage Vos singed when the body's defenses are not able to handle camping with virulent microbial flora. Sometimes primary gangrenoz ny cholecystitis occurs in thrombosis cystic artery. In lane howling place severe intoxication symptoms appear with phenomena niyami local or diffuse purulent peritonitis (which is especially pronounced at the perforation wall of the gallbladder). Gangrenous inflammation of the form occurs more frequently in elderly and starches who age with reduced tissue regenerative abilities, reduced reactivity and impaired blood supply of the gallbladder wall due to atherosclerotic lesions of the abdominal aorta and its branches. With perforation of the bladder, symptoms of diffuse peritonitis rapidly develop. The condition of the patients is grave, they are lethargic, inhibited. Body temperature is febrile. Expressed tachycardia (up to 120 per minute and

bo Lee). Rapid shallow breathing (the patient spares the diaphragm when breathing). Tongue dry. The abdomen is swollen due to intestinal paresis, its right sections do not participate in the act of respiration, intestinal peristalsis is sharply depressed, and is absent in diffuse peritonitis. Protective tension of the muscles of the anterior abdominal wall, symptoms of peritoneal irritation are expressed. Percussion can be determined sometimes dulling the sound over the right Lateral nym stomach channel. In vitro assays: high leuco cell count, leukocyte abrupt shift left, increased erythrocyte sedimentation rate, impaired blood electrolytes and acid-alkali Nogo state, proteinuria, cylinduria (destructive inflammation symptoms and severe intoxication). Acute cholecystitis in elderly and especially senile people with a decrease in the general reactivity of the body and the presence of concomitant diseases has an erased course. Gangrenous cholecystitis most often develops in such people. Old people often lack the intense pain, you dimly razhen protective muscle tension anterior abdominal wall, there is a high leukocytosis. That is why elderly patients may encounter quite serious difficulties in diagnosing acute cholecystitis, assessing the condition and choosing a treatment. In typical cases, the diagnosis of acute cholecystitis not before stavlyaet serious problems. However, it should be noted that a similar clinical presentation may proceed with acute appendicitis subhepatic location process, acute pancreatitis, perforated gastric ulcer and duodenal ulcer, pochech Nye colic and other diseases of the abdominal cavity. Hydrocholecystis develops at the completion wor pas acute cholecystitis (catarrhal) if microbial flora bile has little virulence and stored occlusion neck of the gallbladder or cystic duct. The gall bladder is sucked bile constituents, bacteria Pogi bayut, the contents of the gallbladder becomes colorless, fusion Zist character. On physical examination of patients, the bottom of an enlarged, stretched, painless gallbladder can be palpated. At calming acute inflammatory changes in the wall zhelch Foot bubble may develop gallbladder empyema. Patients complain of dull pulling pains in the right hypochondrium, somewhat aggravated after eating, episodic increases in temperature to 37.8-38 ° C, palpation can determine an enlarged, slightly painful gallbladder.

Choledocholithiasis is one of the most frequent complications of cholelithiasis and calculous cholecystitis (in 20% of patients). In elderly and senile people, choledocholithiasis is observed more often 2-3 times. Stones in the common bile duct in the vast majority of patients from the gallbladder. Migration of stones from the gallbladder is possible with a short wide cystic duct, a pressure sore in the neck of the gallbladder or Hartmann's pocket with the formation of a wide fistula between the gallbladder and the common bile duct. The migration of stones into the common bile duct also contributes to the disruption of the motor activity of the gallbladder and, first of all, the Lutkens sphincter. In some patients (1-5%), primary formation of stones in the biliary tract is possible. Choledocholithiasis can be asymptomatic for a long time. Even with multiple stones of hepaticoholedochus, disturbances in the passage of bile do not always occur. Bile, as it were, flows around the stones located in the lumen of the extrahepatic biliary tract, and if there is no obstacle in the terminal section of the common bile duct freely flows into the duodenum. When the migration of stones in the most narrow sections hepaticoholedochus its terminal department, and especially in a vial of a large duodenal papilla, it may obstruct the flow of bile into the intestine, which clinically manifested it is obstructive jaundice. Jaundice is the main clinical sign of choledocholithiasis. Sometimes jaundice is remitting in the presence of the so-called "valve" stone of the terminal part of the common bile duct or large duodenal papilla. When a stone occludes the terminal part of the common bile duct, biliary hypertension occurs, which is clinically expressed by dull pain in the right hypochondrium and obstructive jaundice. With further increase in pressure in extrahepatic bile duct lumen extends past the stone as it emerges proximal gepatoholedoha, jaundice reduced and disappeared can pull the. Cholangitis - acute or chronic inflammation within and outside the hepatic biliary tract. It occurs with choledocholithiasis due to cholestasis and an infection in the bile. By the nature of morphological cal changes in the walls of the bile duct is isolated kata -sectoral and purulent cholangitis. The clinical manifestations of cholangitis are characterized by a sudden increase in body temperature to febrile, tremendous chills, heaviness and dull pain in the right hypochondrium, nausea and vomiting. When purulent cholangitis have intense pain, jaundice

appears early, which is associated with damage to pechenoch Noah parenchyma, as well as with cholestasis. The physical explores Vania patients noted in the right upper quadrant pain, mind Renno pronounced muscle protection (purulent cholangitis); symptoms of peritoneal irritation are negative. In pain shinstva patients can test the lower edge of the increase of the painful liver. With progressive turbulent Techa SRI purulent cholangitis small ulcers are formed in the walls of the bile ducts in the parenchyma and thicker at its surface, which leads to the formation of multiple liver abscesses. The prognosis in such cases is unfavorable. If the infringement of the stone in the vial with a major duodenal Socko along with violation of the outflow of bile can occur at Rushen outflow of pancreatic juice, and often develop acute pancreatitis. Scarring stricture papillary and thermo -regional division of the common bile duct damage occur when mucosal duodenal papilla stones inflammatory process. Strictures can be limited in length from a few millimeters to 1-1.5 cm and tubular, in which the concentric narrowing of the terminal section of the common bile duct occurs for 2-2.5 cm or more. This conditional division of strictures comfortable in the choice of the optimal method of correction of complications during operator radio. Cicatricial strictures, as a rule, do not have pathognomonic clinical symptoms. With pronounced stenosis of the terminal section of the common bile duct with impaired passage of bile and pancreatic juice, symptoms of cholecystopancreatitis, acute or chronic pancreatitis, obstructive jaundice, cholangitis appear. Often, strictures are combined with choledocholithiasis. Internal biliodigestive fistulas. Prolonged presence of stones (especially large ones) in the gallbladder can lead to the formation of a pressure ulcer of its wall and a nearby hollow organ, closely adhered to the gallbladder due to pericholecystitis. Most often, fistula formation occurs between the gallbladder and the duodenum or the hepatic flexure of the colon. Much less often fistulas form between the gallbladder and the stomach or between the gallbladder and hepatocolichus. Clinical manifestations of internal fistulas biliodigestive scarce, so a diagnosis before surgery udaet camping is not for all patients. Large stones, migrated to about the light duodenal ulcers, can cause acute obstructive ileus. Smaller stones pass freely through the intestine and go out with feces, which can be detected by the patient himself. When the infected intestinal contents are thrown into the lumen of the gallbladder, symptoms of cholangitis occur. With a cholecysto-cholechoal fistula, stones migrate from the gallbladder into the lumen of the common bile duct with the development of symptoms of choledocholithiasis. Plain X-ray of the abdominal organs in patients with vesicovascular duodenal or vesicouco-colonic fistulas reveals the characteristic symptom of aerocolia (the presence of gas in the gallbladder or bile ducts). Due to the close morphofunctional relationship between gallbladder, bile ducts and the pancreas as well as between different pathological conditions make it difficult pancreatic juice outflow (choledocholithiasis, stricture of the large duodenally th papilla, cholangitis, etc.) To from Menenius in the biliary tract when connected changes in Poggio ludochnoy gland, which clinically manifested in the form of cholecysto pancreatitis. At the same time, along with symptoms characteristic of cholecystitis and its complications, there are clinical Prizna ki chronic, less acute pancreatitis. These symptoms should pay close atten manie to in the operating period of examination of the patient or during surgery to identify the root cause of the development of pancreatitis, and to fix it. Diagnostics: the main method for diagnosing cholelithiasis is contrast cholecystocolangiography. According to the methods of administration of a contrast agent, oral, intravenous and infusion cholegraphy are isolated. With oral cholecystography, 10-14 hours before the study, the patient takes 6-12 tablets of an iodine-containing X-ray contrast substance (cholevid, iopagnost), which is easily absorbed from the gastrointestinal tract into the blood, is actively absorbed by hepatocytes and excreted in bile. Morning fasting produce a series of X-ray images of the domain gallbladder before and after breakfast choleretic (2 egg yolk) direct radiographic sign gallstones is the presence of defects on a background contrast filling of the gall bladder. When obturation stone neck of the gallbladder or cystic duct if the lumen bladder filled multiple stones contrast agent does not penetrate into the gallbladder and it radiographic not detected when the stored shadow extrahepatic biliary absence contrast zhelch Nogo bladder may be in violation of its concentration function (disabled gallbladder). When oral lobby cystogram concentration of contrast agent in the bile



Nevelev ka, so the picture is difficult to obtain a clear shadow of the gallbladder and the bile ducts more (especially in obese people). By their informative ultrasonography (US) exceeds cholecystocholangiography is in contrast to the last non-invasively study allowing to detect stranded The shortest stones in the gall bladder and biliary tract (1-2 mm), determine the thickness of the wall of the gallbladder, bile duct width dimensions pancreas (Fig. 156). Ultrasound can also be performed with an acute inflammatory process. Effectiveness of this method reaches 90% and higher. When obstructive jaundice caused by choledocholithiasis, papillary stenosis, tumors of the biliary tract and of the pancreas, shown vypol nenie retrograde cholangiopancreatography (RPHG). The essence of this research method is as follows. The patient vypol nyayut gastroduodenoscopy in vertical branch dvenadtsatiper stnoy large intestine are duodenal papilla into the lumen through which the biopsy channel of an endoscope introduced into a thin, flexible catheter.

Treatment: All patients with acute cholecystitis have to hoditsya hospital under constant supervision of a surgeon If you have symptoms of peritonitis shows the emergency operation. In the remaining patients displayed drug Tera Pius. Patients restrict food intake, allowing only alkaline water (since the acidic gastric contents, proteins and fats stimulate the secretion of intestinal hormones reinforcing motor hydrochloric activity gallbladder and secretory activity under gastric cancer). To reduce the pain used nenarko cal analgesics. Narcotic analgesics (promedol, morfine, fentanyl), due to their pronounced analgesic effect, can significantly reduce pain and objective signs of the inflammatory process (muscle protection, peritoneal symptoms), which can create the impression that the inflammatory process has subsided and thus "lubricate" the clinical picture of the disease , despite the ongoing destructive changes in the gallbladder. Narcotic analgesics, causing spasm of the sphincter of Oddi, bile contribute to the development of hypertension and disturbance of outflow of pancreatic juice, which is very nezhe desirable to in acute cholecystitis. Pain can be reduced by applying anticholinergics and spasmolytics (at ropin, platifillin, Nospanum et al.). An ice pack is placed locally on the right hypochondrium. The use of heaters is absolutely unacceptable, as this significantly increases the blood filling of the gall bladder, which leads to further progression of the inflammatory process with the development of destructive changes. To suppress the activity of the microbial flora desg chayut broad spectrum antibiotics except tetracycline drugs having hepatotoxicity. For detoxification, infusion therapy is prescribed at least 2--2.5 liters of solutions per day. During treatment, the patient is under constant observation. Take into account the subjective nye sensations objective symptoms of the disease. It is advisable to conduct individual observation picture, in which it is necessary We mention chat every 4--6 hours heart rate, blood pressure value, body temperature, the number of leukocytes in the blood. This substantially governmental facilitates the monitoring of patients, allows to evaluate the ef ciency of the treatment, to judge the course of the inflammatory process. In acute holetsistopankreatit complex drug therapy should also include drugs used to le cheniya acute pancreatitis. In most patients, an attack of acute cholecystitis can be stopped. At the end of the attack, the patient must be examined to identify stones in the gallbladder. When the Detect zhenii stones in the gallbladder or bile ducts of the patient is necessary to operate routinely in 2-3 weeks after an acute attack subsided. If during the treatment of acute cholecystitis in those chenie 48-72 hours the patient's condition does not improve, stored or amplified abdominal pain persists or increases protection voltage of In recent years, there have been reports of the successful use of emergency laparoscopy and treatment of acute of cholecystitis. Under the control of a laparoscope, a puncture of the gallbladder is performed, its infected contents (bile, pus) are evacuated, and solutions of antibiotics and steroid hormones are injected into the lumen of the bladder. This tactic allows the early stages to stop the progression of the inflammatory process with the development of destructive changes in the gallbladder wall, quickly achieve positive clinical effect, avoid forced surgery at an altitude of acute cholecystitis, you play time for preoperative preparation of patients with ities stvuyuschimi diseases. The situation becomes much more complicated with the development of obstructive jaundice against the background of acute

cholecystitis. This complication threatens pain, cholangitis, hepatic parenchymal cell damage, further aggravation of intoxication with the development of renal failure. Mechanical jaundice is not rare in elderly individuals, compensatory capacity of the organism for which is very limited. Early operative proliferative intervention on the background of acute cholecystitis with obstructive jaundice is they have a pretty big risk. In such a situation, urgent endoscopic papillotomy is a rather promising direction. After biopsy channel duodenoscopy administered thin cannula with large duodenal sheath, then using a special papillotomy incised its top wall. Stones of ducts extend either self parking Tel'nykh or they are removed or basket Dormia probe Fogarty. This manipulation allows you to eliminate gallstones and pancreatitis, hypertension, jaundice and reduced toxicity. Vposled Corollary perform gall bladder surgery in planned by row. Cholecystectomy - major surgery, you fills in acute cholecystitis. Removal of the gallbladder can present significant difficulties due to pronounced inflammatory changes in the gallbladder and surrounding tissues, in connection with which they resort to a number of special techniques - removal of the gallbladder from the bottom, removal of the gallbladder after preliminary opening of its lumen. Cholecystectomy must necessarily be complemented with intraoperative The investigations of extrahepatic bile ducts (cholangiography). Further surgical tactics are determined depending on the nature of the detected changes, taking into account also the age, the general condition of the patient at the time of the operation. With a total tyazhe scrap the patient's condition, diffuse peritonitis and serious ities stvuyuschih diseases impractical endeavor to undertake surgery in full in accordance with the nature of the changes in the extrahepatic bile ducts. No necessity to remove only inflammatory-modified PU cholic zyr, eliminate (if it is detected during operation) zhelch hydrochloric hypertension. To combat cholangitis, drainage is left in the common bile duct. Cholecystostomy removing stones and infected with the contents of the gall bladder is shown in rare cases as a forced measure the general condition of the patient and the weight -intensity inflammatory infiltrate around the gallbladder, CCA cially in elderly and senile age. This operation allows only palliative and eliminate the inflammatory acute -inflammatory changes in gall bladder wall. In the late postoperative periods, usually again in the gallbladder occurs exacerbation of the inflammatory process and the sick accounted for vtorno operate. Mortality after cholecystectomy performed routinely for chronic cholecystitis calculouse does not exceed 1%, and cholecystectomy for acute cholecystitis accom panied by lethality in 6-8% of cases, reaching in elderly and senile age of 2 5%.

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## **TOPIC № 12: Surgical liver diseases . Liver abscess.**

**The lecture is dedicated to:** for 4th year students of the medical faculty

**Rationale for the topic:** The liver is the largest organ in the human body. Its mass is 1200-2000 g (1/50 of body weight). Many liver diseases, unfortunately not fully covered by

this lecture, are of great interest. Diseases such as echinococcosis are a social problem. The need to study the liver anomalies themselves is indisputable. Surgical methods for correcting the manifestations of portal hypertension have recently become increasingly popular. These pathologies, formidable today, will be discussed in this lecture.

**The purpose of the lecture:** to familiarize students with surgical liver diseases, to find out the etiopathogenesis, to teach diagnostics, differential diagnosis and treatment.

**Educational goals:** Lecture promotes expansion of the range of students' knowledge about the surgical diseases of the liver, its possible etiology and methods of prevention and treatment is a preparatory material for practical busy I tiyam. To train students to be attentive to the sick, protect the interests of patients, know the questions of medical ethics and deontology.

**Lectures Objectives:** Writing concept of surgical liver diseases etiopathogenesis, introduce the clinical manifestations and complications of these diseases, disclose methods of diagnosis and differential diagnosis, to introduce the modern methods of treatment of liver diseases.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Motivation - substantiation of the topic - 5 min.
2. Brief anatomical and physiological data, methods of examination of patients - 15 min
3. The concept of portal hypertension, liver echinococcosis - 15 min
4. Classification of portal hypertension - 5 min
5. Clinic, symptomatology, stages of the course - 25 min
6. Treatment methods - 25 min

**Anatomical and physiological features**

The liver is the largest organ in the human body. Its mass is 1200-2000 g (1 \ 50 of body weight). It develops in the third week of intrauterine life of the fetus by outgrowth from the epithelium of the duodenal mucosa. The liver is located in the upper right quadrant of the abdomen and is covered by the ribs. Its upper border reaches the fourth intercostal space along the right midclavicular line, the lower border in newborns often reaches the navel, in infants it protrudes 2-3 cm from under the costal edge and by about four years it breaks down behind it. In the midline, the lower border of the liver is located midway between the navel and the xiphoid process. The anterior-superior convex surface of the liver is divided by the crescent ligament into two lobes: the right, larger in size, and the left. On the lower concave surface, there are two longitudinal grooves (right and left) and a transverse one, which is called the gate of the liver. These grooves divide the liver into right, left, square, and caudate lobes. The hepatic artery, nerves and portal vein enter the gate of the liver, and the lymphatic ducts and the common hepatic bile duct exit. The liver is covered on all sides by the peritoneum, with the exception of the area on the posterior surface, where it is adjacent to the diaphragm. The peritoneum, passing to the surrounding organs, forms ligaments (right and left coronary, hepato-gastric, hepato-duodenal, hepato-renal), which play an important role in fixing the liver. The liver is supplied with blood both from its own hepatic artery and from the portal vein. At the same time, about 25% of the total hepatic blood flow falls on the artery and 75% on the portal vein.

The division of the liver into the right and left lobes along the falciform ligament does not correspond to its functional anatomy, which is used both in evaluating the results of imaging methods and in performing surgical interventions. It is based on the principle of branching of the portal vein, its own hepatic artery and bile ducts, which provide blood supply and outflow of bile from relatively isolated zones of the liver. So, the portal vein is divided into right and left branches, feeding, respectively, the right and left lobe of the liver. The border between the lobes follows an oblique line from the inferior vena cava to the bed of the gallbladder and further to the gate of the liver. Each of the branches of the portal vein, in turn, is divided into two more branches, which supply blood, the so-called sectors. In the right lobe, the anterior and posterior sectors are distinguished, and in the left lobe, the medial and lateral sectors. Sectors are divided into segments (Fig. 1), which are designated by numbers. The left lobe is formed by I - IV segments. In this case, segment I corresponds to the caudate lobe of

the liver, II, III segments are located in the left lateral sector, IV - in the left medial. The right lobe of the liver includes segments V - VIII. The right anterior sector is divided into V and VIII, and the right posterior sector is divided into VI and VII segments.

The basis of the histological structure of the liver are lobules with a prismatic shape and sizes from 1 to 2.5 mm. A central vein is located in the middle of each lobule. From it to the periphery along the radii there are beams (beams), which are two rows of hepatic cells that form bile capillaries, which, after fusion, form bile ducts. The terminal branches of the hepatic artery and portal vein form capillaries that surround the hepatic cells. Unlike ordinary capillaries, intralobular capillaries, in addition to endothelium, contain Kupffer cells, which have a high phagocytic function. Endothelial cells are equipped with fenestres, which are able to "filter" blood, allowing macromolecules of a certain size to pass into the Disse space, located between hepatocytes and endothelial cells. In the subendothelial space, stellate cells (Ito cells) are found, which, due to the presence of actin and myosin, are able to contract under the influence of certain substances, for example, endothelin-1, thereby regulating blood flow at the level of sinusoids. The blood, passing through the capillaries, enters the central vein, which combine to form the hepatic veins. The latter, in the amount of 3-5, flow into the inferior vena cava.

Intrahepatic bile ducts are located along the branches of the portal vein and hepatic artery. The right and left lobar hepatic ducts, merging together, form a common hepatic duct (hepaticoholedochus). The common bile duct after the cystic duct flows into it is called the common bile duct (common bile duct), which flows into the duodenum together with the pancreatic duct.

Lymph is formed in the spaces of Disse. With impaired venous outflow from the liver and an increase in sinusoidal pressure, lymph production increases sharply, which is one of the important factors in the formation of ascites. The lymphatic vessels of the liver carry out the outflow of lymph into the lymph nodes of the liver gates and further along the hepatoduodenal ligament. From the superficial parts of the liver, lymph flows through the streams that perforate the diaphragm and along the internal thoracic artery provide lymph flow to the nodes of the mediastinum and into the thoracic lymphatic duct. Part of the lymphatic ducts and nodes spreads along the thoracic inferior vena cava.

The liver is innervated along nerve fibers from the seventh to tenth thoracic sympathetic ganglia, whose synapses are located in the celiac plexus. Parasympathetic innervation is represented by fibers of the right and left vagus nerves. The right phrenic nerve is also involved in innervation. Nerve fibers penetrate along the hepatic artery and bile ducts and reach the liver parenchyma.

The liver performs a variety of functions, participates in protein-synthetic, carbohydrate, fat metabolism, which are closely related to each other. In the liver, the synthesis of the main proteins of blood plasma (albumin, globulins, fibrinogen), the glycogen polysaccharide from simple carbohydrates and its breakdown to form glucose, fat utilization, breakdown and oxidative breakdown of fatty acids, as well as the synthesis of phospholipids take place. In the liver cells, urea is formed from ammonia, the synthesis of blood coagulation factors, and the exchange of bilirubin. The liver is one of the most important organs for the utilization of endogenous and exogenous toxic substances.

An important manifestation of liver failure is jaundice, which is based on a violation of the liver pigment function. Bilirubin is the end product of heme metabolism, which is a constituent part of the molecules of hemoglobin, myoglobin, cytochromes, for example, cytochrome P450. About 300 mg of bilirubin is produced in the reticuloendothelial system per day. At the same time, about 80% of it is synthesized from the hemoglobin of erythrocytes, and the rest from immature cells of the spleen, bone marrow, heme-containing proteins.

In the process of utilizing hemoglobin, its protein part (globin) is cleaved off, the iron in the hemosiderin is then used for synthesis, and hematoidin (a heme-containing fragment of the molecule) is further

decay. Under the influence of the microsomal enzyme heme oxygenase, the porphyrin ring is converted into linear terapirrol (biliverdin), which, in turn, is converted by biliverdin synthetase to bilirubin. The structure of the formed bilirubin is a non-polar compound, i.e. fat-

soluble substance. It is strongly associated with blood albumin. In the sinusoids of the liver, bilirubin is separated from albumin. In the hepatic cell, a reaction of conjugation of bilirubin with glucuronic acid occurs, as a result of which bilirubin is converted into mono- and diglucuronide (bound bilirubin). It becomes water-soluble and is excreted in the bile. Unconjugated bilirubin does not enter into a direct reaction (Van den Berg) with a sulfodiazoreagent without the influence of alcohol, which destroys intramolecular hydrogen bonds, therefore it is called indirect, in contrast to conjugated (direct bilirubin). Indirect bilirubin, bound to albumin and insoluble in water, is not filtered in the glomeruli of the kidneys and, therefore, is not excreted in the urine.

In the bile ducts (especially with bacterial cholangitis) and the small intestine, direct bilirubin is converted into urobilinogen, which is well absorbed into the blood, but is almost completely captured by the liver. With impaired liver function, renal excretion of urobilinogen increases. Further, in the large intestine, under the influence of microflora, stercobilinogen is formed from bound bilirubin, which, turning stercobilin, gives the feces a normal color. A small part of stercobilinogen is normal through the veins of the rectum, bypassing the liver, enters the systemic circulation and is excreted in the urine.

### **ANATOMICAL ANOMALIES OF THE LIVER**

Anatomical abnormalities of the liver are associated with the peculiarities of the position of the liver ( situs viscerus inversus ) and its structure. The lobular structure of the liver, characteristic of a number of animals, can also take place in the form of atavism in humans. In rare cases, the extra lobules have a mesentery and can twist, creating the need for surgery.

Congenital pathology of the liver vessels can lead to atrophy of the liver lobe, the size of which sharply decreases with the development of fibrosis. It is quite rare to find agenesis of the right lobe of the liver, which can lead to extrahepatic portal hypertension.

A variant of the anatomical structure of the liver is the presence of Riedel's lobe, which is an outgrowth of the right lobe of the liver in the form of a tongue, which can go down to the level of the right iliac region, simulating the presence of a mass.

In most cases, liver abnormalities do not manifest clinically, do not require treatment, and may be an accidental finding when examining a patient for another pathology.

### **LIVER INJURY.**

Liver injuries are usually associated with road traffic accidents, falls from a height, penetrating wounds with cold weapons or firearms, and various hard objects. They can be iatrogenic (during surgical interventions, resuscitation measures). Liver injuries are often accompanied by damage to other organs of the chest, abdominal cavity, as well as the head and bones of the skeleton. Liver damage is divided into open and closed.

Depending on the nature and extent of liver injury clinical symptoms may be minimal or bright as shock symptoms internal kro votecheniya, peritonitis. The presence of bruises on the anterior abdominal wall, the location and direction of the wound channel suggests liver damage before surgery. Diagnostic aspiration of the contents of the abdominal cavity, ultrasound examination, and computed tomography can provide significant assistance in making a diagnosis. This can reveal the presence of blood or bile in the abdominal cavity, rupture of the liver, or the accumulation of fluid under its capsule. In some cases, an accumulation of gas is found in the liver parenchyma, the presence of which against the background of a zone of reduced absorption coefficient at CT indicates an infection of the hematoma. In case of blunt abdominal trauma, laparoscopy is necessary to clarify the diagnosis.

Treatment of liver injuries in the vast majority of cases is surgical and is determined by the nature and severity of the damage. Small hematomas of the liver, with careful observation and stable hemodynamic parameters, allow conservative treatment. In the presence of abnormal fluid in the abdominal cavity, as well as with stab-cut, gunshot wounds, it is necessary to conduct a laparotomy and revision of the abdominal organs.

Table 1. The severity of liver injury as classified by the American Association for the Surgical Treatment of Liver Injury.

| Severity | Damage nature                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I        | Subcapsular hematoma less than 10% of the surface, does not grow, rupture of the parenchyma no more than 1 cm deep without bleeding                                                          |
| II       | Subcapsular hematoma from 10 to 50% of the surface, does not grow. Gap less than 10 cm long and 1-3 cm deep, ongoing bleeding                                                                |
| III      | Subcapsular hematoma more than 50% or growing, rupture of the hematoma with bleeding, central hematoma at a depth of more than 2 cm. Rupture of the parenchyma in a depth of more than 3 cm. |
| IV       | Rupture of the central hematoma with bleeding. Destruction of 25-50% of the parenchyma of the liver lobe                                                                                     |
| V        | Destruction of more than 50% of the parenchyma of the liver lobe. Damage to the inferior vena cava, large hepatic veins.                                                                     |
| VI       | Avulsion of the liver                                                                                                                                                                        |

Surgical intervention for liver injuries consists in stopping bleeding, surgical treatment of damaged liver tissue, and draining the abdominal cavity. To stop bleeding, tamponing, finger pressure of the hepatic artery and portal vein passing in the hepatoduodenal ligament, the imposition of hemostatic clamps, suturing or ligation of blood vessels in an accessible place are used. Surgical treatment of liver damage consists in coagulation of small superficial wounds for local hemostasis, excision of crushed and non-viable tissues (atypical resections), application of special U-shaped sutures or clips. In some cases, tamponade of the damaged area with a hemostatic sponge or a strand of an omentum is required.

Extensive damage to the liver parenchyma with the involvement of large vessels and bile ducts requires resection of a part of the liver, which is carried out taking into account its segmental structure and features of the blood supply.

The postoperative period can be complicated by late bleeding, biliary fistula formation, bile duct strictures, portal vein stenosis and portal hypertension, liver abscesses, coagulopathy and sepsis. One of the causes of bleeding can be the forming aneurysms of the hepatic artery with rupture, including in the bile ducts with hemobilia. To identify this complication, selective angiography of the hepatic artery is used, followed by its embolization.

Biliary fistulas in the absence of patency of the main bile ducts and biliary hypertension do not require surgical treatment. With strictures of the biliary tract, a good effect can be achieved with the help of endoscopic or transhepatic endobiliary interventions through dilatation of narrowed areas, installation of stents. Surgical intervention consists in the imposition of bypass biliodigestive anastomoses.

Mortality in liver injuries ranges from 10 to 60% and depends on the depth of shock, the nature of the injury, and the frequency of postoperative complications. Especially dangerous are liver injuries with damage to the inferior vena cava, hepatic veins, and portal vein.

### **Liver abscess**

Liver abscesses have become a rarer disease after the widespread use of antibiotic therapy. Arise as a result of ascending biliary infection; hematogenous spread of infection through the portal venous system or through the hepatic artery with sepsis; direct spread of infection in inflammatory diseases of the abdominal organs; liver injury. In most cases, liver abscesses are a complication of severe, more often purulent, cholangitis that occurs with gallstone disease or cancer of the extrahepatic bile ducts. Other causes are sepsis, pylephlebitis, which can be a complication of destructive appendicitis, colon diverticulitis, ulcerative colitis, amoebic dysentery. Abscesses can be single, but multiple abscesses are more common. A single abscess is more often located in the right lobe. The bacterial flora in the abscess is found in about 50% of cases. With sepsis, *Staphylococcus aureus*, hemolytic streptococcus are more often sown, with biliary abscesses, *E. coli* or mixed flora are more often found. In recent years, much attention has been paid to anaerobic flora, which can only

be detected by sowing pus on a special medium. Liver abscess is always a secondary disease. Against the background of clinical manifestations of the underlying disease, the temperature becomes intermittent or hectic, chills, sweating, nausea appear, and appetite decreases. Pain is a late symptom and is more common with solitary large abscesses. Often the liver enlarges and its edges appear sore on palpation. Sometimes there is icterus of the skin and sclera. In the analysis of blood - high leukocytosis with a shift of the formula to the left, anemia. When sowing blood, the causative agent of the disease is detected in about 30%, more often with abscesses of septic origin. With a survey fluoroscopy of the abdominal organs, a high standing and limited mobility of the right dome of the diaphragm are found, and fluid accumulation in the pleural sinus is possible. With a gassing flora against the background of the shadow of the liver, the liquid level can be determined, sometimes a deformation of the upper contour of the liver is found. Ultrasound examination of the liver, computed x-ray tomography, angiography, and liver scan with technetium-99 help in diagnostics.

Antibiotic therapy according to the sensitivity of the microflora. To create a higher concentration of antibiotic in the liver, it is possible to insert a catheter into the hepatic artery or into the umbilical vein after its isolation and instrumental bougienage. With single large or several large abscesses, surgical treatment is indicated - opening and draining the abscess. The most gentle and at the same time effective method of treatment (especially for multiple abscesses) is percutaneous drainage of the abscess under the control of a computed tomography or ultrasound scanner. Complications of liver abscesses include sepsis, subphrenic abscess, abscess breakthrough into the free abdominal or pleural cavity, pleural empyema, purulent pericarditis. The forecast is always very serious. With single large abscesses in the case of timely drainage, up to 90% of patients recover. Multiple abscesses and undrained solitary ones are almost always fatal.

### **ECHINOCOCCOSIS OF THE LIVER**

There are two forms of echinococcosis: single-chamber or hydatidous and multi-chamber or alveolar, which are caused by two separate types of echinococcus. The hydatid form of echinococcosis is the larval stage of development of the tapeworm of *Echinococcus granulosus*. The causative agent of the alveolar form is *Echinococcus multilocularis*. The main host of the worm is predators (dog, wolf, fox, etc.), and the intermediate host is herbivores (sheep, cattle, camels) and humans. The development of an echinococcal cyst occurs when the eggs of the worms enter the human body, which penetrate the wall of the stomach or small intestine and through the blood vessels reach, first of all, the liver (usually the right lobe), then the lungs and other organs.

Echinococcal cyst consists of an inner (germinal) and outer (chitinous) membranes. The body reacts to the presence of a parasitic cyst by forming a dense fibrous capsule. The inner shell of echinococcus secretes fluid and forms embryonic scolexes and new cysts (daughter, grandchild) bubbles.

*Echinococcus* of the liver begins to manifest itself clinically when the cyst reaches a large size. There are pulling, dull pains in the projection of the liver and epigastrium. Then there is a bulging of the anterior abdominal wall, especially with a giant cyst. Allergic reactions caused by antigens pазазита, appear as manifested etsyа in the form of urticaria. Echinococcal cyst can cause compression of large vessels of the liver, bile ducts, causing obstructive jaundice, which is also formed when the cyst breaks into the biliary system. Rupture of a cyst in the abdominal cavity often leads to the development of anaphylactic shock, peritonitis, dissemination of echinococcus. With suppuration of an echinococcal cyst, symptoms of purulent intoxication appear.

When detecting echinococcus of the liver, when collecting anamnesis, attention is paid to professional activity, to contact with dogs. In the general analysis of blood, eosinophilia, leukocytosis with suppuration of the cyst are revealed. Serological tests (RSK, RIGA, RGA, ELISA) are positive in 90% of cases of liver damage. Plain radiography can reveal a high standing of the diaphragm, protrusion of its dome, and the presence of calcifications. The most informative method is ultrasound and computed tomography. Radioisotope and

angiographic methods have lost their importance in the diagnosis of the disease. Treatment of liver echinococcus surgery by echinococectomy. With ideal echinococectomy (small size, marginal location), the entire cyst with its chitinous and fibrous membranes is removed without opening the lumen. In most cases, removal of the germinal and chitinous membranes of the cyst is used after preliminary puncture of its cavity and aspiration of the contents. The fibrous membrane from the inside is treated with a glycerin solution and sutured (capitonage). In some cases there is a cavity strand gland. Festering cyst after completing the main stage of operation further Dren ruyut. In the postoperative period, antiparasitic drugs are prescribed to prevent relapse (mebendazole).

Alveococcus represents opuholeobrazny fibrous assembly with mnizhestvom fine bubbles containing colorless Yid bone. Alveo polar Echinococcus capable of infiltrating growth, invasion into the bile ducts and kro venosnye vessels resembling tumor growth. For this reason, the most common complication of alveococcosis is obstructive jaundice caused by compression of the large biliary tract. Treatment is significantly complicated due to the infiltrating growth of the alveococcus and the involvement of the great vessels and bile ducts. Perform atypical or anatomical resections of the liver or removal of a part of the parasite with drainage of the biliary tract, the introduction of antiparasitic drugs (flavacridine) into the tissue.

### **PORTAL HYPERTENSION SYNDROME**

Syndrome of portal hypertension, which is based on an increase in pressure in the portal vein (normally up to 200 mm water column), caused by a violation of the relationship between blood flow into the portal bed and its outflow. Impaired blood flow can be caused by extrahepatic, intrahepatic, suprahepatic, and mixed block. The extrahepatic form of portal hypertension syndrome is caused by congenital anomalies in the development of the portal vein (atresia, obliteration of the lumen) or its thrombosis as a result of a purulent process in the abdominal cavity, umbilical sepsis, compression by a tumor. The most common (80-90%) intrahepatic form of portal hypertension syndrome is associated with liver cirrhosis. In the suprahepatic form caused by thrombophlebitis of the hepatic veins (Chiari disease) or occlusion of the vena cava at the level of the confluence of the hepatic veins (Budd-Chiari syndrome), the formation of anomalies in the inferior vena cava, impaired blood flow from the liver. Increased pressure in the portal vein can be caused by increased blood flow into the portal bed through arteriovenous fistulas, with the so-called idiopathic portal hypertension.

Portal hypertension leads to the formation of natural portocaval anastomoses, shunting blood into the systemic circulation bypassing the liver. Among them, the most dangerous are gastroesophageal anastomoses, which can be complicated by rupture and bleeding.

The main priznakmi portal hypertension is splenomegaly, varicose veins of the esophagus and stomach, bleeding from them, as well as from the hemorrhoidal veins, ascites, dyspeptic symptoms (pain in the epigastric raids STI, lack of appetite, nausea, constipation), hepatic signs ( "spider veins" , "hepatic palms", etc.), hypersplenism (thrombocytopenia, leukopenia, less often anemia), disorders of the blood coagulation system towards hypocoagulation

With the intrahepatic form of portal hypertension, the leading symptoms of liver cirrhosis in the clinic. The nature of the disease depends on the nature of liver cirrhosis (postnekrotiche sky, and alcoholic al.), Activity of the process, the degree of compen sation disturbed liver function. Portal hypertension pro is in these patients is hemorrhagic complications, splenomegaly, enlargement of the anterior abdominal wall veins, ascites threatening complication is bleeding from esophageal varices and gastric Thus there regurgitation or vomiting unmodified blood, without preceding any pain in the epigastric area of the blood flowing in stomach, with massive bleeding, you can observe vomiting with blood-colored coffee grounds, melena. Symptoms of post-hemorrhagic anemia develop quickly. Mortality at the first bleeding from the veins of the esophagus with cirrhosis is high - 30% or more. Repeated bleeding, ascites, jaundice (due to lesions of the liver parenchyma) - signs of running cirrhosis stage that the remaining wish to set up little chance of success of medical or surgical treatment of portal hypertension syndrome in this disease. The



suprahepatic form of portal hypertension syndrome is often caused by Chiari malformation or Budd-Chiari syndrome. In the acute form of the development of the disease, rather severe pains suddenly appear in the epigastric region, in the right hypochondrium, hepatomegaly, hyperthermia, and ascites are intensively increasing. Death pain GOVERNMENTAL comes as a result of profuse bleeding from the veins of food water or hepato-renal failure. In the chronic form of the disease is increasing gradually hepatomegaly and splenomegaly develops collateral ve noznaya vasculature on the anterior abdominal wall increases ascites, wasting, protein metabolism disorders occur (hypoalbuminemia).

Forecast: unfavorable. Treatment: symptomatic. In rare cases, when Budd-Chiari syndrome is caused by membranous congestion of the hepatic veins or the inferior vena cava, surgical intervention is possible - dissection of the membranes. Diagnostics: the first in portal hypertension is an X-ray examination of the esophagus and stomach to detect varicose veins in the distal esophagus in the form of multiple oval and rounded filling defects. However, the effectiveness of this method The investigations dovaniya does not exceed 50%. Fibroesophagoscopy is more informative. Instrumental research methods (celiacography - arterial and venous phases, cavagraphy, splenoportography, percutaneous transhepatic portography) are of great importance in diagnosing portal hypertension syndrome - determining the level of obstruction to the outflow of blood from the portal vein. With the intrahepatic form of the syndrome, valuable information can be obtained with laboratory research methods that reflect the functional state of the liver. Treatment: complex therapeutic measures in respect of the disease, caused by portal hypertension, and in otno shenii of portal hypertension syndrome. When predpechenoch hydrochloric shape syndrome patients subject to surgery. The most commonly used operation is portosystemic anastomosis of splenorenal, mesenteric-caval or direct portocaval anastomosis.

When treating patients with cirrhosis of the liver complicated by portal hypertension, surgical treatment is possible only in the absence of an active process in the liver and symptoms of liver failure. The choice of the operation method is determined taking into account the age, general condition of the patient, the presence of concomitant diseases, the degree of compensation for impaired liver functions, the height of portal pressure severity of hypersplenism. It is noted that the best results when applied portoka rotary shaft anastomoses are observed in patients with blood levels bilirubin below 0.02 g / l (2 mg%), the level of albumin in the blood above 0.35 g / l (3.5 g%), in the absence of ascites and neurological disorders. In patients with bilirubin levels in the blood of more than 0.03 g / l (3 mg%), the concentration of albumin in the blood below 0.03 g / l (3 g%), the presence of ascites, eating disorders and neuro logical disorders of operation bad. Postoperative mortality is very high

Minimally invasive endovascular methods of treatment (embolization of the splenic artery, varicose veins of the esophagus and stomach, the imposition of an intrahepatic portosystemic shunt) are widespread.

Treatment: bleeding from varicose veins of the esophagus begins with conservative measures: tamponade of the esophagus with a Blackmore probe, use hemostatic therapy, blood transfusion, pituitrin (to reduce portal pressure). The Blackmore probe consists of a three-lumen rubber tube with two cylindrical and circular cylinders. Two probes are used for inflating the channel cylinders, the third (open vayuschiysya in the distal portion of the probe) for the aspiration of gastric contents (control of hemostasis efficacy). Black mora probe introduced through the nose into the stomach is inflated distal (zhelu zling) balloon pumping 60-70 mL of air. Then the probe podtyagi vayut until resistance is felt, which occurs when the balloon localization in the cardia. After that, 100-150 ml of air is injected into the esophageal balloon. In this state, elastic wall Nogo cylinder exert a uniform pressure over the entire circumference of the esophagus, squeezing the vein bleeding distal food water and cardia of the stomach. After a few hours, the pressure in the balloons is released, monitoring the hemostasis effect using the probe. The duration of the stay of the probe in the esophagus should not exceed 2 days due to the risk of bedsores. The use of phlebosclerosing drugs (varicocide, thrombovar, etc.) in the treatment of bleeding from varicose veins of the esophagus is carried out through an esophagoscope. Special needle through an endoscope into a vein or paravenozno administered drug call conductive venous intima damage, obliteration

of its sticking to about light. In order to create favorable conditions for adhesion of the walls of varicose veins, a Blackmore probe is introduced for 1 day.

If the drug treatment of bleeding from varicose veins of the esophagus is unsuccessful, various types of surgical interventions are used as a forced measure, aimed at stopping bleeding and disconnecting the portocaval anastomoses of the gastroesophageal zone. In connection with the serious condition of the patient, the most often used is the operation of transgastric ligation of the dilated veins of the esophagus and cardia or stitching of the subcardial section with staplers. Much less often, proximal resection of the stomach and abdominal esophagus, vascular direct portocaval anastomosis are performed. Prognosis: unfavorable, mortality after these types of operations reaches 75%.

**Literature used to write the lecture:**

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## **TOPIC № 13: Acute and chronic pancreatitis. Diseases of the pancreas**

**The lecture is dedicated:** *for 4th year students of the medical faculty.*

**Substantiation of the topic:** In recent years, a statistically significant increase in the frequency of acute pancreatitis has been noted. In the general structure for acute bolevany abdominal it is 7-12% and knitting maet third after acute appendicitis and acute holetsis Titus. Acute pancreatitis is most often observed in women aged 30-60 page and give this disease 3-3.5 times more often than men.

**The purpose of the lecture:** *to familiarize students with diseases of the pancreas, to find out the etiopathogenesis, to teach diagnostics, differential d and agnostics and treatment.*

**Educational goals:** Lecture promotes expansion of the range of students' knowledge about the diseases of the pancreas, its possible complications and methods of prevention and treatment, a conditioner s nym material for practical exercises. Watch yo teach students to be a tion to the sick, protect the interests of patients, know the questions of medical ethics and deontol about ology.

**Tasks lecture:** Writing concept of pancreatic diseases, pancreatic diseases etiopatogeneze, introduce the Klinichev e Skim manifestations and complications of this disease, disclose methods d and agnostic and differential diagnostics, to introduce the modern m e todami treating pancreatic diseases.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Motivation - substantiation of the topic - 5 min.
2. Brief anatomical and physiological data, methods of examination of patients - 15 min
3. The concept of acute pancreatitis, chronic pancreatitis - 15 min
4. Classification of acute pancreatitis - 5 min
5. Clinic, symptomatology, stages of the course - 25 min
6. Treatment methods - 25 min

**Questions to the audience to establish feedback:**

1. List the complaints presented by patients with acute pancreatitis and volume

2. What instrumental diagnostic methods used in the OS so rum pancreatitis
3. List the differential features between acute na n kreatitom and perforated ulcer 12 duodenal ulcer
4. List the basic rules of treatment for acute pancreatitis

### **Anatomical and physiological features**

The pancreas is located retroperitoneally at the level of I-II lumbar vertebrae, extending in the transverse direction from the duodenum and duodenum to the hilum of the spleen. Its length is from 15 to 23 cm, width is from 3 to 9 cm and thickness is from 2 to 3 cm. The mass of the gland is on average 70-90 g. The head, body and tail are distinguished in the pancreas of the mammary gland. The head is in for Dr. Cove duodenum and has a Hammer shape. Body pancreatic des e zy front surface is adjacent to the rear wall of the stomach. These bodies of t Delena apart narrow slit - bursae omentalis rear surface straight and lies to the vena cava, the aorta and the solar plexus and the bottom is in contact with the lower horizontal part of the duodenum. The tail of the pancreas often protrudes deeply into the gate of the spleen. Behind gland at the transition of the head to the body tested vertex x of the mesenteric vessels. The superior mesenteric vein merges with the splenic vein, forming the main trunk v.portae. At the level of the upper edge of the gland , its hepatic artery goes towards the tail and below its splenic vein. These vessels have many branches. Their location must be taken into account during operations on the pancreas. The main duct des e PS (d.Wirsungi) is formed from fusion of small lobular duct. Its length is 9-23 cm. The diameter ranges from 0.5 to 2 mm in the tail part to 2-8 mm in the area of the mouth. The head of the pancreas theses same main duct connects t Xia with an additional duct (d. Accessorius Santorini) and then flows into the common bile duct, which extends through the head gland closer to the rear surface thereof and opened on the top major duodenal papilla (papilla yateri). In some cases, extension duct empties into twelve ne p stnuyu intestine independently opening on a small papilla papilla duodenalis minoris, located at 2-3 cm above the major duodenal papilla (papilla of Vater). In 10% of cases, the accessory duct takes over the main drainage function of the pancreas. Relationships end of the common bile and main pancreatitis and Cesky ducts are different. Most often, both fall into the duct with the intestine to jointly form a common vial that its end portion opens on the big duodenal papilla (67%). Sometimes both ducts merge in the wall of the duodenum, there is no common ampulla (30%). The common bile and pancreatic duct (Wirsung duct) can flow into the duodenum separately or merge with each other into the pancreatic tissue near the mammary gland at a considerable distance from the duodenal papilla (3%).

Perfusion pancreatic carried branches art e ry liver (a. Hepatica) supplies blood to a large portion of the head des e PS, superior mesenteric (a inesenterica superior) supplies the head and body of d gastric gland and splenic (a. Lienalis) supplies blood to the body and tail pancreas. Pancreatic veins go together with the arteries and flow into the superior mesenteric (v mesentenca superior) and splenic (a lienalis) veins that carry blood from the pancreas of t Tek into the portal vein (v. Portae). Lymph drainage from the pancreas is carried out in the lymph nodes located at the upper edge of the gland between the head of the pancreas and duodenum ki w ki gate in the spleen. The lymphatic system of the pancreas it is, is a close connection with the lymphatic system of the intestine stomach Twelve and duodenum and bile duct, which has implications for the development of pathological prospect of processes in these organs.

The innervation of the pancreas occurs due to the branches of the jealous, the nocturnal splenic and superior mesenteric plexus. From these splt e Nij gland to extend both sympathetic and parasympathetic nerve fibers which enter into the pancreas in conjunction with the blood vessels and accompany them to penetrate the lobules. Innervation of pancreatic islets (Langerhans islets) is separate from innerv a tion zhelezi ies cells. There is a close connection with the innervation of the pancreas, dvenad tsatiperstnoy liver cancer, biliary I boiling tract and gall bladder, which largely determines their functional L hydrochloric interdependence.

The parenchyma of the gland consists of many lobules separated from each other by layers of connective tissue. Each lobule consists of an epithelium and acinar cells that form acini. The total area of secretory cells is 10-12 m<sup>2</sup>. Nightly gland secretes pancreatic 1000-1500 ml of the first juice. Among the parenchymal cells of the pancreas, there are special cells that form clusters of 0.1 to 1 mm in size, called pancreatic islets. Most often they have an oval shape. Pancreatic islets do not have excretory ducts and are located directly in the parenchyma of the lobules. They include four types of alpha cells, beta, gamma, delta cells have different functional properties. The pancreas is an organ of external and internal secretion. It secretes pancreatic juice (pH 7.8-8.4) into the duodenum with its new enzymes trypsin, chymotrypsin, lipase, lactase, maltase, amylase, etc. Proteolytic enzymes are represented by trypsin, chymotrypsin, carboxypeptidase and promote the breakdown of proteins into amino acids. Proteolytic enzymes are secreted into the duodenum in an inactive state, the activation of their crust at the influence of enterokinase of the intestinal juice. Lipase is also released into the lumen of the gut into an inactive state activator it is a bile acid. In the presence of the latter, lipase breaks down neutral fats into glycerol and fatty acids. Amylase unlike other enzymes released by cells of the pancreas in the active state, cleaves starch into maltose. The latter, under the influence of the enzyme maltase, is broken down to glucose.

Regulation of pancreatic secretion mechanism of humoral and nervous. Humoral is carried out under the influence of secretin (pancreozymin and others), nervous - under the influence of the vagus nerve. It is believed that the protein content and ferment content regulated in pancreatic juice by giving nerve and quantitative composition of the liquid portion and bicarbonates secreted into the duodenum. Endocrine pancreas is the development of insulin hormone glucagon lipokain which have a large receptor and for signal transduction and lipid metabolism. Insulin is produced by beta (in) -cell pancreatitis islets, and glucagon-alpha (a) -cells. At its disposal both these hormones are antagonists and thus retain balance of blood sugar levels. Characteristic property of insulin is its ability to reduce the amount of blood sugar increase fat storage in the liver, increase the uptake of blood sugar, and reduce tissue lipemia. Glucagon in contrast has the opposite effect, promotes glucose release from glycogen reserves in the liver and thereby prevents the occurrence of hypoglycemia. Lipokain is produced in the alpha cells of the pancreas in the mammary gland. It has a lipotropic effect. In particular, it is established that protects against lipokain organism hyperlipemia and fat reabsorption in the liver.

### Special research methods

Laboratory research methods. Exocrine function of pancreas in clinical study for a power quantity by determining enzyme content (amylase, lipase, and trypsin and chymotrypsin) in serum, and in duodenal contents in the urine. On the state of the internal secretion is judged in terms of blood sugar and with a Harn curves with a single and double sugar load.

In acute pancreatic diseases a very important criterion for diagnosing contents has study of amylase (in manholes), trypsin and lipase in the blood and urine. In chronic pancreatitis, in addition, of great importance is the study of enzymes in duodenal contents on the background of stimulation of pancreatic secretion secretin or pancreozymin.

X-ray study reveals direct and indirect signs of pancreatic disease. Sometimes, even with a conventional X-ray of the abdominal cavity, areas of calcification of the pancreatic tissue, stones in the ducts are revealed. Often the stones in the ducts are plural and plain film can be seen at the level I - II Lumbar -border vertebrae on either side of the spine. Indirect radiological signs of changes in pancreatic wall are manifested symptoms of compression or displacement of the stomach and duodenum. When the head of the pancreas or under the influence of the inflammatory process characteristic of tumor is the deformation, displacement and the expansion loops (so-called horseshoe) duodenum. Especially often, these signs are revealed by causing temporary artificial hypotension of the duodenum by the introduction of atropine or an anticholinergic drug. The conditions "indirect duodenography" clearly visible contours

duodenal folds of mucous membranes, the location of papillary, its shape and dimensions, their measurable features and ontological process in the pancreas. When the body of the pancreas and the increase in tail x-diffraction patterns we find filling can often visible defect caused by the back pressure on the stomach wall. In the investigation investigations at the lateral projection with a pathologist and iCal processes under gastric gland noted an increase in the distance between at zvonochnikom posterior gastric wall. If the specified distances of Speeding and a spine width (5-6 cm), this witness exists for an increase in body of the pancreas.

Retroperitoneal pankreatopnevmografiya is roentgen of logical pancreatic study the conditions in ditions administration retroperitoneal fat in air or oxygen. At the same time, the contours of the pancreas become clearer than in conventional images. Computed tomography in diseases of the pancreas makes it possible to judge its size, changes in structure of tours, there is dense inclusions connection with about Sedna authorities. Produce it at the prostate level location, ie at the level I -.. II lumbar calls operate 6--12 images at intervals p of Luciano slices in 0,5--1,5 cm depending on the resolving ability of the computer.

Ultrasound pancreas scan also provides information about the size and structure changes podzheludoch hydrochloric gland. Since it is non-invasive method The investigations dovaniya may need nokratnoe its repetition to estimate di Namiki process.

Retrograde cholangiopancreatography. The use of flexible fibroendoscopes allows not only to examine the mucous membrane of the duodenum and duodenum, the large duodenal papilla, but also to insert a thin X-ray contrast probe into its mouth. Therethrough in pancreatic ducts, water-soluble contrast agents are administered to obtain X-ray from a mapping of the bile and pancreatic ducts.

Selective angiography celiac trunk and branches of the superior mesenteric artery allows to study the extra- and intra-organ architecture of blood with GOVERNMENTAL vessels pancreas and its measurable features caused of pathological e skim process. Most often angas Fargo is performed according to the method Sel s Schrodinger.

### **Acute pancreatitis**

Acute pancreatitis - acute disease of the pancreas is lezy in about a Nova which are degenerative and inflammatory about the processes caused by prostate tissue autolysis its own fer cops. The term "pancreatitis" the conditions in Noah, the collective concept. Inflammatory changes in the gland wherein z and bolevanii are not are determining, and are usually secondary. They arise or join when the iron has them e are you expressions destructive changes, developing under the influence of activated digesting action of proteolytic and lipolytic enzymes we lezy.

In recent years, a statistically significant increase in the incidence of acute pancreatitis has been noted . In the general structure for acute bolevany abdominal it is 7-12% and knitting maet third sharp after a first acute appendicitis and holetsis Titus. Acute pancreatitis is most frequently called and was observed in women aged 30-60 suffer from this disease in the 3-3.5 times more often than men.

Distinguish: 1) acute edema of the pancreas, 2) hemorrhagic necrosis of the pancreas, 3) purulent pancreatitis. Such division yavl Ietsya to a certain extent arbitrary. When morpho logical study in one and the same patient can often be observed combination of pathological e modalities as well as re Khodnev form more acute edema often observed podzheludoch hydrochloric cancer (in 77-78% of patients). Acute hemorrhagic necrosis and purulent pancreatitis observed in approximately 10-12% of pain GOVERNMENTAL.

Etiology and pathogenesis. Acute pancreatitis - poly etiological Zab about Levan. Most often in clinical practice ke occur secondary forms of the disease that the WHO Nick against the background of diseases of other organs, which podzhel zling iron has close functional and anatomich e skie connection. Secondary pancreatitis often develops in common infectious tions and inflammatory diseases of adjacent organs can talk about pankre and Titus in typhoid and typhus, an infectious mumps, hepatitis, duodenal diverticulum, once the personal forms of EtOH and one ileitis, colitis. Penetration of infection into the pancreas of possible hematogenous, lymphogenous, upward "duktogennym" way and as a

result neposreds m venous circulation. Traumatic pancreatitis, than open and s and covered by stated failures gland, often occurs after operations on the upper abdomen organs. This also can be attributed due to the occurrence of disease retrograde cholangiopancreatography, when cat about swarm contrast agent into the ducts for gastric cancer is introduced under pressure e Niemi. To develop predispose the disease: 1) violation outflow pancreatic secretion, which may be due to stenosing n and pillitom, idiopathic hypertrophy of muscle sphincter papillary, neurogenic or medikame n tozno caused dyskinesia papillae (parasympathomimetics, mo p Fin), the introduction of a duodenal papilla ascaris. Stenosis peripheral parts in the duct can of niknut as a result of scarring. The outflow of pancreatic juices disrupting etsya ducts with stones, in the formation of viscous secretions with high protein content. This last pathogenetic mechanism plays a role in chronic alcoholism, Gypea p kaltsiemii (hyperparathyroidism, an overdose of vitamin D), distro graphy as a result of starvation, chronic renal nedostatochnos minute, resection w e ludka and gastrectomy, 2) metabolic disrupt lines: The disorder of the blood flow of the kA vascular diseases, autoimmunity, allergy, Gorm about -functional disorders during pregnancy, the disease to have shing, long-term steroid therapy, diuretic therapy derived thiazide, hyperlipoproteinemia and others. The generating factor in the development of acute pankre and titanium is neirogennaya or humoral stimulation of pancreatic secretion (abundant food, alcohol, diagnostic Cesky secretin stimulation or pancreozymin). In about 2/3 of patients with acute pancreatitis, the disease is due to cholelithiasis. However patogenetich e sky mechanism is not entirely clear. May play a role due to lymph l lecturers zhelch Foot bladder and pancreas.

Normally, the activation of enzymes primarily proteases podzheludo h hydrochloric gland occurs usually in the lumen dvenadtsa tiperstnoj intestine. In acute pancreatitis autodigestivnom activation of these enzymes has been going on in a while my iron. However, it is not exactly established what enzymes of the gland in acute pancreatitis are necessary for self-digestion of its tissue. Three n syn activator is mostly proenzimov, chymotrypsin ELAST and PS, collagenase and phospholipase A. The latter releases from phospholipids of cell membranes and lysolecithin and lizokefalin which possess strength s nym cytotoxic the action viem. Active proteases secrete sex and peptides and kinins from tissue and blood kininogen . The latter are responsible for pain and generalized vasodilation, which is one of the causes of hypoplasia of lemic shock. Active lipase cleaving cellular fats glycy l e rin and fatty acids, lead to the development cha heavy dystrophic edited e neny in tissues, promote Obra mations portions fat necrosis (steatonekrozy) A direct venno in most cancer tissues, environmental w e climb tissue, in mesentery of small intestine and colon, in large and small sebaceous Kach and in other organs.

Important role in the pathogenesis of the disease plays a kallikrein-kinin system, which provides the appropriate reologiche skom of blood so on nous vessels. Trypsin and active kinins cause a sharp increase in capillary permeability, stasis, "microcirculatory unit" with complete cessation of perfusion of the capillaries, ischemia, hypoxia, acidosis, impaired heme of coagulation (trypsin activated Hageman factor - factor XII blood coagulation) with disseminated intravascular convolution and Niemi and subsequent consumption coagulopathy.

Pathological anatomy: acute swelling podzhel zling gland is sometimes called catarrhal pancreatitis. Mack macroscopic iron thus withdrawn and Chen in the volume swelling. Edema can spread to the retroperitoneal kletcha m ku and mesentery of peppermint colon. There is often a serous-hemorrhagic effusion in the abdominal cavity and in the oily bag and bursa . When histo logical study show interstitial tissue edema, small hemorrhages zone to moderate degenerative tive variable e Nia glandular tissue. Acute hemorrhagic pancreatitis is characterized by the presence of extensive hemorrhages and foci of fatty necrosis. Sometimes the whole w e Lesa is imbibirovannoy blood. Thrombosis of blood vessels is often observed, along with the zone of hemorrhages in the thickness of the gland, areas of extensive necrosis can occur, and microscopic examination reveals inflammatory infiltration. Ocha gi fat necrosis, in addition to cancer, there are a large and ma scrap glands and formations containing oil on -hand fiber.

Acute suppurative pancreatitis develops with the addition of bacterial and alal flora. Focuses of purulent fusion of the gland tissue are visible. Microscopic examination detected pus hydrochloric infiltration, cat of paradise is only for abscess PLAYBACK Lenia or a plurality of different sizes ab with processes. In the abdominal cavity there is a purulent-hemorrhagic or serous-purulent exudate.

Clinical picture and diagnosis: pain is a leading and constant symptom of acute pancreatitis. Pain arises is zapno. However, sometimes there are harbingers of a sense of thee tin in the epigastric region, light Di with Pepsi. By their ha rakteru pain is very intense, dull, constant, rarely skhva t koobraznye. The intensity of the pain is so great (the feeling of a "hammered stake") that the patients sometimes lose consciousness. Localization tion of pain varies and depends on the pathological process involving a particular part podzheludo h hydrochloric gland. Pain can lo -localized in the right and left hypochondria, in the left costal-iliac angle, often worn shingles character and irradi and ruyut in the back, shoulder girdle, behind the breastbone that can simulates Vat myocardial infarction. Nausea and vomiting are reflexive. Vomiting is often repeated, unrestrained, not bringing bol s nym relieve th cheniya. The position of the body is often forced. Patients often called and go camping in a half-bent position. Body temperature is normal, sub normal. High body temperature and fever are characteristic of the isolator and vayuschihsya inflammatory complications. The color of the skin and mucous membranes is pale, with a cyanotic tint, which is explained by severe intoxication. Often nab ljuda ikterichnost and jaundice, about at slovlennye impaired bile outflow or severe liver toxicity. When ten T ruktivnyh forms of pancreatitis, and prostate enzymes kinin system components fed in roll stands retroperitoneal Chatka and further under the skin, leading to the development of hemorrhagic tissue imbibition until ecchymosis. When localization DECT ruktivnogo process mainly in the pancreatic tail jelly PS such changes are localized on the left side wall of the abdomen (Gray - Ternera symptom), the localization domain of a dexterous in pu p ka (Cullen symptom). When entering the bulk enzymes in blood, similar changes may locale Call in remote areas of the body, on the face. Tongue coated with bloom, dry. The abdomen is swollen on examination. In the first hours and sy disease there is an asymmetry of the abdomen due to vzdu ment only epigastral s Noi and periomphalic areas (lane then initial gastroparesis and pope river colon). With further development of dynamic Kish h hydrochloric impassable Mosti bloating increases and becomes ravnome p nym. At the beginning of palpation of the abdomen is soft, which distinguishes acute pancreatitis tit most acute diseases of the abdominal cavity. However, in nekot about ryh patients palpation can note mild muscular tension and epigastric pain during the pancreas (Kerte symptom). X and acteristic is etsya symptom disappearance pulsation of the abdominal aorta in epigast ralnoi region (symptom of the Resurrection) and used for leznennost in le tion costovertebral angle (symptom Mayo-Robson). Sympto we peritoneal irritation become positive in destructive forms in connection with the development and Thieme peritonitis. Peristal tick gut is weakened in the first hours of the disease. When tyazhe mated forms peristaltich e skie noise may disappear altogether.

At the beginning of the disease may be bradycardia, which rapidly shifts I etsya tachycardia. For severe forms of the disease is characterized by frequent nit e prominent pulse. . Blood pressure "in most patients dropped on electrocardiogram marked are expressed disturbances of metabolism in the myocardium (decreased interval S-T, the deformation of the T wave, additional dome l tional tine U) Respiratory disorders -. Dyspnea, cyanosis, are under severe pancreatitis. parenchymatous organs evolve di a trophic from Menenius, disrupted their functional condition Underlying these changes lie g. and perenzimemiya, microcirculatory disturbances and intoxication Especially greatly disturbed renal function. (y 10 - 20% of patients), reduced urine output until anuria and development of acute renal untill a tatochnosti.

In laboratory studies, pathognomonic for the g cerned pancreatitis are significantly elevated levels of enzymes Podge e ludochnoy iron in the blood and urine, glycosuria. The blood levels of trypsin and its inhibitor rise early. Increasing the concentration of lipase in the kr of vi occurs more Pozdov of time (on the 3-4th day of disease

onset). Diagnostically important to increase urine diastase than 512 units and down by Wohlgemuth. The increased content of diastase in the blood and urine in acute pancreatitis is not always the case. With extensive destruction gland diastase in blood and urine is essential but does not change or even declining.

Hyperglycemia and glucosuria indicate the involvement of the islet apparatus of the gland in the pathological process. Pathognomonic for ten tons ruktivnyh forms of acute pancreatitis hypocalcemia. It usually appears between the 4th and 10th days zabole Bani, t. E. At the height of fat necrosis. A decrease in blood calcium below 4 meq / l is a poor prognostic sign. In severe destructive forms of pancreatitis occurring with the I in leniyami pronounced dynamic ileus tend to nab Luda hypovolemia, reduction in circulating blood volume, pla of us, hypokalemia, and change the acid-base status aside as alkalosis and acidosis. Red blood usually does not change significantly so camping. However, with prolonged duration cha severe forms of the disease due to hemorrhage and toxic at r Neten bone marrow anemia. With Storo us white blood cells, there is usually a pronounced Lake on cytosis shifted to the left blood.

In urine, besides increasing the content of enzymes podzheludoch hydrochloric w e lezy appear protein erythrocytes cylinders. In severe cases, the development of toxic and infectious kidney damage reducible dit to acute renal failure, which is manifested oliguria or anuria, az accumulation of Teesta toxins in the blood.

The main complications of acute pancreatitis: early - shock and acute heart failure, peritonitis; later - abscesses podzheludo h hydrochloric cancer, retroperitoneal abscess checkered ki, subdiaphragmatic, IU w intestinal, omental, arrozionnye bleeding necrotizing rejection of bathroom tissue, acute renal failure. Subsequently possible way vanie false cysts and pancreatic fistulas, to and antiplaque fistula, the development of diabetes.

Diagnosis: for diagnosis of acute pancreatitis Titus base are anamnesis data (reception abundant if -operation of food and alcohol, trauma etc.), Characterized by intensive .boli in the upper abdomen, often taking zoster conductive nature accompanied tahika p diey reduction and artifact ble pressure. Characteristically, belly up to the isolator and Tia peritonitis that remains soft, but swollen, absent peristalsis. Sometimes there is a positive Mayo-Robson symptom.

X-ray examination reveals indirect signs of acute pancreatitis. On plain film appearance but the expansion zhelu e ka, the presence of a liquid. Loop ( "horseshoe wa") duodenum expanded in a state of paresis. Paretic as the initial loop of jejunum (a symptom of "a hundred Rozheve loop"), the transverse colon. The left ple in ral hydrochloric cavity often determines effusion.

In computer tomography and ultrasound scanning neck of a lyayut increase pancreatic sizes inhomogeneous NOSTA its structure. Laparoscopy enables to see the characteristic abdominal hemorrhagic effusion, in the investigation which are dovanii high enzyme content Poggi ludochnoy cancer, the presence of "stearin" spots fat necrosis sometimes enlarged stretched cholic n y zyr.

Acute pancreatitis must be differentiated primarily from a perforated gastric and duodenal ulcer. For perforated ulcers is characterized by a young age of the patient, not rarely ulcer history, sudden "stabbing" pain, no vomiting, "doskoobrazny" stomach, the disappearance of hepatic dullness to percussion of the abdomen and the presence of sickle air strips under the dome of the diaphragm, detectable by X-ray and a Conse- Vania.

Acute pancreatitis occurs predominantly in more of a residential aged people suffering from gallstone disease and disorders w and rovogo exchange. Herpes nature of pain, their irradiation, repeated vomiting, lack of symptom "muscular protection", abdominal distention, leukocytosis, hy e renzimemiya and diastasuria characteristic of acute pancreatitis.

Differential diagnosis between acute pancreatitis and acute me e-mechanical ileus carried out on the axles Considerations following features: pain in acute pancreatitis are permanent and are combined with weakened Niemi peristalsis or its complete otsuts m viem are localized in the upper and middle parts of the abdomen. Conversely, when the wasps t swarm non food go intestinal cramping pain usually around the abdomen; lane and steel are violent in the initial period of the disease. High



contains zhanie enzymes in the blood and urine of the pancreas confirmed given the diagnosis of acute pankre and Titus.

Thrombosis or embolism of the mesenteric vessels. From the outset ill and of condition characterized by severe patients; a history of rheumatic heart disease or myocardial infarction. Opoya ik- pain are not typical. Very quickly, due to intestinal gangrene, symptoms of peritonitis appear and intoxication increases. In doubtful cases must straight and run to Emerg hydrochloric laparoscopy and Derivatives angiography (Mesa n terikografii).

Acute appendicitis as well as acute pancreatitis, Nered to beginners so camping with acute pain in the epigastric region. However, the localization of the pain epigas t tral area of appendicitis is short, after 2-4 hours, the pain moves to the great -hand iliac region, combined with tense and abdominal wall eating and other symptoms develop local lane and then nit. The study of blood and urine diastase allows finality but to hold diff e differential diagnosis between these two zabole vaniyami. If in doubt about d and agnosis, laparoscopy is indicated.

Acute cholecystitis and biliary colic attacks have a number of boiling with acute pancreatitis symptoms (sudden onset, severe pain, irradiation used for lei, the weakening of peristalsis, etc.). One to for acute cholecystitis is more characteristic localization of pain in the right upper quadrant, the symptom myshe h Noi protection, detection by palpation enlarged and painful des h Foot bubble or the Institute of the filtrate in the right upper quadrant, diastase normal levels of blood and urine. Acute pancreatitis often develops on the background of gallstone Bole of any (holetsistopankreatit).

Treatment: complex therapy of acute pancreatitis should include: the fight against pain, the enzyme toxemia, adequate core rektsiyu hydroelectric or n GOVERNMENTAL disorders and acid-base status. To remove or reduce e Nia pains must be applied analgesics and spasmolytics (Nospanum, platifillin, papaverine). Horo shy effect gives epidural block (epidural catheterization space of the spinal cord with the introduction Anesti e ticks).

To combat enzymatic toxemia, use:

1) inhibition of exocrine function of the gland by aspiration of gastric contents and gastric lavage with cold soda sol of rum (hydrochloric acid gastric contents is stimulyato rum pancreatic secretion), atropine (caution in patients with chronic alcoholism - may develop psi Hoza) Hypothermia podzhel at zling cancer, administration of cytostatics in 4-5 days (., 5-fluorouracil, ftorafur and other ENT e melting gland excretory function of almost 90%);

2) providing nor mal evacuation ENTER NO enzymes elaborated e Niemi antispasmodics;

3) elimination of enzymes that have entered the bloodstream or abdominal cavity; thoracic drainage limfatiche Skog with lymph duct of the sorption, stimulation of diuresis; drainage of the abdominal cavity;

4) inactivation of enzymes with protease inhibitors (counterkal, tsalol, etc.). However, the inhibitors have a positive effect only in ne p stems clock disease when administered large (1-1.5 million. Units) doses. In phase g and rovyh necrosis inhibitors application loses its meaning.

With a view to the regulation of water and electrolyte balance, normalization tion lo p dechnoy activity and reduce the toxicity 5 shows the use of sol and 10% of glucose moat polyionic solutions, plasma poliglyukina, gemodeza. By indications prescribed pre Paratov potassium, cardiac glycosides. Units e GUSTs administered sol moat required to restore normal volume within the vascular-extracellular and sectors must be sufficiently large (3 to 5 liters / day). In order to improve the rheological properties of cr of vi and prophylaxis of disseminated intravascular coagulation applied reopolilyukin and heparin (5000 IU) every 4h.

In order to prevent and treat possible secondary PLAY -inflammatory changes prescribe broad-spectrum antibiotics.

Surgical treatment for acute pancreatitis is shown:

- 1) a combination of acute pancreatitis with destructive forms oc t cerned cholecystitis;
- 2) if unsuccessful conservative leche SRI for 36-48 hours;

3) with pancreatogenic peritonitis if laparoscopic drainage of the abdominal cavity is impossible;

4) at complications of acute pancreatitis: abscession omental, retroperitoneal fat cellulitis.

The diagnosis and treatment of destructive forms of acute pancreatitis great importance laparoscopy, in which can be made more precise thread diagnosis in s manifest hypertension biliary tract (strained gallbladder) and make percutaneous cholecystostomy controlled lapar of Osprey, but the primary-to drain the abdominal cavity to aspirate exudate and forward (decrease fer -element toxemia), washing the peritoneal cavity with solutions of an antibiotic treatment, and protease inhibitors.

In surgical treatment of acute pancreatitis apply the following suitable types of operations: 1) the nucleus resection omental, 2) resect the tail and body of the gland, 3) pancreatectomy.

The most common is the drainage of the gland operation of howling bags. It is used for destructive forms of acute pancreatitis complicated by peritonitis. The main aim of the operation is to release organs from toxic substances and active elements in the peritoneal exudate; ensuring the conditions for adequate drainage actively and neutralization of pancreatic juice, exudate, sloughing. As an access, the most commonly used median laparotomy and approach to the gland by wide dissection of the gastrocolic ligament. After exposure of the prostate infiltrate the surrounding tissue novocaine solution with broad-spectrum antibiotic and inhibitors, etc. on the mesos. Curtailements and apparently necrotic pancreatic region remove. Leaving them subsequently leads to massive bleeding. After removal of the necrotic tissue, washed the abdominal antiseptic solution produced some surgeons biologist and local tamponade omental greater omentum. The most effective drainage packing sum ki through drainage counteropening posteriorly through the left inguinal to -boundary area. Use Double lumen drainage pipes ki, allowing to carry out subsequently washing the cavity. In the presence of concomitant illnesses gallbladder (stones, inflammation) and changes in the biliary tract (choledocholithiasis, cholangitis, stricture) operative benefit indications or supplemented cholecystostomy cholecystectomy followed by draining and Niemi hepatoholedocha T-shaped nucleus resection. The appropriateness of a gall bladder operation and ducts not only when expressed anatomical and ontological measurable changes (cholecystitis, cholangitis, stones in the ducts, strictures), but also in hypertension in the biliary tract and Corollary their compression edematous head of the pancreas or enlarged lymphatic nodes remains controversial.

Resection of the distal pancreas is a more radical operation. However, in severe destructive forms of acute pancreatitis, it is technically difficult and poorly tolerated by patients, so the indications for it should be set very carefully.

The prognosis of the disease is largely determined by the nature of the morphological changes in the pancreas. The heavier the destructive change in breast tissue, the worse the prognosis. To predict and with the disease moves prognostic factors have been proposed in recent years, developed a retrospective analysis of clinical techniques in acute pancreatitis in a large group of patients. These include: age below 55 years, leukocytosis (white blood cell count of more than  $16 \times 10^9 / L$ ), hyperglycemia (glucose levels over  $2 g / L$ ), decreased hematocrit below 10% decrease in serum calcium is below  $4 mEq / l$  fluid sequestration more than 6 liters, base deficit more than  $4 meq / l$ , reduced Arterial pressure or the same 60 mmHg. Art. Mortality in the group of patients with less than three above-mentioned features, is 1%, with 3 or more symptoms of 33% at 7 and 100% of Lee signs.

### Chronic pancreatitis

The disease is a consequence of acute pancreatitis or transferred from the beginning develops gradually, when becomes chronic.

Etiology: causes chronic pancreatitis are diseases of the stomach, duodenum, liver, gall of bladder and biliary tract, ie, bodies having a close anatomical and function.. On - regional communication with the pancreas; alimentary disorders and changes in fat

metabolism (inaccuracies in diet, alcoholism); acute and chronic infections; intoxication; poisoning; changes in the ductal system; pancreatic cancer (primary tumors, stricture, metaplasia of and intra-excretory ducts); closed trauma to the pancreas.

Pathogenesis: chronic pancreatitis has a lot in common with the pathogenesis of acute pancreatitis. Relapses of the disease lead to involvement in the forward of the process of all the new sections of the pancreas, that eventually causes replaced by a non-functioning parenchyma scar connective tissue leads to sclerotic changes in the pancreatic ductal system and in periductal and vascular tissue.

Pathological anatomy: in pancreatic tissue occurs proliferation of connective tissue, the result then develops fibrosis and sclerosis. The latter may be either peri- and intralobular combines the simultaneous glandular tissue atrophy. The result reinforced isolator and the surrounding connective tissue is compacted and often changes in volume. Microscopically observed simultaneously with fibrosis tissue given its inflammatory infiltration, adiposis, inflammatory changes in the walls of the ducts. Sometimes detect the so-called small cysts of the pancreas owing to obliteration of the lumen duct, the deposits of calcium in breast tissue (calcification pancreatitis).

There are the following clinical and anatomical shape chronic pancreatitis: 1) chronic indurative pancreatitis, 2) pseudotumorous pancreatitis, 3) pseudocystic pancreatitis (chronic pancreatitis with an outcome in cyst), 4) chronic calculary pancreatitis (choledocholithiasis, cholelithiasis and cholecystitis) ...

Clinic and diagnosis: the main symptoms are pain, dyspepsia, jaundice, weight loss, pain in the epigastric region and there is rarely an increase in the pancreatic enzymes detected at palpation.

Pain can be acute or obtuse, and are located in the epigastric region, right and left hypochondria; often they wear a shingle character, radiate to the back, to the interscapular region, to the right hypochondrium. Pain can be constant or paroxysmal. The attacks of pain last from several hours to 4-6 days. Most often provoke mayhem with a change in the diet. Dyspepsia - nausea, vomiting, dysregulation of stool (constipation alternating with diarrhea) - are either permanently or only during an exacerbation. Jaundice, icterus of the skin and sclera are observed in half of patients. They can be worn as a relapsing-remitting type, and permanent. Expressed jaundice most often is associated with GOVERNMENTAL Ahola combined with the result of swelling of the pancreas head, compression of bile ducts due to indurative process in the pancreas, scarring and inflammatory changes in the ducts and in the sphincter of Oddi, stones in the large duodenal papilla. Weight loss sometimes reaches dramatic steps.

EC causes depletion of are: the lack of development and will do is, of pancreatic enzymes into the duodenum, the difficulties in the selection of diet, fear of patients to eat because of the pain. In many patients, the pain attacks occur even after taking a small quantity of liquid food that does not have stimulating properties. An objective Research and SRI in periods of exacerbation often exhibit symptoms characteristic of acute pancreatitis. In the interictal period, usually about moderate disease along the pancreas. In lean patients sometimes may be palpable increase in volume and a thickened gland. Explore the patient should be in a prone position with a padded back to a face in the position on the right side of the body with an inclination of 45 ° in front, standing with an inclination of the body forward - left. Pseudotumor forms, flowing with jaundice, sometimes exhibit Courvoisier syndrome characterizing biliary triad of symptoms: obstructive jaundice, increased number and size of gallbladder, Ahola.

Diagnosis of chronic pancreatitis is performed on the basis of subjective and objective clinical symptoms of disease, laboratory data and the results of special methods. In exacerbations process of outflow of pancreatic juice in the blood and urine often increases the content of pancreatic enzymes - amylase, trypsin, lipase. In the interictal period, it is

normal. The concentration of all major cancer enzymes in the duodenal contents, by contrast, is reduced, individual bol s GOVERNMENTAL they are completely absent.

Coprological research shows the presence of a greater number of undigested muscle fibers (kreatoreya) and neutral fat droplets (steatorrhea). In connection with the involvement of the islet apparatus of the gland in the process, hyperglycemia and changes in normal sugar blood and howling under the influence of a double load of sugar are observed .

With a plain fluoroscopy of the abdominal cavity, calcifications are sometimes determined along the pancreas. When rents genologicheskoy study duodenum conditions it hypotension ( "paralitic e Skye" duodenography) can you reveal indirect signs of chronic pancreatitis: open loop ( "horseshoe") duodenum, impression or a filling defect on the inner contour of its descending part, relief changes mucosal folds in location with zheniya duodenal papilla and the deformation of the latter.

Ultrasound examination and computed tomography allow in chronic pancreatitis to detect an increase in the entire gland or tol s to her head (pseudotumor pankre Amum), cystic changes in the thickness of the gland. The pn some cases reveal dense ehostruktury disposed spra Islands and on the left of the spine at the level II-III lumbar call Cove, head and syaschie on the presence in the lumen or duct stones calcifications in claim thicker and renhimy gland.

When the radioisotope scan reveal: the impoverishment of scintigraphy and Cesky figure due to diffuse sclerotic process, defects n and accumulation of the isotope, which indicates their cystic changes or calcification of the parenchyma Poggio ludochnoy gland.

Retrograde pancreatography reveals characterized Terni etc. and signs of chronic pancreatitis: deformation of the main or additional duct, narrowing of the lumen, defects complements along the duct due to the presence of stones.

Angiography (tseliako- and mezenterikografiya) in early stages of chronic pancreatitis shows gipervaskulyar zone and tion, and in later stages due to the widespread diffuse fibrosis depleted e of vascular ri sunka, changing its architectonic, offset or Otte with nenie with vessels when forming gland cysts.

Treatment: In the interictal period consists of a special diet, and with turns the fried, spicy, salty, fatty foods, sokogonnym dishes. However, the diet should be vysokokalo Rijn and contain a sufficient amount of digestible white Kow. The daily ration should be 150 g of protein, 30-40 g of yarn pa, 350-400 hypertension carbohydrates. It is expedient in malnutrition supplement enteral nutrition parenteral, Execu s Zuya for this amino acid solutions, concentrated solutions Ch th goats. To improve pi schevareniya recommend that patients receiving preparations containing pancreatic enzymes (pancreatin Festalum, Panzi and standards). Periodic treatment antispasmodics, alkalizing min e eral waters such as Borjomi.

Each exacerbation of chronic pancreatitis should rassmat regarded as an attack of acute pancreatitis. Treatment during exacerbations SRI be straight on to drive on the same principles as the treatment of acute pancreatitis.

Chronic pancreatitis occurs more often in the background of diseases of adjacent organs (chronic calculous cholecystitis, peptic ulcer or duodenal ulcer), so hirur gical treatment of Zab on timetotal improves the course of chronic pancreatitis. In the absence of a stalemate on ogy from the biliary tract, stomach and duodenum may be originated pull the question of the intervention directly on pancreatic des e se. Indications for surgery in this case will be: the presence of stones in the ducts of the gland, cicatricial strictures of the ducts, severe forms of painful pancreatitis. The main objective of surgical le cheniya - creation at a lovy for optimal outflow pankreatiche Skog juice in the gastrointestinal tract. During the operation, a thorough intraoperative revision of the pancreatic ducts of the mammary gland, bile ducts and duodenum is required . For this purpose, intraoperative cholegraphy and gallbladder examination are performed. During operation used by retrograde cannulation pancreatography flow through duodeno e onal papilla puncture or - by puncture through the tissue gland ducts extended distal portion thereof. In case of small strictures of the end part of the pancreatic duct , transduodenal papillosphincterotomy with transpapillary drainage of the pancreatic duct or virsungoplasty is indicated. In the case of direct on traction of pancreatic duct stricture such operation is impracticable, the most expedient anastomosis

between the cracked nym in length through the thickness of the pancreatic duct and gland off Roux loop jejunum.

Well at narrowing a large part of the flow in the area of head and body e lezy advisable to resect the distal part of the gland, and sew it into the jejunum, disabled Roux. The purpose of this operation - to create conv on WII for the outflow of pancreatic juice in a retrograde direction. In cases where the functioning parenchyma mostly gland as a result of pathological process irrevocably lost in ductal B with the theme are diffuse sclerotic changes, and the main symptoms of chronic pancreatitis pronounced and can not be conservative methods of treatment, about plague pancreatectomy (tail and t e la, Subtotal pancreatectomy).

### **Pancreatic cysts and fistulas**

Pancreatic cysts are limited by capsule collection of fluid in the form of cavities, arranged both in the x e Leze, and in the surrounding tissues. The disease occurs in different ages with both groups with equal frequency in men and women.

Pancreatic cysts are a collective term. Various types of cysts.

I. Congenital (dizontogeneticheskie) cysts formed in RESULT and those malformations pancreatic ductal tissue and its system.

II. Acquired pancreatic cysts: 1) Retention cysts develop as a result of stricture of the outlet of the gland resistant occlusion of the lumen stones, tumors; 2) degenerative cysts. Formed due to deterioration of the pancreatic tissue with necrotizing pancreatitis, trauma, hemorrhage, chronic cholic process; 3) proliferative cysts - abdominal neoplasms, which include cystadenoma, tsistadenokarts and noma; 4) parasitic cysts: echinococcus, cysticercus.

Pathological anatomy: depending on the type and mechanisms of formation of cysts, the structural features of its CTE NOC should also distinguish the true and false cysts of the gland.

For true cysts include: congenital dizontogeneticheskie gland cyst, acquired retention cysts, cystadenoma and tsistadenokarts. A distinctive feature of a true cyst is the presence of an epithelial lining on its inner surface. True cysts make up 20% of gland cysts. Unlike the false cysts true cysts are usually big time mers do not reach, and are often called random and salable during surgery.

A pseudocyst (pseudocyst, cystoid) is observed more often (80% of all cysts). It is formed after acute destructive pancreatitis or pancreatic injury, accompanied by focal necrosis of the pancreatic tissue destruction duct walls, yield pancreatic juice and hemorrhage into the peritoneum beyond the prostate. False wall cysts constitute densification of the peritoneum and fibrous tissue, unlike true cysts have not inside the epithelial lining and presents granulocytes translational cloth. The cavity of the pseudocyst is usually filled with fluid and necrotic tissues. The nature of the liquid contents varies. "This is usually serous or purulent exudate containing a large admixture of altered blood and pancreatic juice. False cyst may localized in the head, body and tail of the pancreas and attains considerable size. The number of contents with false cysts often is 1-2 l and more false cyst large scale. It may extend in different directions: forward and upward in the direction of the head of the gland, pushing liver upwardly and displacing downwards, towards the lesser omentum ligament - pushing same upwardly and downwardly transverse colon; between the mesentery transverse colon, displacing the latter anteriorly and finally into the bottom floor of the abdominal cavity, by displacing the transverse colon upward, and the small intestine backward and downward.

Clinical picture and diagnosis: small cysts may be asymptomatic. Symptoms appear when the cyst becomes large and causes compression and displacement of neighboring organs.

The most frequent symptoms are more false cyst: pain in the upper abdomen, dyspepsia, disorders of general condition, shows weakness, weight loss, periods of elevated temperature etc., the presence of palpable tumor formation in the stomach.

Pain may be blunt and constant or paroxysmal. One of the signs of GDSs marked encircling and bursting pain, due to which the patients are in a semi-recumbent or knee-elbow position. The pain is especially severe if the cyst puts pressure on the solar and celiac plexus. However, even with huge cysts pain does not always happen. Expressions are slightly different and then patients complain only about discomfort in the epigastric region. Of dyspeptic symptoms are more often nausea and vomiting, unstable stool.

An objective study of the main features of cysts. It is difficult to set up the presence of tumor formation. When a large scale is reached, it can be found even at the initial examination. The outer boundaries of the cyst are clear, the shape is round or oval, the surface is smooth. Depending on the location of the cyst, the place of tumor formation was determined in the epigastric, umbilical region, in the right or left upper quadrant. Watch as pressure on the degree to slowly progressive tenderness of and more acute when the cyst in a short time attains a large size, causing severe functional impairment of other organs, and is accompanied by complications, I mean.

The most frequent complications of pancreatic cysts include hemorrhage into the cavity of the cyst, abscess, breaks with time vitium peritonitis, external and internal fistulas, disturbances caused by compression from a neighboring organ.

Diagnosis: In addition to taking into account the clinical symptoms, diagnostic ERA cysts of the pancreas are based on data from special methods. Except for a small increase in the amount of enzymes, podzhel in zling iron in the blood and urine, Inog but noted a decrease in their contents dvenadts and tiperstnoj intestines.

When X-ray reveals the outlying of the stomach, transverse colon and anterior upwards or downwards from the normal position.

Ultrasound and computed tomography and scintigraphy help detect fluid-filled formation associated with podzheludoch hydrochloric gland. When the differential diagnosis of pancreatic cysts is difficult, PS must be pancreatic tumor, deleted Aneva ism aortic tumor, retroperitoneal lymph nodes, tumors and cysts of the liver, hydronium f roses and kidney tumors, cysts mesentery of the colon.

Treatment: should only be surgical. For large cysts of the pancreas choice of method of operation determined by the form of cysts, its location and size. Radical surgery - resection of the lesion, pancreatic extirpation of cysts or is possible only with small true gland cysts, localized mainly in the body with for Basic gland sections. When false cysts, the walls of which are formed by their bodies, such operations are not feasible. Most often, with pseudocysts, various drainage operations are used. When pancreatic cysts located in the rear part of the gland is shown chrezheludochnaya tsistostomy and stromiya which consists in creating a fistula between the cyst and the stomach. For small cysts localized in the head of the pancreas, etc. of the caudal transduodenal cystostomy - the creation of an anastomosis between the cyst and the duodenum. When retroperitoneal cysts emanating from the body and head cancer, illustrated anastomosis between cysts and the Roux loop jejunum. At breaks cysts complicated peritonitis, septic condition of the words lennom suppuration cysts shown marsupialization operation - and ruzhnoe cysts drained by suturing it to the walls of the parietal peritoneum and skin. Currently, this type of surgery is rarely used. After surgical treatment, favorable results were obtained in 90-95% of cases.

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## Topic number 14 : Diseases of the large intestine

**The lecture is dedicated to:** *for 4th year students of the faculty*

**Substantiation of the topic:** Diseases of the colon arise as a result of disturbances in embryogenesis, as a result of which the location of the entire intestine in the left or right half of the abdominal cavity is possible, the location of the cecum under the liver is possible. Uwe lichenie length of the colon can capture all of its departments (dolihokoliya) or limited to some of its sections (dolichosigma) In this case violated the motor-evacuation function of the intestine and come constipation, bloating and pain. In a stomach. Stenoses and atresias can be single or multiple. They show symptoms of intestinal obstruction soon after the baby is born and require surgery. Doubling of a site or the entire colon is very rare.

**The purpose of the lecture:** **To** acquaint students with surgical diseases of the large intestine, their etiology and pathogenesis, methods of diagnosis and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** **To** acquaint students with diseases of the large intestine. To acquaint students with their etiology, pathogenesis, diagnosis and differential diagnosis. To acquaint the principles of pre- and postoperative management of patients operated on with diseases of the colon.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomy, physiology of the colon - 10 min.
2. Hirschsprung's disease - 20 min
3. Ulcerative colitis - 25 min.
4. Colon polyps and polyposis - 10 min.
5. Colon diverticula - 10 min
6. Colon cancer - 10 min.

### COLON DISEASES

#### Anatomical and physiological data

The colon includes the cecum, the ascending transverse, the descending, and the sigmoid. The length of the colon is 1-2 m, diameter is 4-6 cm. The longitudinal muscles of the intestine are concentrated in the form of three parallel ribbons (free, mesenteric and omental), the width of each of which is about 1 cm. Circular muscles have unequal thickness, as a result of which the bowel has protrusions alternating with constrictions (bowel haustration). Fat pendants are located along the free and omental muscle bands.

The ascending intestine is located mesoperitoneally (sometimes covered by the peritoneum on all sides - intraperitoneally). The ascending intestine in the right hypochondrium, forming a hepatic bend, becomes transverse, 50-60 cm long, covered on all sides by the peritoneum. The anterior surface of the intestine is fused with a large omentum. The transverse colon in the left hypochondrium forms the splenic flexure, passing into the descending colon, which is usually located mesoperitoneally. The descending colon passes into the sigmoid colon.

Outflow of venous blood - through the system of the arteries of the same name into the portal vein system.

Lymphatic drainage - through the lymphatic vessels and nodes lying along the arteries and veins.

Innervation is the branches of the celiac, superior and inferior mesenteric plexuses.

Large intestine functions.

1. Metabolic - involved in the synthesis of vitamin K and the groups B through E to roflory; regulation of water-salt metabolism;

2. Excretory - excretion through the wall of the insoluble components (calculation, heavy metals).
3. Formation of intestinal microflora involved in the digestion of fat and the formation of fiber required for the regulation of the colon.

All diseases of the colon can be divided into 3 groups:

1. Hereditary and congenital diseases
2. Acquired diseases
3. By the characteristics of pathological changes:
  - A. Inflammatory genesis
  - B. Non-inflammatory genesis.

### **ANOMALIES AND DEVELOPMENTAL FAULTS**

Anomalies in the position of the colon (dystopias) occur as a result of disturbances in embryogenesis, as a result of which the entire intestine may be located in the left or right half of the abdominal cavity, and the cecum may be located under the liver. The length of the colon can capture all of its departments (dolichocolon) or limited to some of its sections (dolichosigma). In this case, violated the motor-evacuation function of the intestine and come constipation, bloating and pain. In a stomach. Stenoses and atresias can be single or multiple. They show symptoms of intestinal obstruction soon after childbirth and require surgery. Doubling of a site or the entire colon is very rare.

### **HIRSCHSPRUNG'S DISEASE**

Hirschsprung's disease is a hereditary pathology, accompanied by a sharp expansion of the colon and a violation of its evacuation function. For 5000 children born, this disease is observed in 1 case. More common in boys.

The disease is associated with impaired development of the autonomic nervous system of the colon - hypoplasia (hypoganglionosis) or absence (aganglionosis) ganglion cells between muscle (Auerbach's) and submucosal (Meissner's) nerve plexus. Aganglionary zone more often (80-90%) localizes into the distal intestine, as well as to a greater or lesser extent on the area of the sigmoid colon or other portion of the colon. Aganglionary section constant intestine but spastic reduced without peristalsis. As a result of the difficulties are the passage of intestinal contents through this area located above departments intestine with normal innervation, hypertrophied and extended. This leads to a sharp thickening of the intestinal wall.

Violation of passage of intestinal contents underlies the clinical manifestations of Hirschsprung's disease, the major symptom in which are constipation, bloating, abdominal pain. In most cases, the diagnosis is made in the neonatal period based on signs of intestinal obstruction: absence of meconium in the first 48 hours of life, abdominal enlargement, vomiting, and neonatal enterocolitis. In some cases, the disease is diagnosed later due to severe constipation, permanent enlargement of the abdomen, vomiting, and delayed physical development. To prevent constipation, patients resort to laxatives and enemas.

As a result of prolonged stool retention, patients develop weakness, nausea, vomiting, and appetite worsens. Sometimes constipation is replaced by diarrhea (paradoxical diarrhea), lasting several days and leading to exhaustion of the patient, and sometimes to a collapse state.

Finding, along with the anamnestic data (starting from childhood constipation) and complaints of patients is essential examination in which the detected increase in abdominal distension. In the intestinal loops swollen with gases, dense fecal masses are palpated. When rectal examination determined an increased sphincter tone, empty rectum. When sigmoidoscopy reveals a spasm of the rectum, the advancement of the rectoscope is difficult, after which it seems to fall into the enlarged part of the intestine. This part of the intestine is always filled with feces. Ergography reveals the constriction zone, location and extent of extended aganglionary areas, whose diameter is typically 10 - 15 cm. When studying passage of barium suspension through the gastrointestinal tract is observed prolonged (over several days) stagnation in the extended large intestine. Transanal biopsy of the rectum often allows verified diagnosis. It is used in adult patients. When histological study of biopsy - aganglionosis, increased anti-cholinesterase activity of the parasympathetic



ganglia. Biopsy is especially valuable in determining the level of resection of the affected bowel.

With a slow development process of the patients for a long time can make up for it, achieving a bowel movement with the help of cleansing enemas, and only if decompensation fuss jacent already in middle age, there are indications for surgeons Ceske treatment. Complications: intestinal obstruction, perforated bowel tion,

Treatment: surgical, consists in removing the aganglionic zone and decompensated enlarged sections of the colon, followed by restoration of intestinal patency. Conservative treatment considered only as preparer ny stage of the operation, it is Means of bowel movements. Development of intestinal obstruction, to toruyu can not be resolved through conservative measures, an indication to the imposition of a colostomy on the proximal colon .

## **INFLAMMATORY DISEASES**

### **NONSPECIFIC ULCERATIVE COLITIS**

Ulcerative colitis is a chronic inflammatory disease of the colon, affecting, as a rule, the mucous membrane of the rectum and other parts of the colon, with a recurrent or continuous chronic course. Ulcerative colitis, unlike Crohn's disease, can be cured with surgery (removal of the large intestine), but such an operation disables the patient. Therefore, the main place in her treatment is taken by conservative therapy.

The prevalence of ulcerative colitis in different European countries ranges from 50 to 200 cases per 100,000 population.

#### **Etiology**

The etiological factor of ulcerative colitis has not been precisely established. Attempts are periodically made to link this disease with any infectious agent, in recent years, for example, with the measles virus or paratuberculosis bacillus, but there is no direct evidence.

The point of view about the presence of a genetically determined defect of the immune system, which leads to the development of a severe inflammatory process in the colon, seems to be much more justified. The participation of hereditary mechanisms in the processes of origin of ulcerative colitis can be considered proven. Evidence was obtained in the course of population studies, in the study of family pedigrees using the twin method, in the study of antigens of the major histocompatibility complex, using cytogenetic studies. At the same time, the role of external environmental factors is also obvious. There is every reason to attribute ulcerative colitis to multifactorial (polygenic) diseases. Susceptibility to ulcerative colitis is determined by the presence of a recessive gene with incomplete penentrance. The question of the localization in the chromosomes of the gene (or genes) responsible for the occurrence of ulcerative colitis remains open.

#### **Pathogenesis**

The pathogenesis of ulcerative colitis can be represented as circulus vitiosus, the main links of which are immune, including autoimmune, disorders, intestinal dysbiosis, changes in psychological status, which, when initiated by an unknown etiological factor, lead to a severe inflammatory necrotizing process in the colon.

**Morphological changes in the colon** . Macroscopically: the rectum is always affected, then the process can spread to the entire colon and terminal ileum; granular mucosa, full-blooded, with multiple hemorrhages, erosions, ulcers, pseudopolyps are often determined. Microscopically: inflammatory changes are localized in the mucous membrane and submucosal layer, they are infiltrated by plasma cells and lymphocytes, crypt abscesses, microerosions and ulcerations are found. Expansion of blood vessels, swelling of the endothelium are noted, cords of granulation tissue rich in vessels are visible.

#### **Clinic features**

Until now, there is no single classification of ulcerative colitis. Usually, an acute form is distinguished, a chronic relapsing form with phases of exacerbation and remission, a chronic continuous form; by severity - light, medium and severe forms. In addition, the diagnosis includes the extent of the colon lesion and complications.

All forms of uncomplicated ulcerative colitis are characterized by two groups of symptoms: local (intestinal) and general.

Of the local symptoms, the most frequent and constant is rectal bleeding. Blood in the stool in patients with ulcerative colitis is noted constantly, even in remission. During the exacerbation phase, the amount of blood in the feces increases. Most often it is scarlet, with diarrhea in the form of streaks, if the feces are formalized, then the blood seems to envelop it. Constant bleeding is caused by significant disturbances in the microcirculation of the colon, slight vulnerability of blood vessels, the presence of erosions and ulcerations.

Stool disorders are the second permanent sign of ulcerative colitis, while diarrhea occurs most often, especially in the acute phase; much less often constipation or change of constipation and diarrhea. The mechanism of diarrhea is an increase in fluid secretion and a decrease in its absorption due to mucosal damage, increased vascular permeability; at the same time, the longer the process in the intestine, the more frequent the stool. In addition, even small amounts of feces, mucus or pus, getting into the inflamed sigmoid and rectum, cause a reflex to defecate; this explains false desires and tenesmus.

Abdominal pain is the third local symptom; they are usually localized in the left iliac region, the left half of the abdomen, less often throughout the abdomen. After a bowel movement, the pain subsides or, less often, increases.

Common complaints include weakness, decreased performance, and weight loss. Very often astheno-hypochondriacal, depressive syndromes develop, often carcinophobia.

The acute form of ulcerative colitis is characterized by a violent onset of the disease with the most pronounced local and general symptoms. Stool is frequent, sometimes up to 20 times a day, scanty, bloody; abdominal pain, fever, signs of intoxication and circulatory disorders. Syndrome of exudative enteropathy with the development of hypoproteinemia and edema can be observed. The course of the disease is complicated by massive bleeding, colon perforation. The prognosis for the acute form is unfavorable, the mortality rate is high.

The most common chronic recurrent form of ulcerative colitis. It is characterized by the alternation of phases of exacerbation and remission. There are two variants of this form - sudden, stormy, which is very similar to the acute form; and slow gradual, when the clinic of exacerbation grows slowly, there is usually no pronounced intoxication.

The chronic continuous form is characterized by the fact that the symptoms of the disease and the activity of the inflammatory process in the intestine continue continuously for many years.

### **Data from laboratory and instrumental methods**

The decisive method for the diagnosis of ulcerative colitis is sigmoidoscopy or better colonoscopy. The most important and almost constant sign of ulcerative colitis is a slight vulnerability of the mucous membrane, the appearance of contact bleeding when advancing the tube of a rectoscope or endoscope. Mucosal hyperemia, swelling of folds, submucous hemorrhages, erosion, ulcers, pseudopolyps are often determined. Predominantly erosive-hemorrhagic or ulcerative-hemorrhagic syndromes are diagnosed. The changes detected during endoscopy cannot be considered specific only for ulcerative colitis, they are also noted in other forms of intestinal pathology. Nevertheless, such signs as contact bleeding, slow regeneration of erosions and ulcers, even with active therapy, help in the correct recognition of ulcerative colitis. In milder forms with mild macroscopic changes, it is advisable to perform a mucosal biopsy. Colonoscopy is performed less frequently in severe and moderate forms due to the risk of perforation. It should be carried out in case of suspicion of malignancy, in the phase of a dying exacerbation or remission.

The classic complex of studies includes irrigoscopy, which allows you to assess the extent of the lesion, helps in the differential diagnosis of ulcerative colitis with Crohn's disease, tumors and diverticulosis of the colon, ischemic colitis.

## **Complications**

Distinguish between local (intestinal) and general (systemic) complications.

Local complications include massive intestinal bleeding, toxic megacolon, perforation, peritonitis, and the development of polyposis and colon tumors.

The risk of malignancy (the formation of a malignant tumor) of the UC is highest with a long-term course of the disease (more than 10 years) and total lesion of the colon. In this regard, patients with a disease experience of more than 10 years and extensive lesions of the colon are obligatory recommended regular (once every 1-2 years) colonoscopy with mucosal biopsy in various parts of the colon.

General systemic complications. There are various approaches to grouping them.

They are divided into three groups according to the pathogenetic principle:

1) arising from systemic "hypersensitization" - damage to joints, eyes, skin, oral mucosa;

2) arising from bacteremia and antigenemia in the portal system - damage to the liver and biliary tract;

3) secondary to long-term disturbances in the colon - anemia, electrolyte disorders.

The extraintestinal manifestations of ulcerative colitis include:

1) Skin manifestations (erythema nodosum, pyoderma gangrenous, vegetative purulent stomatitis, vesiculopustular exanthema, cutaneous vasculitis, etc.)

2) Joint damage (arthritis, sacroiliitis, ankylosing spondylitis (ankylosing spondylitis))

3) Inflammatory eye diseases (scleritis and episcleritis, iridocyclitis, fundus changes)

4) Diseases of the liver and biliary tract (primary sclerosing cholangitis, fatty liver infiltration, chronic active hepatitis, cholangiocellular carcinoma, etc.)

5) Vasculitis

6) Violations of hemostasis and thromboembolic complications

7) Blood diseases

8) Amyloidosis

9) Disorders of bone metabolism (osteoporosis)

It should be noted that the course of inflammatory bowel disease, despite the careful study of many decades, still remains a very difficult task for doctors and patients themselves. The course of ulcerative colitis, like Crohn's disease, cannot be predicted by modern medicine, therefore, special attention is paid to the issues of maintenance of remission and anti-relapse therapy .

## **Treatment**

### **Diet**

There is one general dietary restriction for all forms of ulcerative colitis in the acute phase - the exclusion of dairy products due to the large percentage of patients with hypersensitivity to milk proteins. It is recommended to enrich the diet with proteins at the expense of low-fat varieties of boiled meat, fish, low-fat cottage cheese, cheese. Fats and carbohydrates are limited. In the hospital, patients are usually assigned a 4-table diet. Patients with severe forms in the phase of pronounced exacerbation, with a decrease in body weight, may be prescribed parenteral nutrition for a short period. The subclavian vein is catheterized, protein preparations, essential amino acids, glucose, fat emulsions, vitamins are injected.

### **Drug treatment**

In the phase of exacerbation of the disease, patients with moderate and severe forms must be hospitalized, with a mild form, treatment can be carried out on an outpatient basis.

There is no etiotropic therapy for ulcerative colitis. The basis of drug treatment is the activities of pathogenetic therapy. Correction of immunological disorders, mainly at their final stage - immune inflammation in the colon mucosa, as well as correction of dysbiosis and disorders of psychological status - is of leading importance.

Antibiotics for ulcerative colitis are indicated only with the development of purulent complications - microabscesses in the intestine, widespread purulent deposits. It is better to

prescribe broad-spectrum drugs in short courses. Bacterial preparations, which are shown in the phase of subsiding exacerbation, are of a certain importance for the correction of dysbiosis.

**Clinical examination** . Patients with ulcerative colitis should be registered with a gastroenterologist (the best option) or a local therapist. The main goals of dispensary observation are prolongation of remission, prevention of exacerbations, timely diagnosis of complications, especially malignancy. Therefore, with a favorable course, the patient should be examined at least 1 time per quarter, if he takes maintenance doses of sulfasalazine or prednisolone - monthly. Endoscopic examination should be carried out at least 1 time per year, with deterioration of the condition, changes in the clinical course - more often. Employment of the patient is necessary - release from work associated with business trips, night shifts, irregular meals, emotional overload. Sanatorium treatment for patients with ulcerative colitis is not indicated.

## **DIVERTICULES AND DIVERTICULOSIS OF THE COLUMN**

Diverticula are blindly ending saccular protrusions of a limited area of a hollow organ, in particular, the colon. Diverticulosis means the presence of multiple diverticula. They are congenital and acquired.

Acquired colon diverticula develop mainly in residents of economically developed countries, where the incidence reaches 30% of the entire population. The main role in such a wide spread of this disease is played by the depletion of the diet in coarse fiber and plant fibers, which leads to the development of constipation - the most important risk factor for diverticular disease. The second circumstance is the increase in life expectancy in developed countries. Colon diverticulosis is common in the elderly and old. Most often, diverticula are localized in the sigmoid and descending colon, much less often in the right parts of the colon.

The most common theory for the onset of diverticular disease is mechanical or pulsatile. It is possible to name a number of risk factors that determine the main elements of the pathogenesis of diverticulosis - a decrease in the diet of ballast substances, constipation, obesity, old age, and inflammatory processes in the colon. All these factors lead to an increase in intracavitary pressure in the colon due to intestinal dyskinesias. In the pathogenesis of diverticular disease, a significant role belongs to the weakness of the intestinal wall. The muscle tone of the large intestine gradually decreases with age, the circular and longitudinal layers of the muscular membrane become thinner, the supporting connective tissue is less organized, with signs of wear, and the elastin in it is fragmented.

### **Clinic and diagnostics**

According to the WHO recommendations, there are three forms of diverticular disease of the colon: asymptomatic diverticula (incidental findings during irrigoscopy or colonoscopy); uncomplicated diverticular disease, when there are clinical manifestations and diverticular disease with complications.

There are no characteristic symptoms of uncomplicated diverticulosis, patients have signs characteristic of the colon lesion syndrome - abdominal pain without clear localization, stool disturbances, most often constipation or unstable stool (change of constipation and diarrhea), signs of intestinal dyspepsia (rumbling, bloating).

The most common complication of diverticulosis is inflammation of the diverticula - diverticulitis. This is facilitated by violations of the evacuation of contents from diverticula, intestinal dysbiosis. Often, diverticulitis acquires a chronic recurrent course with a change in the phases of remission and exacerbation, sometimes in the form of painful abdominal crises. Signs of developed diverticulitis are fever, increased abdominal pain, diarrhea, the appearance of mucus and blood in the stool, persistent flatulence, quite pronounced pain on palpation of the abdomen in the projection of inflamed diverticula, usually in the left flank, sometimes signs of damage to the peritoneum. When diverticular disease manifests itself as diverticulitis, which is not uncommon, patients are admitted to surgical departments with suspicion of some form of "acute" abdomen. Intestinal bleeding is a serious complication of diverticular disease. Its likelihood increases with age. It manifests itself most often among complete well-being in the form of excretion of scarlet blood or clots in the feces; may stop as

suddenly as it started. The development of bowel stricture due to recurrence of diverticulitis, compression by inflammatory infiltrate with peridiverticulitis, adhesions leads to intestinal obstruction. Perforation of the diverticulum is complicated by the development of diffuse peritonitis. Other complications of diverticular disease include interintestinal abscesses, fistulas, pylephlebitis, and torsion of the diverticulum.

Diverticulitis is characterized by "inflammatory" changes in the hemogram - leukocytosis, accelerated ESR. Scatological changes are nonspecific, naturally, especially with diverticulitis, dysbiosis is detected. The decisive methods for diagnosing colon diverticulosis are irrigoscopy and colonoscopy. With irrigoscopy, diverticula are found in the form of protrusions of the intestinal wall of a rounded shape with a more or less pronounced neck, which are clearly identified along the outer or inner contour of the intestine, they are especially clearly visible with double contrast. In patients with uncomplicated diverticulitis, the diverticula are well emptied. Contrast lag is a sign of diverticulitis. Colonoscopy is more helpful in recognizing diverticulitis. Ordinary diverticula themselves are not visible; their mouths are round or oval in shape with unchanged mucous around them. The presence of inflammation is judged if the mouths are deformed, the mucous membrane around them is edematous, hyperemic. Colonoscopy for bleeding allows you to establish its level.

### **Treatment**

The main challenge in identifying uncomplicated colon diverticulosis is stool regulation. This allows to some extent prevent the formation of new diverticula and prevent complications, for example, diverticulitis. For this purpose, a diet rich in plant fiber is prescribed. If this is not enough, wheat bran is recommended. Their important property is the ability to absorb liquid in an amount that is 4 times their own weight. Thus, the volume of feces increases, which leads to a normalization of the transit time through the intestine, a decrease in intracavitary pressure. The appointment of bran leads in patients with diverticulosis to a decrease in pain, flatulence, and normalization of the stool. Wheat bran, now produced by the food industry under various names, for example "Fibromed", is poured with boiling water before use. They can be used in the form of a talker for oral administration, and also added to compotes, jelly, soups, cereals. The first 2-3 days, bran is prescribed 1 teaspoon 2 times a day, then every 2-3 days the dose is increased by 1 teaspoon a day until normal stool appears; then the amount of bran is slowly reduced until a dose is reached that guarantees a normal rhythm of bowel emptying (once a day or every 2 days). Bran can be used for a long time. In the first days of treatment with bran, abdominal pain may appear or increase, they are stopped by taking baralgin or noshpa, the pains subside and then stop.

With the development of diverticulitis, it is necessary to prescribe antibacterial agents (broad spectrum antibiotics, poorly absorbed sulfonamides, 8-hydroxyquinoline derivatives) for 7-10 days, antispasmodic drugs (baralgin, spazmolgon, trigan); after the acute phenomena subsided, prescribe a course of treatment with bacterial drugs - colibacterin, bifidobacterin, bifikol (3-5 doses 2 times a day before meals). In patients with frequent relapses of diverticulitis, a good effect can be achieved by prescribing drugs such as sulfasalazine - sulfasalazine, salazopyridazine, salazodimethoxin. It is good to combine them with polyenzyme preparations.

For other complications of diverticular disease or ineffectiveness of conservative therapy, various types of surgical interventions are indicated.

### **POLYPPES AND POLYPOSIS OF THE COLUMN AND RECTAL Intestine**

Polyps are benign growths iskho dyaschim of the epithelium, but they are prone to malignancy. Among all proctological patients, polyps are found in 10-12%, and among persons who undergo sigmoidoscopy during a preventive examination, in 2-4%. Men get sick 2-3 times more often than women.

Polyps can be single or multiple. Usually their size is 0.5-2 cm, but occasionally they reach 3-5 cm or more. Polyps have a leg hanging down into the intestinal lumen, less often they are located on a wide base. Allocate juvenile, hyperplastic, glandular (adenomatous) polyps villous glandular, villous tumor, diffuse polyposis colon (truths ny and secondary).

Juvenile polyps are seen primarily in children. The rectal mucosa is more often affected. Macroscopically polyps have the form "bunch" having a leg their smooth surface, a more intense colouration than the surrounding intact mucosa. Microscopically detected characteristic cystic glandular stroma formation with a predominance of glandular elements. As a rule, juvenile polyps do not become malignant.

Hyperplastic polyps are small (2-4 mm) formations, more often they have a conical shape. In hyperplastic polyps, the normal structure of the intestinal mucosa is preserved with the correct structure and orientation of the glands with a significant increase in their number, due to which the impression is created of a thickening of the mucous membrane in the form of a polyp. They are very rarely malignant.

Adenomatous polyps (glandular) are most common. Adenomatous polyp looks like a round tumor with or without a pedicle, with a smooth surface. It represents portion mucosal hyperplasia, constructed from diverse of different shape glands often kistoznorrashirenniyh, lined GOVERNMENTAL columnar epithelium. These polyps are often malignant, and the larger the polyp, the more often malignancy is detected. With a polyp size of more than 2 cm, the frequency of malignancy reaches 50%.

The villous polyp (adenopapilloma) is covered with fine, delicate villi. The frequency of malignancy reaches 30-35%.

Solitary polyps sometimes asymptomatic or are causing the cause of patients' complaints on the allocation of blood and mucus from the rectum, abdominal pain, constipation, diarrhea, abdominal discomfort. These symptoms are not pathognomonic for polyps, therefore, to identify them, it is necessary to use a digital examination of the rectum, sigmoidoscopy, colonoscopy, irrigography. A polyp biopsy is necessary to determine the histological structure of polyps, the presence or absence of malignancy.

The glandular villous polyps have a lobular structure, their surface is velvety, covered with many villi.

Villous tumor is a lobed novooobra mations with a velvety surface, pinkish-red color, protruding into the lumen, located on a wide Ba Vania (nodular form). One of the varieties of villous tumors is a creeping, carpet form, in which there is no tumor node. In this case the propagation process is on a mucosal surface, occupying a fairly large area sometimes throughout the colon manifesting circumference and thief sinchatymi melkodolchatymi or growths. The sizes of villous tumors are from 1.5 to 5 cm. The tendency to malignancy of villous tumors is very high (up to 90%). Among all neoplasms of the colon, they account for about 5%. Most often villous tumors are localized in the rectum and sigmoid colon. Manifest villous colon tumor discharge of mucus during defecation, and amount of mucus can be zna considerably and reach 1-1.5 liters, resulting in a water-electro litnym disorders. Due to the easy vulnerability villi OPU holy bleeding occurs in almost all patients. Other symptoms of the disease include abdominal pain, constipation, diarrhea, and intestinal discomfort.

Diffuse polyposis of the colon is true (familial) and secondary (as a result of other colon lesions, such as colitis). The frequency of malignancy in diffuse polyposis reaches 70-100%, therefore, it is an obligate precancer.

Diffuse true polyposis is inherited, it is time zhaya several family members, hence one of its names - the family. The disease is usually detected in children and people Molo dogo age. The frequency of malignancy is approaching 100%. The combination of diffuse polyposis colon dobroka-quality tumors of soft tissues and bones called Sindh rum Gardner. The combination of polyposis of the gastrointestinal tract with pigment spots on the mucous membrane of the cheeks, around the mouth and on the skin of the palms is called Peitz-Gigers syndrome. In childhood, it is asymptomatic.

Diffuse colon polyposis is characterized by abdominal pain without clear localization, diarrhea, excretion of blood and mucus with feces, weight loss, anemia .

Diagnostics: along with clinical symptoms and anamnestic data, recto- and colonoscopy, irrigography are important.

The choice of treatment for polyps and diffuse colon polyposis should be individualized. Solitary polyps ud lyayut by electrocoagulation through recto- or

colonoscope. Elect rokoagulyatsiya admissible and villous tumors with a well-defined foot in the absence of malignancy.

When villous tumor malignancy operate radical hydrochloric operation, the volume of which is determined by the location of the tumor (right- or left-sided hemicolectomy, resection of the sigmoid colon). With cellular atypia of the apex of the polyp without invasion of the muscular plate of the mucous membrane, a radical operation is a wedge-shaped excision of the intestinal wall in the polyp zone.

With diffuse familial colon polyposis, subtotal colectomy with the imposition of an ileorectal or ileosigmoid anastomosis is performed. With the localization of multiple Lipov produced in a limited area, startled resection of intestine.

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### **Topic number 15 : Diseases of the rectum**

**The lecture is dedicated to:** *for 4th year students of the faculty*

**Substantiation of the topic:** Colorectal cancer accounts for 15% of all newly diagnosed malignant tumors of all localizations, and 30% of this number is rectal cancer. Every year in the United States there are about 150 thousand new cases of colorectal cancer and it ranks 2-3rd. Colorectal cancer in average vstre chaetsya at 10 per 100 000 population. Mostly people aged 50-60 are affected, men and women equally often.

In recent years there has been a significant increase in Zabol vaemosti rectal cancer, and this trend continues today.

**The purpose of the lecture: To** acquaint students with surgical diseases of the rectum, their etiology and pathogenesis, methods of diagnosis and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives: To** acquaint students with diseases of the rectum. To acquaint students with their etiology, pathogenesis, diagnosis and differential diagnosis. To acquaint the principles of pre- and postoperative management of patients operated on with diseases of the rectum.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Anatomy, physiology of the rectum - 10 min.
2. Congenital rectal anomalies, trauma - 5 min
3. Hemorrhoids - 15 min
4. Anal fissures - 15 min
5. Rectal prolapse - 15 min.
6. Paraproctitis - 25 min.
7. Rectal cancer - 5 min.

## DISEASES OF THE RECTUM

### Anatomical and physiological features.

The rectum begins at approximately the level of the third sacral vertebra ( $S_3$ ) and is the terminal section of the intestine. It is located in the posterior part of the pelvic cavity, descends along the bend of the sacrum and coccyx, passing through the pelvic diaphragm, and ends in the anal canal. The rectum is 12-20 cm long. Three sections are distinguished in it: supra-ampullary (rectosigmoid), - 3 cm, upper ampullary section - 3-5 cm, middle ampullary section 4-6 cm, lower ampullary section 3-5 cm, anal canal 2.5-4 cm. The lower ampullary section of the rectum passes into the anal canal and ends with the anus. Only the nadampulyarnom rectum is covered by bryushi hydrochloric, located below it and covered by extraperitoneal fascia. Under the pelvic peritoneum, the rectum is surrounded by tissue located in the pelvic-rectal and sciatic-rectal spaces. The middle ampullary section is located completely extraperitoneally, its upper border is the transitional fold of the peritoneum, it is surrounded by pararectal tissue, which is more pronounced behind and on the sides.

Unlike other parts of the large intestine, the rectum does not have haustration, its longitudinal muscle layer is not collected in ribbons, but evenly distributed around the entire circumference.

Although the localization of the transitional fold of the pelvic peritoneum has significant individual and gender differences, in general it is located along the anterior semicircle of the rectum in men by 7-9 cm and in women by 5-7 cm from the anus.

On the back - side walls of the intestine, the transitional fold of the peritoneum - plicae rectovesicales is usually located 12-15 cm from the anus.

The rectal mucosa is covered with columnar epithelium. In the lower ampullary part of the rectum, the mucous membrane forms longitudinal folds (Morgagni columns), at the base of which are the anal sinuses (crypts). In these crypts, the ducts of the anal glands open, which produce mucus. In the anal canal, the mucous membrane is covered with stratified squamous epithelium.

The border between the columnar epithelium of the lower ampullary section of the intestine and the squamous epithelium of the anal section is a zigzag anorectal (dentate, scallop) line.

**The anal canal** is the most terminal part of the gastrointestinal tract. It starts from the anorectal junction (dentate line) and ends with the external anus (anus). Its length is 3-4 cm. The anal canal is surrounded by two muscle rings that form the obturator apparatus of the rectum: the inner (deep) and outer muscle rings. The inner muscle ring (internal sphincter) is a continuation of the inner circular muscle layer of the rectum. The internal sphincter is a smooth muscle formation with autonomous innervation and involuntary contraction, and the external muscle ring (external sphincter) consists of three parts - subcutaneous, superficial and deep, which consists of striated muscles with somatic innervation, the contraction of which is controlled by human consciousness.

## CONGENITAL ANOMALIES

Congenital anomalies occur as floor hydrochloric atresia or atresia with fistulas. When complete atresia's contents output for direct intestinal is absent. Distinguish: Atresia back about progress, atresia direct quiche ki, atresia of the anus and rectum.

With atresia of the anus, there is thin skin in its place, which can easily be pressed inward with a finger. With rectal atresia, connective tissue is in its place. The lumen of the anus may be absent, but it may be. In the latter case, it leads to a blind pocket with a depth of 1-3 cm. Sometimes rectal atresia is combined with fistulas: rectovaginal atresia, rectal vesicular atresia, rectal-urethral atresia.

**Clinic**: from the first days after the birth of a child, the main symptom of complete atresia of the anus or rectum is intestinal obstruction, which is manifested by bloating, non-evacuation of gas and feces, hiccups, belching, vomiting. The correct diagnosis can be made after examining the perineum.



Discharge of stool occurs in unusual nom spot when atresia combined with fistulas (through the vagina, urethra). With rectal-cystic atresia, the urine is cloudy, mixed with feces.

**Treatment** is surgical. Complete atresia of the anus or rectum is an indication for urgent surgery. With atresia of the anus, the skin that closes the exit from the intestine is dissected, the rectal mucosa is lowered and sutured to the skin. Other types of complete rectal atresia require complex surgical procedures. With atresia with a fistula, the operation is performed in a planned manner; it is aimed at the elimination of Atre sion and fistula.

## **RECTAL TRAUMA**

Injuries rectum may result from damage to different objects, when falling on them, in fractures of the pelvis, with gunshot wounds, with medical procedures (sigmoidoscopy, the introduction of enema nakonech nicknames, thermometers), as a result of complications during surgical operations on the pelvic organs, with birth trauma.

Clinical manifestations of trauma are largely determined fissile localization of lesions of the rectum - intraperitoneal or extraperitoneal parts. They are associated both with a violation of the integrity of the intestinal wall - pain, bleeding, and with the release of feces outside the intestine (into the pararectal tissue or into the abdominal cavity). Treatment of rectal injuries is surgical. It comes down to suturing a defect in the intestinal wall, drainage of pelvic tissue, and often resort to the imposition of a discharge colostomy.

## **HEMORRHOIDS**

Hemorrhoids - expansion of the cavernous bodies of the rectum, the most common coloproctological pathology. Hemorrhoids are ill about 12 - 13 people out of 100, and its share in the total structure of rectal diseases is 40%. The disease occurs almost equally among men and women aged 30-50 years.

**Etiopathogenesis.** Hemorrhoids is a pathological changes cavernous submucosal plexus due to Rushen outflow of blood from the cavernous venules of submucosal plexus of the rectum with arterio-venous anastomoses, which explains the nature of the arterial bleeding hemorrhoids. In the overwhelming majority of cases, internal and external hemorrhoids are formed in the area of the base of the Morgan columns diffusely or, more often, are grouped mainly in three zones: on the left lateral, right posterolateral and right anterolateral walls of the anal canal, by 3, 7, and 11 o'clock , respectively , according to the conventional dial when the patient is on his back.

At present, the most common theories of the pathogenesis of hemorrhoids are mechanical and hemodynamic theories.

There are internal hemorrhoids located above the scallop line of the submucosa of the rectum, and external ones located below the scallop line under the skin. Approximately 40% of patients was observed combination of external and vnut rennego hemorrhoids - Mixed hemorrhoids. External hemorrhoids are rare and occur in less than 10% of patients.

**Clinical picture and diagnosis of hemorrhoids.** Initially disease patients note unpleasant sensations in the anus (Chuv GUSTs presence of a foreign body). These phenomena are aggravated by dietary disorders, bowel function disorders (constipation, diarrhea). Then bleeding, pain, pinching of nodes appear.

The main symptom of hemorrhoids is bleeding. It occurs at the time of defecation or immediately after it, manifested by the release of scarlet blood. Sometimes the blood comes out in a trickle. With hemorrhoidal bleeding, feces are not mixed with blood, it covers it from above. Bleeding from hemorrhoidal veins can sometimes be very intense, as a result of which anemia often occurs.

The next characteristic symptom for hemorrhoids is pain that occurs when inflammation joins, thrombosis of nodes or their infringement, with the appearance of cracks in the wall of the anus. The pain also occurs at the time of bowel movement and continues for some time after it.

Itching anus occurs due to skin maceration under the mucous secretions of the intestine that may lead to time vitiyu eczema.

Based on the clinical picture, 4 stages of chronic hemorrhoids are distinguished. Stage I is manifested by bleeding; hemorrhoids do not fall out. During stage II, hemorrhoids fall out when straining and set on their own. At stage III, hemorrhoids fall out and are set only manually. Moreover, first the nodes fall out only during bowel movements, then with an increase in intra-abdominal pressure. During stage IV, hemorrhoids fall out and at rest, do not adjust or fall out again immediately after reduction. In this case, their thrombosis, pain in the anus, and profuse bleeding often occur.

Chronic hemorrhoids are characterized by periods of remission and exacerbations. During the period of remission, patients do not present any complaints. Consuming alcohol or spicy food, as well as physical overstrain lead to bleeding. The characteristic complaints of the patient and the presence of hemorrhoids during examination allow the correct diagnosis to be made.

Osmate regarded the patient should be in a knee-elbow position and in the squatting position straining. Inspection should be supplemented finger vym examination of the rectum, anoscope and proctoscope.

**Differential diagnosis** of hemorrhoids is carried out with a polyp and rectal cancer, an anal fissure, prolapse of the rectal mucosa. For differential diagnosis Tols cancer of the colon are used irrigoscopy, colonoscopy.

**Treatment:** Hemorrhoids are treated with conservative, minimally invasive and surgical methods.

Conservative treatment of hemorrhoids is aimed at eliminating inflammatory changes, normalizing blood circulation in the rectal area, and regulating stool. The indications for conservative treatment are the initial stages of chronic hemorrhoids, as well as the acute course of the disease with a characteristic pain syndrome. This type of therapy includes general and local treatment. The basis of general treatment, in addition to diet therapy, elimination of constipation, is the use of phlebotropic drugs and analgesics. Local treatment is aimed at eliminating pain, thrombosis, inflammation of hemorrhoids and bleeding. For local treatment, pain relievers, antipruritic, astringent, wound-healing agents are used in the form of suppositories, ointments, microclysters, sitz baths.

Sclerotherapy is referred to as minimally invasive methods.

Contraindications to this method are various infectious diseases, inflammatory processes in the anal canal. This method is accompanied by a higher recurrence rate than the surgical one. Sometimes this method causes inflammatory complications that require on observations of patients. Another non-operative (minimally invasive) method of treating hemorrhoids is ligation of the nodes with latex rings. Thus with a special device for the leg elastic haemorrhoid throw Noe ring which causes necrosis and host rejection.

In comparison with the surgical method of treatment, this method is less radical and gives a greater number of relapses. It is used in patients with a high degree of operational risk due to severe concomitant diseases of internal organs. A competing method for ligating nodes with latex rings is ligation of hemorrhoids under the control of ultrasound Doppler. This technique is used in the second or third stage of hemorrhoids.

In addition, minimally invasive methods include infrared photocoagulation, cryodestruction, monopolar and bipolar coagulation, laser coagulation.

**Surgical treatment** is indicated for stages II-III of the disease. Preoperative preparation includes besshlakovuyu diet for Length SRI 1-2 days, an enema in the morning and in the evening before surgery. Celje according to general anesthesia. The use of modern methods of anesthesia allows the operation to be performed absolutely painlessly and to minimize pain during dressings in the postoperative period.

The operation to remove cavernous tissue (hemorrhoidectomy) was developed in the 30s of the century by English surgeons Milligan and Morgan.

In addition, there are methods for Subbotin, Lockhart-Mummery, Martynov and Ryzhikha.

Surgical treatment of hemorrhoids is **contraindicated** in severe portal hypertension and stage III hypertension.

By the **complications** of hemorrhoids include thrombosis and infringement of hemorrhoids. Thrombosis of the external hemorrhoidal node often occurs after an error in diet, exercise. Res appear Kie pain in the anus, aggravated by any physical load, the coughing; feeling of a foreign body. When viewed in the anal area, a cyanotic knot is visible, very painful on palpation. Rectal examination is painful, however, it does not provide any other information. The treatment of thrombosis often conservative, with the exception of diet east ryh meals, alcohol; laxatives, anti-inflammatory drugs (NSAIDs, topical lead lotions) are advisable. From the 3-4th day, sessile warm baths with a weak solution of potassium permanganate.

Surgical treatment is more expedient - dissection of the thrombosed node, removal of thrombotic masses. Such treatment OAPC it possible to reduce the terms of patient disability, to eliminate pain.

Infringement of internal hemorrhoids is also provoked by errors in the diet. Internal hemorrhoids fall and restrained in the anus, the second fuss repents thrombosis disadvantaged nodes and necrosis. Patients develop sharp bursting pains in the anus and a foreign body sensation. When viewed along the entire perimeter of the anal canal la visible temnosinyushnogo fallen down to black, hemorrhoids. With necrosis of the mucous membrane, bleeding is possible, subsequently - paraproctitis. Rectal studies of in the acute period is impossible.

Treatment for pinched hemorrhoids includes a laxative diet, anti-inflammatory drugs, and lead lotions. Good effect has Presacral blockade 0.25% novocaine solution, whereupon pain Nogo put to bed with a raised foot end - some patients may precipitated nodes right. After the elimination of the acute effects to patients, surgical treatment in Plano vom order.

## **ANAL FISSURE**

Among all diseases of the rectum, anal fissure ranks third in frequency (11.7%) after colitis and hemorrhoids. Cracks back about stroke is more common in women (60%) aged 30 to 50 years. Usually a crack is up to 2 cm long and 2–3 mm wide . Most often, the fissure of the anus is located in the area of the posterior commissure of the anus, which is caused by traumatization of this zone during defecation. There may be several cracks, in which case their most typical localization is the anterior and posterior commissures ("mirror" cracks). The direction of the cracks is longitudinal.

**Etiology and pathogenesis:** Anal fissure occurs as a result of damage to the mucous membrane of the anal canal with constipation and diarrhea, as well as due to trauma. Predisposing diseases are colitis, proctosigmoiditis, enterocolitis, hemorrhoids, etc. In almost 70% of patients, a crack is combined with chronic diseases of the upper digestive tract (gastritis, gastric ulcer and duodenal ulcer, cholecystitis). In two-thirds of patients, an anal fissure occurs against the background of hemorrhoids. Occasionally they arise as a result of rough manipulations during anoscopy, sigmoidoscopy.

An anal fissure is a defect in the wall of the anal canal. This defect is linear or triangular, 1-2 cm long . It, located slightly above the Hilton's line, near the transitional fold, reaches the scallop line or goes beyond it. A sharp, slit-like crack with smooth, even edges. Its bottom is the muscle tissue of the sphincter of the anus.

In more than 85% of patients, the anal fissure is localized at 6 o'clock of the conventional dial (posterior anal fissure), in 8-9% (mainly in women) - on the anterior wall of the anal canal (at 12 o'clock); cracks on its side walls are extremely rare (0.5%). Sometimes (3-4%) there is a combination of two cracks located on the anterior and posterior walls of the anal canal.

The fact that cracks are most often localized in the region of the posterior wall of the anus is explained by the peculiarities of the structure and function of its sphincter. In the area of 6 and 12 o'clock of the conventional dial, especially at the back, there are worse conditions for blood supply, which creates a great danger of trauma to the mucous membrane during the act of defecation.

**Clinical picture and diagnosis:** For the clinical picture of anal fissure, a triad of symptoms is typical:

- scanty bleeding during bowel movements;
- pain during or after a bowel movement;
- spasm of the sphincter.

Pain cutting, burning, stabbing, lasts from a few minutes to several hours after defecation, and their intensity can be very significant. Pain can radiate to the sacrum and perineum, cause dysuric phenomena, dysmenorrhea, intestinal colic, provoke angina attacks. Pain during bowel movements is especially typical for acute cracks, and after it - for chronic ones.

Intense pains make patients strive for infrequent bowel movements. As a result, stool retention occurs, which leads to the development of constipation and subsequently increases the possibility of tissue trauma. Prolonged spasm of the sphincter is characteristic.

Bleeding in anal fissure usually insignificant. At the same time, blood is not mixed with feces, but is on its surface in the form of stripes. Sometimes a few drops of blood appears at the end of a bowel movement.

**Diagnosis** of anal fissure is based on data from medical history, assessment of the patient's complaints and inspection of the rear area of about stroke, in which the crack is clearly visible. Long existing crack results in the replacement of muscle elements with connective tissue, whereupon it becomes rigid, narrows the annulus formed around the anus (pektenoz).

**The differential diagnosis** is carried out with rectal cancer, tuberculous and syphilitic ulcers.

Anal fissure **treatment** can be both conservative and surgical. Conservative treatment is effective in 65-70% of patients. It is prescribed if the crack is sharp, with a clean bottom, smooth edges, and there is no more than a week.

Conservative treatment is aimed at breaking the vicious circle: constipation - crack - pain. Conservative measures include weak anti-inflammatory drugs, analgesics, suppositories, enemas before defecation, thermal, and physical therapy. Alcohol-operate novocaine block (under the base of the crack), voluntary expansion of the sphincter (in order to cause a temporary paresis and remove abnormal sphincter spasm).

## **RECTAL POLYPS**

Polyps are benign epithelial neoplasms. The reasons for their occurrence in the colon have not been reliably elucidated. However, it has been established that chronic inflammatory diseases contribute to the aging of the epithelium of the colon mucosa and the proliferation of benign neoplasms on the mucosa. The epithelial cells of the colon mucosa are normally regularly intensively renewed, which obviously contributes to the prevention of various harmful effects that carcinogenic environmental factors have on the colon mucosa, primarily the metabolic products of food masses. Discoordination of the processes of cell renewal can contribute to the growth of polyps.

According to morphological characteristics, polyps are divided into glandular (tubular), glandular-villous (tubulo-villous), villous (villous polyps, or villous tumors). Of the various forms of polyps, adenomas are the most common.

Rectal polyps are precancerous lesions. With an increase in the size of the neoplasm and with the complication of its microscopic structure (growth of villous structures), the potential for malignant transformation increases.

**The clinical picture.** In the vast majority of patients, rectal polyps are not clinically manifested and are detected by chance during endoscopic studies for another pathology or during targeted surveys of the population. In more than 78% of cases, polyps are found in people over 50 years old. Large polyps (1.5 - 2 cm) can cause pulling pains in the lower abdomen during or after bowel movements, as well as the release of mucus and blood from the rectum, occasionally intestinal obstruction, as a result of intussusception or obstruction of the intestine.

**Treatment.** Conservative treatment of rectal polyps is futile. Any polyp found on sigmoidoscopy or colonoscopy should be removed and examined under a microscope. Rectal polyps are removed with special forceps or with the help of electrocoagulation with a loop electrode - they grab and pinch the leg of the polyp. Large polyps are removed in parts. Since rectal polyps are a precancerous disease, after their removal, the patient undergoes dynamic sigmoidoscopy and colonoscopy.

Timely detection and removal of almost always asymptomatic polyps is the main measure for the prevention of rectal cancer, especially in older people.

### **PARAPROCTITIS (RECTAL FISTULAS)**

Chronic paraproctitis (rectal fistula, pararectal fistula) is a chronic inflammatory process in the crypt and pararectal tissue with the presence of a fistulous tract. In 95% of cases, it is a consequence of acute paraproctitis and is characterized by the presence of an internal opening in the intestine, a fistulous passage in the intestinal wall and cellular spaces of the pelvis, as well as an external opening (s) on the skin of the perineum. The wide spread of the disease is explained by the late treatment of patients with acute paraproctitis for medical help and the incorrectly chosen tactics of its treatment.

In frequency is about 30% of all zabolovany rectum, affecting approximately 0.5% of the population. Men suffer from paraproctitis 2 times more often than women, and the main contingent of patients is between the ages of 30 and 50.

**Etiology and pathogenesis.** The causative agents of paraproctitis can be *Escherichia coli*, *staphylococcus aureus*, gram-negative and gram-positive bacilli, as a result of which they enter the perirectal tissue contributes to the occurrence of paraproctitis. With ordinary paraproctitis, polymicrobial flora is most often detected. Inflammation with the participation of anaerobes is accompanied by especially severe manifestations of the disease - gas phlegmon of the pelvic tissue, putrefactive paraproctitis, anaerobic sepsis. Specific causative agents of tuberculosis, syphilis, actinomycosis are very rarely the cause of paraproctitis (specific).

The routes of entry of microorganisms that give rise to paraproctitis are varied. Microbes enter the pararectal tissue from the anal glands that open into the anal crypts. The results in Tate inflammation in the anal gland duct it overlaps a space formed mezhsfinkternom abscess, in which breaks or perianal adrectal space.

The transition of the process from the inflamed gland to pararectal tissue is also possible by the lymphogenous pathway. In the development of paraproctitis, a certain role can be played by trauma to the rectal mucosa by foreign bodies contained in feces, hemorrhoids, anal fissures, ulcerative colitis, Crohn's disease.

Paraproctitis can be secondary. In this case, the inflammatory process goes to pararectal tissue from the prostate gland, urethra, and female genital organs. Rectal trauma is a rare cause of (traumatic) paraproctitis.

The spread of pus adrectal cellular space can go in different directions, which leads to the forming vaniyu various forms of abscess. In this case, pus often breaks out through the skin with the formation of a fistula.

#### **Classification of paraproctitis.**

##### **I. Acute paraproctitis**

1. According to the etiological principle (normal, anaerobic, specific, traumatic).
2. By localization of abscesses, infiltrates, leaks (submucosal, subcutaneous, iliorectal, pelviorectal, retrorectal).

##### **II. Chronic paraproctitis (rectal fistulas)**

1. On anatomical basis (complete, incomplete, external, internal).
2. By the location of the internal opening of the fistula (anterior, posterior, lateral).
3. In relation to the fistulous tract to the fibers of the sphincter (intrasphincteric, transsphincteric, extrasphincteric).
4. By the degree of complexity (simple, complex).

**Acute paraproctitis** is an acute purulent inflammation of pararectal tissue, characterized by the rapid development of the process. It is clinically manifested by rather

intense pain in the rectum or perineum, an increase in body temperature accompanied by chills, a feeling of malaise, weakness, headaches, insomnia, and loss of appetite. Extensive phlegmon of pararectal tissue leads to severe intoxication. Stool retention, tenesmus, and dysuric phenomena often appear. As pus accumulates, the pain intensifies, becomes twitching, pulsating. If the abscess is not opened in a timely manner, it breaks through into the adjacent cellular spaces, into the rectum, out through the skin of the perineum.

A breakthrough of an abscess into the rectum is a consequence of the melting of its wall with pus in pelviorectal paraproctitis. Formed communication of the cavity of the abscess with the lumen of the rectum (incomplete internal fistula). When pus breaks out (onto the skin of the perineum), an external fistula is formed. The pain subsides, the body temperature decreases, the general condition of the patient improves. A breakthrough of an abscess into the lumen of the rectum or outward very rarely leads to a complete recovery of the patient. A fistula of the rectum (**chronic paraproctitis**) is more often formed. The reason for the transition from acute to chronic paraproctitis is the presence of an internal opening leading from the rectum into the abscess cavity. With the formation of chronic paraproctitis, the internal opening of the fistula opens into the lumen of the rectum, the external opening on the skin of the perineum. Gas and feces enter the fistula from the rectum, which constantly maintains the inflammatory process. Recurrent paraproctitis is manifested by the presence of remissions, when a seemingly complete recovery of the patient occurs (pain disappears, body temperature normalizes, the wound heals), followed by new exacerbations.

**Subcutaneous paraproctitis** is the most common form of the disease (up to 50% of all patients with paraproctitis).

**Sciatic-rectal paraproctitis** occurs in 35-40% of patients.

**Submucous paraproctitis** is observed in 2-6% of patients with acute paraproctitis.

**Pelvic rectal (pelviorectal) paraproctitis** is the most severe form of the disease. It occurs in 2-7% of patients with acute paraproctitis.

**Retrorectal paraproctitis** is observed in 1.5-2.5% of all patients with paraproctitis.

Of special methods of investigation used sigmoidoscopy, which is informative when pelviorektalnom paraproctitis ones. Pay attention to hyperaemia and slight bleeding of the mucous membrane in ampoules, smoothing wrinkles and yn filtering wall, an inner opening in the breakout fistulous ulcer in the bowel lumen. Fistulography - an X-ray examination of rectal fistulas - is also a mandatory study. On the basis of fistulograms, one can judge the direction and branching of the fistulous tract, its length and width, the presence of cavities and leaks in the pararectal cellular spaces, as well as the localization of the internal opening of the fistula. Sigmoidoscopy is necessary to exclude or detect concomitant inflammatory or tumor lesions of the rectal mucosa, as well as high fistulas.

**Treatment is surgical.** Surgery for acute paraproctitis is in the incision and drainage of an abscess, infection elimination input gate. The operation is performed under general anesthesia. After introduction of the patient in anesthesia must install localization affected crypts (examination of the bowel wall by means of rivers Talnoe mirror after administration to the oral ulcer methylene blue solution with hydrogen peroxide). If the abscess breaks out through the skin, then its good drainage, as a rule, does not occur.

In subcutaneous abscess paraproctitis autopsied semilunar incision, purulent cavity well audit dissolved finger division webs and elimination of purulent Zateev Cove. A bulbous probe is passed through the cavity into the affected crypt and a section of the skin and mucous membrane that form the wall of the cavity together with the crypt is excised (**Gabriel's operation**).

With ishiorectal and pelviorectal paraproctitis, such a surgical intervention is impossible, since most of the external sphincter will be crossed. In such cases, the abscess is opened with a semilunar incision, the cavity is carefully examined with the opening of all purulent leaks, the wound is washed with hydrogen peroxide and loosely tamponed. To eliminate cryptitis, which led to the development of paraproctitis, in such cases, it is necessary to provide sphincter paresis. This can be achieved either by dosed posterior sphincterotomy (in this case, the affected crypt is also dissected), or by the introduction of a durant solution of novocaine into the sphincter (solution of the basic salt of novocaine in stone oil).

In some cases (if during the revision of the purulent cavity) a defect in the rectal wall (entrance gate of infection) is clearly defined, it is possible to use the ligature method. The lunar skin incision after opening the abscess is extended to the midline anteriorly or posteriorly to the rectum (depending on the location of the affected crypt). Further, the affected crypt is excised from the side of the rectum with an elliptical incision. A thick ligature is passed through the opened cavity and the excised crypt into the rectum and then outside and placed strictly along the midline in front or behind the anal canal and tightened. After 2-3 days, part of the sphincter fibers is cut with a ligature, and it is tightened again. This is repeated several times. This achieves a gradual intersection of the sphincter muscle fibers with the ligature, as a result of which in most patients it is possible to eliminate the development of the fistula without disturbing the sphincter closure function.

**Chronic paraproctitis (rectal fistulas)** occurs in 30-40% of all proctological patients.

It develops as a result of acute paraproctitis and is manifested by the presence of a rectal fistula. Reasons for the transition from acute to chronic paraproctitis:

- 1) late appeal of patients for medical care, when the abscess has already spontaneously opened,
- 2) incorrect surgical strategy in the acute period - the restriction of intervention without opening an abscess infection readjustment input gate.

The fistula can be complete or incomplete.

**The clinical picture** is associated with the presence of a fistula. The amount of purulent discharge from the fistula is different and depends on the volume of the cavity that it drains, as well as on the degree of inflammatory changes in it. With a wide fistulous course, gases and feces can escape through it. Periodic closure of the fistula leads to disruption of purulent drainage cavities, the accumulation of pus, about Stren paraproctitis. Such an alternation of exacerbations and remissions is often observed in chronic paraproctitis, the duration of remission can reach several years. Pain occurs only during periods of exacerbation of the disease, disappearing with a functioning fistula.

Fistulas of the rectum often lead to proctitis, proctosigmoiditis, maceration of the perineal skin. In some patients, the sphincter muscle fibers couple the rectum replaced tion cloth, making it rigid and leads to a narrowing of the anal canal, disruption closing function of the sphincter and resulting incontinence of faeces and gases (particularly liquid). Long-term rectal fistulas may become malignant. On examination, pay attention to the number of fistulas, rub the AEC, the nature and the amount of discharge of them, the presence of skin maceration. Already with palpation of the perianal region, it is often possible to determine the fistulous course. Digital examination of the rectum allows you to determine the tone of the sphincter of the rectum, identify the internal opening of the fistula and its size, establish the complexity of the fistula, its course and features. Additional information about the localization of the internal opening of the fistula, about the course of the fistula and its features, which is necessary for choosing the method of operation, is obtained by introducing methylene blue into the fistula, careful probing of the fistula, fistulography, anoscopy and sigmoidoscopy.

**Treatment:** conservative and surgical. Conservative - sitz baths after defecation, vaginal fistulas antiseptische Skim solutions, the introduction of fistula antibiotics, the use of micro-enemas with sea buckthorn oil, colloid silver. KONSER servative therapy rarely leads to complete recovery pain GOVERNMENTAL, however it is generally used only as a preparatory Tel'nykh stage before operation.

Surgical intervention is a radical treatment for rectal fistulas. Selection of surgical BME -interference at the rectal fistulas is carried out differently according to the type of fistula (its relation to the sphincter), the presence of inflammation in the tissue adrectal, burrowing pus, tissue condition in the area of the inner opening of the fistula.

## **RECTAL PROLAPSE**

Rectal prolapse is the protrusion of the intestine outside the anus, which is facilitated by weakness of the pelvic floor muscles (predisposing factor) and increased intra-abdominal pressure (producing factor). An increase in intra-abdominal pressure occurs with constipation,

diarrhea, hard physical labor, difficulty urinating, coughing. In addition, rectal prolapse may contribute to hemorrhoids and chronic inflammation (proctitis, Proctosigmoiditis, ulcerative colitis).

Depending on the severity of the process, the following four degrees of prolapse are distinguished: 1) the rectum falls out only during the act of defecation and adjusts independently; 2) the prolapse occurs during the act of defecation, manual assistance is required for the reduction; 3) the rectum falls out with any increase in intra-abdominal pressure (lifting weights, coughing, straining); 4) loss occurs while walking. Prolapse of the rectum with the preserved tone of the sphincter of the anus may be accompanied by infringement of the prolapsed section of the intestine with impaired blood circulation in it.

**Clinic.** A gradual development of the disease is characteristic. In the initial stages, during the act of defecation, only the mucous membrane falls out, which easily adjusts on its own. Then at each subsequent defecation occurs loss greater or a shorter segment of intestine, which the patient must reduce with a hand. In the later stages of the disease, the intestine falls out not only during defecation, but even when the patient's body is upright. In this case, the reduction of the intestine to the patient does not give a stable result - it immediately falls out again. In such patients originates an insufficiency of the sphincter of the anus.

There are three degrees of **sphincter insufficiency**: I degree - gas incontinence; II degree - incontinence of gases and liquid feces; III degree - incontinence of dense feces.

Frequent loss leads to traumatization of rectal mucosa, more often inflammation, gut wall of the blood flow easily changes often observed mucosal ulceration.

Dropped rectum may be complicated by necrosis or ulcer perforation wall, in cases where the tone of the sphincter is retained and the precipitated portion is restrained. This threatens the development of diffuse peritonitis, acute intestinal obstruction, paraproctitis. With this complication, the prolapsed section of the intestine should be carefully adjusted under anesthesia. In case of necrosis of the intestine operate operation overlay unnatural anus or abdominal-perineal resection of the rectum superimposed sigmoidostoma.

**Diagnostics** is based on the patient's complaints and the data of his objective research. Straining patient especially in the squatting position, falls mucosa or all layers of the wall of a cone of intestine. At manual exploration of rectal sphincter tone estimate. In addition, irrigoscopy and sigmoidoscopy are performed.

**Treatment.** In children, the cure for rectal prolapse is usually conservative, aimed at combating constipation, diarrhea, and cough. In adults, in the initial stage of the disease conservative treatment it gives much worse results, it is necessary to resort to surgical treatment. The most effective rectopexy operation according to Kummel - Zerenin. The essence of this operation is to fix the wall of the rectum to the anterior longitudinal ligament of the spine in the sacral vertebrae. When a rectal prolapse is combined with an anal sphincter insufficiency, this operation is supplemented with one or another intervention aimed at strengthening the muscles of the pelvic floor (sphincterolevatoroplasty). With a small Dropped Denia rectum, as well as in patients with an increased risk of operation rectopexy intraperitoneal way to perform the operation Thiersch subcutaneous implantation under the skin around the anus silver wire. Sometimes, instead of a wire, a flap of the fascia lata of the thigh, a silk thread, a narrow de-epithelialized skin flap is used.

## RECTAL CANCER

Colorectal cancer accounts for 15% of all newly diagnosed malignant tumors of all localizations, and 30% of this number is rectal cancer. Every year in the United States there are about 150 thousand new cases of colorectal cancer and it ranks 2-3rd. Colorectal cancer in average prevalence at 10 per 100 000 population. Mostly people aged 50-60 are affected, men and women equally often.

In recent years there has been a significant increase in the incidence of rectal cancer, and this trend continues today.



As with most sites of malignant tumors, the exact causes of rectal cancer are not exactly known. The nature of the diet is important, which affects the speed of movement of feces, their volume, content, bacterial flora and the frequency of stools. Special studies have shown that the "Western" type of diet, which is dominated by a large amount of fresh fruits and high-calorie fat, easily digestible foods, leads to a slowdown in the movement of contents through the intestines. In this case, substances that cause a tumor, which can be included in the composition of food or produced by the intestine, act on the rectal wall for a long time. The resulting dysbacteriosis and liver dysfunction often accompany rectal cancer.

Other factors contributing to the development of rectal cancer include decreased physical activity that affects bowel motility and constipation associated with chronic bowel disease.

By precancerous polyps diseases include, nespe cific ulcerative colitis, Crohn's disease, chronic abscess. Some significance in the occurrence of colorectal cancer when given the nature of food intake (easily digestible food contains zhaschaya little slag and a large amount of chemicals used for the preservation of products).

By the type of growth, rectal cancer is exophytic (20%), endophytic (30%) and mixed (50%). Exophytic tumors have clear contours and grow into the rectal lumen. These include: polypoid cancer (tumor locat ditsya on a wide or a narrow base, speaking into the lumen kish ki) blyashkovidny (tumor on a broad basis, with the flat on surface slightly protrudes into the lumen), villous-papillary carcinoma (nodular tumor lobular buildings).

It is customary to distinguish four stages of rectal cancer:

Stage I - a small mobile tumor (less than 2 cm in diameter) that does not invade the intestinal wall and does not spread deeper than the submucosal layer, there are no metastases.

Stage II - the tumor occupies no more than a semicircle of the intestine, all layers of its wall do not grow (but grows into the muscle layer), there are no metastases.

Stage II b - a tumor of the same size, the intestinal wall does not grow, there are metastases to regional lymph nodes.

Stage III a - the tumor occupies more than a semicircle of the intestine, grows into its walls, can be fused with surrounding organs and tissues.

Stage III b - the same with the presence of multiple metastases to regional lymph nodes.

Stage IV - an extensive immobile tumor that grows into the pelvic organs and surrounding tissues with multiple metastases to regional lymph nodes or a mobile tumor in the presence of distant metastases.

**Treatment:** Surgery for rectal cancer is the treatment of choice. The choice of the nature of the surgical intervention depends on the location of the tumor, the presence of complications or metastases, the general condition of the patient. In the absence of complications (perforation or obstruction) and distant metastases, a radical operation is performed. Surgery can be complemented by chemotherapy and radiation therapy.

**Combined treatment** straight ki cancer shki. The use of preoperative radiotherapy is highly present time is considered appropriate in locally advanced rectal cancer. In this case, it allows to increase interoperability and improve the results of surgical treatment, povy 5-year survival rate of patients with Shai. The prognosis 5-year survival after radical surgery for rectal cancer is about 40-50%. It depends, first of all, on the stage of the disease, the histological structure and the form of tumor growth. The prognosis is better if the operation is performed in the I-II stages of the disease with an exophytic tumor, especially if it has a high degree of differentiation. The prognosis is worse in young patients, especially with anal cancer.

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## Topic number 16 : Acute intestinal obstruction

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** The problem of diagnosis and treatment of AIO remains relevant for many decades. At any level of development of medicine, acute intestinal obstruction was a disease that created "extremely difficult diagnostic and tactical situations, and sometimes - dramatic situations . "

The incidence of diseases of acute intestinal obstruction is relatively low and, according to various sources, ranges from **4 to 20** cases per **100,000** population. An increase in the incidence of acute intestinal obstruction, mainly adhesions and obstructive forms, complicating colon cancer is predicted. This is associated with an increase in the volume of abdominal surgeries and an increase in the incidence of colon cancer. Among all urgent surgical diseases, ileus accounts for **1.2 to 9.4%** .

**The purpose of the lecture:** **To** acquaint students with acute intestinal obstruction, etiology and pathogenesis, diagnostic methods and clinical symptoms. To acquaint with various methods of surgical treatment of this contingent of patients .

**Educational goals:** To teach students the correct communication with patients, to acquire the skills of establishing a diagnosis. To acquaint students with the methods of adhering to medical ethics and human standards when communicating with this contingent of patients.

**Lecture objectives:** **To** acquaint students with the manifestations of acute intestinal obstruction. To acquaint students with the etiology, pathogenesis of AIO, its classification, diagnosis and differential diagnosis. To acquaint the principles of pre- and postoperative management of patients operated on for AIO.

### **Questions to be analyzed, indicating the time allotted to the question:**

1. Definition, urgency of the problem - 5 min.
2. Classification - 10 min
3. Clinic, diagnostics, diff. diagnostics - 30 min.
4. Principles of conservative treatment of AIO - 15 min.
5. Principles of surgical treatment of AIO - 20 min.
6. Complications and mortality - 10 min.

### **Acute intestinal obstruction**

Acute intestinal obstruction (*acute intestinal obstruction, ileus, acute ileus*) is a condition that develops when **the passage of contents through the intestinal tube stops** . The reasons leading to this are different. We can say that intestinal obstruction is not an independent disease, but complicates various acute and chronic diseases of the abdominal organs. But regardless of the mechanism of impaired intestinal patency, the patient develops a typical complex of severe pathological changes, manifested by characteristic symptoms. It is the universality of pathogenesis and clinic, and, accordingly, unified approaches in diagnosis and treatment that require consideration of such a polyetiological condition as acute intestinal obstruction as an independent nosological unit.

The problem of diagnosing and treating AIO has remained relevant for many decades. At any level of development of medicine, acute intestinal obstruction was a disease that created "*extremely difficult in diagnostic and tactical terms, and sometimes - dramatic situations* . "

The incidence of diseases of acute intestinal obstruction is relatively small and, according to various sources, ranges from **4 to 20** cases per **100,000** population. An increase in the incidence of acute intestinal obstruction, mainly adhesions and obstructive forms, complicating colon cancer is predicted. This is associated with an increase in the volume of abdominal surgeries and an increase in the incidence of colon cancer. Among all urgent surgical diseases, ileus accounts for **1.2 to 9.4%**. At the same time, acute intestinal obstruction retains a leading position as the cause of death in patients with "acute abdomen". Mortality in acute respiratory failure remains extremely high, in some groups of patients having not undergone changes since the 50s of our century. On average, mortality ranges from **4.3 to 18.9%**, reaching **36%** in patients over 60 years old, and **82%** among patients with early postoperative intestinal obstruction. This high mortality is partly due to the late initiation of treatment. One of the reasons for the delay in the provision of care is the delayed diagnosis of the disease. According to our data, the frequency of diagnostic errors is about **54%** at the prehospital stage and **18%** at the hospital.

The ideas about the pathogenesis of intestinal obstruction were formed in the struggle between two theories: **reflex** and **intoxication**. **Braun** and **Borutau** are called the founders of the reflex theory. The essence of their ideas about pathogenesis was as follows: ileus is not a local process limited only to the abdominal cavity. The reaction of the intestine to the cessation of the passage of food entails severe reflex damage to the whole organism. A gradual drop in hemodynamics with obstructive intestinal obstruction, for example, is caused by reflex suppression of the activity of the vasomotor centers of the brain due to a decrease in the volume of circulating blood. The rapid progression of the clinic with strangulation forms of ileus was associated with a reflex effect on the central nervous system. Intoxication was considered secondary, joining at the stage of intestinal gangrene. The intoxication theory was proposed by **Amussat** (France), who in **1838** (according to some sources in 1839) suggested that with ileus, self-poisoning of the body develops as a result of the absorption of toxins. Two ways of getting toxins were determined: absorption by the intestine above the site of obstruction and absorption by the peritoneum from the abundant effusion in the abdominal cavity resulting from changes in the intestinal wall. Numerous supporters of this theory (for example, such well-known surgeons as **Kocher** in Germany and **Spasokukotsky** in Russia) tried to isolate a toxin that determines the severity of the disease. Protein breakdown products, bacterial toxins, digestive enzyme breakdown products, etc. have been suggested as toxic substances.

### **Etiology and classification of acute intestinal obstruction**

Among the etiological factors of acute intestinal obstruction, it is customary to distinguish **predisposing** and **producing ones**.

**The predisposing** factors create the basis for the subsequent development of acute intestinal obstruction. They can be **congenital** and **acquired**.

By **birth** are all sorts of peculiarities and anomalies in the anatomical structure of the gut and intestinal wall: **Elongation colon sections** (megacolon, dolichosigma), **intestinal malrotation**, **congenital stenosis and intestinal occlusion** (eg, achalasia of the rectum), **malformations of the neuromuscular gut apparatus** (aganglionic colon or Hirschsprung's disease).

The **acquired** factors include the adhesion process in the abdominal cavity, which develops after operations and inflammatory diseases of the abdominal organs, acquired **external and internal hernias**, the presence of **neoplasms**, obturation of the lumen with **gallstones, phytobezoars, fecal stones, helminths**. The predisposing role of **irregular, unbalanced and insufficient nutrition** in the development of a predisposition to ileus has been proven.

**Dynamic** (functional) intestinal obstruction are such forms of ileus, in which the cessation of the passage of contents through the intestine occurs **due to a violation of its motor function**. The mechanisms of this disorder are diverse, since the regulation of motor skills is carried out due to a complex complex of neurohumoral effects. The main reasons for this form of ileus are given in the table. Dynamic intestinal obstruction can be spastic and paralytic.

**Strangulated** AIO, which occurs in **15-40% of** cases, differs from obstructive primarily in that, in addition to *compression of the* intestine (from the outside), the mesentery is also compressed, which leads to **impaired blood circulation in the segment of the intestine**. With this form of obstruction, destructive changes in the restrained loop grow faster, endotoxemia and peritonitis develop faster. The strangulation type of intestinal obstruction includes **volvulus, nodular formation and entrapment of the intestine in the external and internal hernial orifices**.

**Mixed** forms of OKN have signs of both obstructive and strangulation varieties of ileus. A striking example of mixed AIOs is intussusception, which occurs predominantly in children. With invagination, a section of the intestine, together with the mesentery, is introduced into the adjacent section of the intestine, and the lumen of the intestine is obstructed by its own wall, and compression of the marginal vessels leads to acute ischemia of the invaginated intestine.

**Adhesive** intestinal obstruction occupies a special place among other forms of ileus. Currently, this is the most common (in **78-86% of** cases) type of acute intestinal obstruction.

### **Clinical picture and diagnostic program for acute intestinal obstruction**

When examining a patient with suspected **acute intestinal obstruction**, it is necessary to get answers to the following questions:

- Does the patient have intestinal obstruction?
- What character is it (mechanical or dynamic)?
- What is the form of mechanical obstruction (obstructive or strangulated)?
- How pronounced are the violations of the water-electrolyte balance, acid-base state and endotoxemia?

The result of the diagnostic search will be the substantiation of treatment tactics, taking into account the peculiarities of the pathogenesis of the disease in a particular patient.

The first step in the diagnosis of AIO is the **collection of anamnesis**. In this case, it is necessary to find out whether the patient had **predisposing** (congenital anomalies in the development of the gastrointestinal tract, previous operations, signs of neoplasms of the abdominal cavity, etc.) and **producing** (as a rule, physical or food stress) AIO factors. It is required to carefully assess the **timing** and **nature of the onset of the** disease, the features of the **pain syndrome**, the development of the disease before the examination.

The clinical picture fully reflects the **stages of the pathogenesis of AIO**, the distinct staging of which makes it possible to distinguish **three phases of the** course of the disease.

The first, initial phase, or the "**ileus cry**" phase, corresponds to the first stage of the pathogenesis of intestinal obstruction. Periodically developing peristaltic waves form typical **cramping pains**, alternating with light intervals. Pains during labor are sharp, extremely intense. The development of shock-like conditions against the background of these pains is described. There is some difference in the nature of pain in obstructive and strangulated forms of ileus. **With strangulation, contractions are almost constant or severe aching pains are noted, periodically exacerbated by a contraction. With obstructive obstruction after the end of the contraction, the pain usually disappears almost completely, the patient's well-being improves significantly**. In the early stages of such an OKN, "light" gaps are long enough, which can cause diagnostic errors. A feature of the pain syndrome in any form of obstruction is the **provoking effect of palpation of the** abdomen, causing contractions. The intestine reacts to mechanical stress by contraction. Deep palpation of the abdomen provokes a peristaltic wave, and the patient develops a new painful attack.

**Stool retention** is not a permanent sign of acute intestinal obstruction and occurs only in **60-70% of** patients. At the same time, more than half of the cases, against the background of stool **retention, the discharge of gases persists**. A single (and sometimes repeated) stool is possible with small bowel obstruction, feces are formed from intestinal contents remaining in the distal parts of the intestine in relation to the level of obstruction.

Over time, the "light" intervals are shortened, the periods of contractions become longer. Then, due to the increase in intestinal paresis, the cramping pains are replaced by

constant, dull, aching pains, as a rule, without a distinct localization. Reflex vomiting stops. The second stage of the AIO clinic begins - the **stage of intoxication**, which is sometimes called the **phase of imaginary well-being** due to the cessation of pain with the general condition unchanged at first.

In the beginning, the patient really feels somewhat better, but the picture soon changes. **Bloating** is progressing. In the later stages of the intoxication phase, **vomiting** appears again. However, now its cause is extreme hyperextension of the proximal small intestine with putrefactive contents. Fetid, fecal-like, vomit is called "**fecal vomit**". The appearance of this symptom in a patient is an extremely unfavorable prognostic criterion, since it indicates a significant overstretching and stagnant changes in the most proximal parts of the small intestine. At the second stage of the course of AIO, nonspecific signs of endotoxemia and hypovolemia are clearly manifested.

The third phase of AIO is characterized by the development of diffuse peritonitis in the patient.

The terms of development and duration of the named phases of the AIC flow given by some authors are extremely conditional. There are forms of ileus, in which changes in the intestine grow gradually, within several days (*subacute forms of adhesive or colonic obstruction*), and the manifestation of the clinic begins, one might say, immediately from the stage of intoxication. In strangulated forms of ileus, the presence of a necrotic intestine will quickly lead to the development of peritonitis, while in obstructive forms of AIO, the increasing endotoxemia will be fatal for the patient even in the absence of peritoneal phenomena.

Bloating is a very common symptom that occurs in **79-86 % of cases**. In about a **third of cases**, flatulence appears already in the first hours of the disease. In obstructive and strangulated forms of ileus, swelling is more often localized in the area of the obstacle (in about **60% of patients**) and sometimes makes it possible to get an idea of the level of obstruction. For example, bloating of the cecum when the cause of the obstruction is located in the more distal parts of the intestine has been described by **Anschutz** and **Boweret**. A clear connection between the level of obstruction and the nature of flatulence is more characteristic of large bowel obstruction, which is explained by the limited mobility of the colon. For adhesive obstruction, proceeding without strangulation, for small bowel obstruction and for dynamic forms of ileus, **general abdominal distention**, sometimes of very significant size, is more characteristic.

Along with flatulence, an important evidence in favor of acute intestinal obstruction will be **visible intestinal peristalsis** - a **symptom of Schlang**, both independent and induced by palpation or tapping on the anterior abdominal wall.

Visible abdominal asymmetry, visible peristalsis, palpable swollen bowel loops, and high tympanitis on percussion are called **Wal syndrome**. The participation of the abdomen in breathing persists for a long time, until the development of excessive flatulence or peritonitis.

Palpation of the abdomen in a patient with AIO should be performed as carefully as possible. Rough, harsh actions can not only cause unnecessary suffering to the patient (in response to palpation, painful contractions may develop), but also provoke a diastatic rupture of the adductor or strangulated intestine, which will significantly worsen the patient's condition and worsen the prognosis. On palpation, it is necessary to assess the **consistency of the abdominal wall, areas of local pain, tension of the abdominal muscles, symptoms of peritoneal irritation**. It is important not to confuse the **resistance of the** anterior abdominal wall over the swollen bowel loops and its **tension** during irritation of the peritoneum. Sometimes palpation is possible to determine the tumor, infiltration, intestinal node or intussusception.

The study of peritoneal symptoms must also be carried out with great care. Intense palpation, abrupt withdrawal of the hand will cause a concussion of the overstretched sections of the intestine, which will be painful for the patient. Such soreness will not indicate irritation of the peritoneum. To obtain reliable results, the **Blumberg-Shchetkin symptom** should be checked with superficial palpation.

An important sign assessed by palpation is the "**splash noise**" described by **I.P. Sklyarov (1923)**. This symptom is detected with a slight lateral concussion of the abdominal wall, it can be localized or defined throughout the abdomen. The appearance of this phenomenon indicates the presence of an overstretched parietic loop filled with liquid and gas. **Mathieu** described the appearance of a splash noise on rapid percussion of the supra-umbilical region. Some authors consider the appearance of a splash noise a sign of neglect of the ileus and, if it is found, they consider an emergency operation indicated.

With abdominal percussion with AIO, the uneven distribution of tympanitis is determined, characterized by a higher sound with a metallic timbre over the swollen areas. When percussion with a plessimeter, simultaneously with auscultation, you can identify the **symptom of Kivul (Kiwull, 1902)**, a percussion sound with a clear metallic tinge.

Sound phenomena in AIO are explained by the resonance of an overstretched and tense intestinal wall. Dullness of percussion sound can be determined over tumor and inflammatory infiltrates, as well as in sloping places of the abdomen - areas of accumulation of peritoneal exudate, which is more typical for strangulated forms of obstruction.

The auscultatory picture in ileus is rather poor and is characterized mainly by an increase in peristaltic noise in the ileus cry phase and their subside with the development of obstruction with the outcome in "**dead silence**" during the formation of intestinal paresis. With significant bloating, it is possible to determine the **Lotheissen symptom** - listening through the abdominal wall of breathing sounds and heart sounds, which are not normally carried out in this way. This phenomenon is also known as **Bayley's symptom**. With auscultation, it is also possible to detect the noise of a falling drop (**symptom of S.I. Spasokukotsky**).

A mandatory step in the examination of any patient admitted on an emergency basis to the surgical department, and especially a patient with suspected acute intestinal obstruction, is a **digital examination of the rectum**. In this case, sometimes it is possible to find the cause of the obstruction - a tumor of the rectum, fecal obstruction. In addition, this study can determine the gaping of the anal sphincter and the balloon-shaped empty ampulla of the rectum, which is known as a **symptom of the Obukhov hospital, a symptom of II Grekov (1928)** or a **symptom of Hochenegg (Hochenegg)**. In intussusceptions, relaxation of the anal sphincter is known as **Hirschprung's symptom**.

X-ray examination is mandatory for all patients with acute intestinal obstruction. At the first stage, a **survey radiography of the abdominal organs** is performed. The picture is taken **in a standing position in frontal projection**. In the case of a serious condition of the patient, when he cannot be put on his feet, for the study, it is permissible to carry out the study **in lateroposition (lying on the side)**. It is not recommended to examine the patient in a seated position, since only the upper half of the abdominal cavity is usually visible. The presence of horizontal fluid levels (**Kloyber cups**) and contoured **Kerkring folds (positive Casey symptom or "fish skeleton")** on the radiograph is an indisputable radiological sign of acute intestinal obstruction. In the earlier stages of intestinal obstruction, X-ray can determine the accumulation of gas (without a liquid level) in the loop of the intestine, according to the clinically determined **Valya symptom** - the **Gintze symptom (Hintze)**. The correspondence of the stretched and tense bowel loop to the zone of gas accumulation in the form of an arch is indicated by the **Stierlin symptom**.

Currently, **ultrasound methods** are effectively used in the diagnosis of AIO. Ultrasonography reveals the so-called **intraluminal fluid deposition syndrome**, which is defined in all patients with ileus. The liquid content allows visualizing the intestine, measuring its diameter, wall thickness, tracing the folds of the mucous membrane, and assessing the nature of peristalsis. Doppler ultrasound makes it possible to qualitatively and quantitatively assess the peristaltic activity of the intestine, to distinguish true peristalsis from the chaotic contractions of individual areas.

Highly informative computed tomography in the diagnosis of intestinal obstruction. CT allows you to reliably establish the presence, level and severity of the disease.

Clinical manifestations of the **syndrome of endogenous intoxication** and **dehydration** are neuropsychic disorders (disturbances of consciousness of

various depths - from somnolence to stupor and coma, delirious states with hallucinosis and psychomotor agitation), tachycardia (and a decrease in blood pressure in the terminal phases), dry skin, especially in the groin folds and armpits. However, these signs develop with a significant progression of the named syndromes and do not allow quantitative assessment of water-electrolyte losses and the degree of intoxication. Diagnostics of the degree of dehydration is complicated by the fact that when determining water losses in AIO, one cannot focus on the change in the patient's weight, since the fluid for the most part remains in the body, sequestered in the intestinal lumen, the so-called "**third space**" (normally, water is distributed in the intracellular and extracellular spaces) ...

The first indication of **water loss**, even in the absence of clinical signs, is a **clinical blood test**. Exceeding the norm for hemoglobin and erythrocytosis, and especially high hematocrit (Ht), will reliably testify in favor of fluid loss. To quantify the deficiency of the BCC, you can use, for example, the formula proposed by **Randall** (according to Yu.M. Dederer, 1971) or the formula of **L.G. Zagorodsky** (1973).

The first stage in the diagnosis of **endotoxiosis** will also be the assessment of the **clinical analysis of blood, its leukocyte component**. An obligatory stage in the diagnosis of endotoxiosis should be the **assessment of the state of the organs of the functional detoxification system**, first of all, the liver and kidneys. It is also carried out on the basis of a study of laboratory parameters: creatinine, urea, bilirubin, transaminases and other markers of cytolysis. Our own studies, carried out according to the described scheme, allow us to state that endotoxiosis is present in all patients with acute intestinal obstruction, and in the vast majority of patients the functional detoxification system at the time of admission is consistent. If you focus only on clinical symptoms, then you can be significantly late with the start of specific detoxification treatment and worsen the prognosis.

### **Differential diagnosis of acute intestinal obstruction.**

It is necessary to carry out differential diagnosis between AIO and diseases characterized by similar clinical manifestations, as well as diseases and conditions occurring with the phenomena of dynamic intestinal obstruction. First of all, symptoms similar to those of acute intestinal obstruction are observed in other diseases of the "acute abdomen" group.

**Acute appendicitis** rarely manifests with cramping pains, although pains are sometimes accompanied by nausea and vomiting. However, the localization of pain and soreness, characteristic symptoms and the presence of fever and leukocytosis already in the early stages of the disease make it possible to distinguish between these two diseases.

**Acute pancreatitis** can resemble ileus with **nausea and indomitable vomiting, and bloating**. The differential sign is the **nature of pain, constant, aching, girdle** in acute pancreatitis, increased **urine diastase and blood amylase, ultrasound picture characteristic of pancreatitis**.

Nausea and persistent vomiting occur in **acute cholecystitis**, however, the **typical localization of pain and soreness, palpation of the gallbladder bottom and ultrasound results** will reliably diagnose this disease.

The clinic of **perforated gastroduodenal ulcers** is characterized by an acute onset, the pain syndrome is extremely intense. But the pains are **permanent**, accompanied by a **board-like tension of the** anterior abdominal wall and clinical and radiological signs of the presence of **free gas** in the abdominal cavity.

Difficulties can be caused by the differential diagnosis between **AIO** and **diffuse peritonitis**. This is due to the fact that one of the pathogenetic links of peritonitis is dynamic intestinal obstruction. Nausea, vomiting, bloating, diffuse aching pains, stool and gas retention are possible with diffuse peritonitis. A **thorough history taking** will help in the diagnosis, since these symptoms develop after some time from the onset of the disease. The existing **peritoneal symptoms** and **clinical and anamnestic picture**, indicating the source of peritonitis, will allow a reliable diagnosis.

### **Treatment of acute intestinal obstruction**

**A patient with suspected acute intestinal obstruction should be examined, observed and treated only in a surgical hospital.** If it is suspected that the patient has ileus, all measures should be taken for emergency hospitalization. Care at the prehospital stage is reduced to symptomatic therapy, which may be necessary in severe forms of endotoxemia and dehydration to compensate for the functions of vital systems. **As in other cases of "acute abdomen" use of narcotic analgesics is unacceptable.**

In the emergency room, the patient is examined and in the case of a diagnosis of acute mechanical intestinal obstruction, the question of treatment tactics is decided.

About 25% of patients need urgent surgical treatment. Emergency, that is, performed within 2 hours from the moment of admission, the operation is **indicated for AIO in the following cases:**

- With obstruction with signs of peritonitis;
- In case of obstruction with clinical signs of intoxication and dehydration (that is, during the second phase of the course of AIO);
- In cases when, on the basis of the clinical picture, there is an impression of the presence of a strangulated form of AIO.

After the preparation of the operating field and the **obligatory setting of the nasogastric tube** to evacuate the contents from the stomach (to reduce the likelihood of complications during induction of anesthesia and intubation), the patient is sent to the operating room. Sometimes the severity of the patient's condition requires additional preoperative preparation - symptomatic therapy. In extremely severe cases, it is advisable to carry out it **directly on the operating table**. It is necessary to catheterize the central veins to increase the rate and volume of the infusion and to control the central venous pressure.

If an emergency operation is not indicated, as well as with an unclear diagnosis, the patient should be admitted to the surgical department for further examination, follow-up and treatment. In about 40% of patients, conservative measures **allow the obstruction to be resolved**.

Conservative treatment of AIO should include the following elements:

- Decompression of the gastrointestinal tract;
- Substitution therapy;
- Treatment of enteric insufficiency;
- Endotoxemia treatment.

If conservative treatment does not give an effect within 1.5-2 hours, the patient should be operated on. The therapy performed in this case becomes an intensive preoperative preparation.

The operation is performed under **general anesthesia**, with endotracheal anesthesia being the preferred method. If the patient's condition allows epidural anesthesia to be performed, then this technique should be used, and the catheter in the epidural space should be left after the operation for prolonged anesthesia and the fight against intestinal paresis.

The volume of surgery for AIO depends on the form of obstruction, but there are general patterns. When operating on a patient with ileus, you must solve the following problems:

- Eliminate obstruction;
- Remove necrotic areas of the intestine;
- Empty the adductor gut;
- If necessary, provide extended bowel decompression;
- Sanitize and drain the abdominal cavity with peritonitis.

The main goal of the operation for AIO is to **eliminate the obstruction**. In this case, the volume of the operation in each case is selected based on the patient's condition and the nature of the disease that caused the obstruction. In case of adhesive AOI, the elimination of obstruction, as a rule, will consist in dissection of the adhesions. In the case of twists and nodules, to eliminate strangulation, it is necessary to unfold the twisted bowel loops. Obstructive obstruction caused by a foreign body, phytobezoar, gallstone, etc. may require an enterotomy to remove the obstructing object. The choice of tactics for colonic obstruction, especially of a tumor nature, is more difficult. The general rule is as follows:



the more severe the patient's condition, the less the allowable volume of the operation. For example, in acute obstructive bowel obstruction, tumor-induced sigmoid colon, bowel resection acceptable performance according to the method **Hartmann** (the resected intestine within 30 to 40 cm. Proximally and 15-20 cm. Distally tumors). If the obstruction is several days old (taking into account the existing severe electrolyte losses, endotoxemia) or even at earlier stages of AIO, but when the patient has severe concomitant diseases, one should confine himself to a **double-barreled colostomy**, and perform a radical operation after resolving the obstruction. **The imposition of primary colonic anastomoses in the conditions of AHO is unacceptable.**

The indication for bowel resection in AIO is usually necrosis. Colon vitality is assessed **clinically** based on the following symptoms:

- Intestine color. A bluish, dark purple or black coloration of the intestinal wall indicates deep and, as a rule, irreversible ischemic changes in the intestine.
- The condition of the serous membrane of the intestine. Normally, the peritoneum covering the intestine is thin and shiny. With intestinal necrosis, it becomes edematous, dull, dull.
- Peristalsis state. The ischemic bowel does not contract. Palpation and tapping do not initiate a peristaltic wave.
- The pulsation of the mesenteric arteries, distinct normally, is absent in vascular thrombosis, which develops with prolonged strangulation.

In a number of cases, when strangulation was short-lived, and not all of these signs are expressed, it is advisable to take **measures to restore blood circulation in the intestine**. To do this, the intestine is warmed by wrapping it with a napkin dipped in warm saline solution, a solution of novocaine (0.25% - 80-100 ml) is injected into the mesentery root. **The appearance of a pink color, peristalsis and a distinct pulsation of the mesenteric arteries indicates the restoration of blood circulation in the intestinal wall. All doubts about the viability of the intestine should be unambiguously interpreted in favor of resection.** Unfortunately, there is currently no generally accepted method for objective diagnosis of intestinal viability.

Sometimes, with adhesive intestinal obstruction, the intestine is **deformed by cicatricial adhesions** to such an extent that its isolation is impossible or dangerous. In such situations, it is also **necessary to resort to resection of cicatricial changes in the intestine**.

**Emptying the adducting sections of the intestine** ensures decompression of the intestine, intraoperative elimination of toxic substances from its lumen (detoxification effect) and improves the conditions for manipulations - resections, bowel suturing, anastomoses. It is indicated in cases where the **intestine is significantly distended by liquid and gas**. It is preferable to evacuate the contents of the adductor loop before opening its lumen. The optimal variant of such decompression is **nasointestinal drainage of the small intestine according to Vangenshtin**. A long probe, passed through the nose into the small intestine, drains it all over. After removal of intestinal contents, the probe can be left for extended decompression.

Sometimes decompression of the intestine without opening its lumen is impossible. In these cases, an enterotomy opening is applied and the contents of the intestine are evacuated using an electric suction. With this manipulation, it is necessary to carefully delimit the enterotomy opening from the abdominal cavity in order to prevent infection.

Prolonged decompression of the gastrointestinal tract is indicated for **adhesive obstruction with traumatization of the intestine during its isolation from adhesions, with small bowel obstruction with pronounced symptoms of hyperextension of the intestinal wall, its edema, venous stasis and lymphostasis in it (especially if it is necessary to impose anastomoses in such conditions), and with forms of colon obstruction, when the small intestine is involved in paralytic changes**.

The main tasks of extended decompression are:

- Removal of toxic contents from the intestinal lumen;
- Intra-intestinal detoxification therapy;
- Impact on the intestinal mucosa to restore its barrier and functional viability;
- Early enteral nutrition of the patient.

There are 5 main types of small bowel drainage.

Transnasal drainage of the small intestine throughout. This method is often called by the name of **Wangensteen** or **T. Miller and W. Abbot**, although there is evidence that the pioneers of transnasal intestinal intubation with the Abbott-Miller probe (1934) during the operation were **GASmith** (1956) and **JCTurner** (1958). This method of decompression is the most preferable due to its minimal invasiveness. The probe is passed into the small intestine during surgery and is used for both intraoperative and extended decompression of the small intestine. The disadvantage of this method is the violation of nasal breathing, which can lead to a deterioration in patients with chronic lung diseases or provoke the development of pneumonia.

Method proposed by **JM Ferris and GKSmith** in 1956 . and described in detail in the domestic literature by **Yu.M. Dederer** (1962), intubation of the small intestine through a gastrostomy tube is devoid of this drawback and is indicated in patients in whom the passage of the probe through the nose for some reason is impossible or the violation of nasal breathing due to the probe increases the risk of postoperative pulmonary complications.

Drainage of the small intestine through an enterostomy, for example, the method of **I.D. Zhitnyuk**, which was widely used in emergency surgery before the advent of commercially available probes for nasogastric intubation. It involves retrograde drainage of the small intestine through a suspended ileostomy. (There is a method of antegrade drainage through a **jejunostomy** according to **JW Baker** (1959), separate drainage of the proximal and distal parts of the small intestine through a suspended enterostomy according to **White** (1949) and their numerous modifications). These methods seem to be the least preferable due to possible complications from the enterostomy, the danger of the formation of a small bowel fistula at the site of the enterostomy, etc.

Retrograde drainage of the small intestine through a microcecostomy ( **G. Sheide**, 1965) can be used if antegrade intubation is impossible. Perhaps the only drawback of the method is the difficulty of passing the probe through the Bauhinia flap and dysfunction of the ileocecal valve. After removal of the probe, the cecostomy usually heals on its own. A variant of the previous method is proposed by **I.S. Mgaloblishvili** (1959) method of drainage of the small intestine through the appendicostomy.

Transrectal small bowel drainage is used almost exclusively in pediatric surgery, although it has been used successfully in adults.

Numerous combined methods for drainage of the small intestine have been proposed, including elements of both closed (not associated with opening the lumen of the stomach or intestine) and open techniques.

The probe from the small intestine is usually removed *4-5 days* after the operation. In case of adhesive obstruction caused by an extensive adhesive process, it is recommended to extend the decompression up to *7 days*, since the probe in this case plays the role of a frame, preventing the formation of new stenosing adhesions.

Treatment of **dynamic forms of** acute intestinal obstruction is based on identifying the cause of functional ileus and eliminating it. The tasks to be solved when planning the treatment of dynamic intestinal obstruction absolutely correspond to the tasks of postoperative management of a patient with mechanical AIO. In most cases, conservative drainage (nasogastric or enteral - using endoscopy), antispasmodic, antibacterial, infusion, detoxification therapy give good results. In some cases, with the ineffectiveness of conservative treatment of dynamic intestinal obstruction, surgical treatment becomes necessary, the main task of which is to drain the small intestine. Postoperative management is entirely consistent with that in the mechanical forms of AIO.

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## **Topic number 17 : Acute Peritonitis**

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Acute peritonitis is inflammation of the visceral and parietal peritoneum, which is accompanied by severe general symptoms of the body's disease and, within a short time, leads to serious, often irreversible damage to vital organs and systems. This is one of the most severe complications of times personal diseases and injuries of the abdomen.

Despite the success of surgical techniques, cardiac and antibiotic therapy, the use of anesthesia techniques, the ability to correct the function of vital organs is new, the problem of treatment of purulent peritonitis attracts attention of surgeons around the world. The progressive development of suppurative process in a closed anatomically complex abdominal cavity, the rapid development of intoxication atony ki shechnika and resulting hemodynamic Serious disorders and respiratory-ki dramatically disturbed metabolism, extremely difficult for purulent peritonitis.

**The purpose of the lecture: to** acquaint students with the diseases leading to peritonitis, the peculiarities of the clinical course of various stages, pay special attention to the fact that this problem has not lost its relevance until now. Acquaintance of students with the main methods of treating patients with peritonitis, pre- and postoperative management, rehabilitation of patients.

**Educational goals:** Students should know about peritonitis, as a severe pathology of surgery, methods of preventing peritonitis, complications of the disease and understand the importance of both studying this problem and its significance and proportion in the development of the younger generation and the health of the entire population. The problem of diagnosing and treating diseases leading to the development of peritonitis is an important part of the work of general practice and many other specialties.

**Lecture objectives:** To teach students to recognize peritonitis. Explain the causes and etiopathogenesis of the development of peritonitis. Give a clinical picture of the various stages of the disease. Principles of modern treatment.

**Questions to be analyzed, indicating the time allotted to the question:**

1. Give the concept of peritonitis. - 5 minutes.

2. Explain the causes and etiopathogenesis of the development of peritonitis. - 15 minutes.
3. Give a clinical picture of the various stages of the disease. Principles of modern treatment. - 35 minutes
4. Conduct differential diagnosis with other diseases. - 10 min.
5. To acquaint students with the modern, most informative methods of examining patients. - 10 min.

**Relevance.** Acute peritonitis is an inflammation of the visceral and parietal peritoneum, which is accompanied by severe general symptoms of the disease of the body and, within a short time, leads to serious, often irreversible damage to vital organs and systems. This is one of the most severe complications times of personal injuries and diseases of the abdominal cavity.

Despite the success of surgical techniques, cardiac and antibiotic therapy, the use of anesthesia techniques, the ability to correct the function of vital organs is new, the problem of treatment of purulent peritonitis attracts attention of surgeons around the world. The progressive development of suppurative process in a closed anatomically complex abdominal cavity, the rapid development of intoxication atony ki shechnika and resulting hemodynamic disorders Serious Set and respiratory metabolism dramatically impaired, extremely difficult for purulent peritonitis.

The first reliable description clinics peritonitis belongs military physician Basil Shabanov (1816), who described the development of the young soldier Perito nit on the basis of gastric ulcer or perforation 12 finger hydrochloric intestine. Much later (1840) in medical Journe le published work of G. Shaliya gut perforation, which describe ik- clinical picture of peritonitis. The guide for the operator proliferative Surgery, published in the same year, academician Salomon before lag median laparotomy, various methods of intestinal sutures, as well as the technique of suturing of the anterior abdominal wall.

In 1881, the Moscow surgeon L.I. Schmidt made the world's first successful laparotomy during propagation roubleshooting purulent peritonitis caused by suppuration of the spleen in malaria. Only 4 years later (1885) Trawee in England and Oberet in Ger mania strongly in favor of surgical treatment Perito nits. Thus, the operation of A.I. Schmidt can be considered the beginning of the surgical treatment of purulent peritonitis.

In the first quarter of the XX century, the majority opinion reputable surgeons in principle agreed on one thing - the need possibility but early surgery. However, washing and drainage issues bryush hydrochloric cavity debated particularly acute. If V.M. Zykov (1897), A. Gagman (1901) believed that the abdominal cavity must be thoroughly washed, then S.P. Fedorov (1901) and I. Grekov (1952) were opponents of abundant washing of the abdominal cavity, believing that in this case, it is possible to enter infection into hard-to-reach pockets of the peritoneum. The introduction of the 30-ies in the clinical practice of sulfanilamide - inflammatory drugs that SS Yudin (1937) proposed to use it intraperitoneally, improved the results of treatment. This once again confirmed the elk in the Great Patriotic War, when surgeons meeting were the most severe forms of purulent peritonitis, where le talnost reached 38-50%.

Obra such Zom, in recent years due to the increased resistance of micro- organisms to antibiotics has worsened the prognosis of peritonitis, increased mortality. The difference in the percentage of mortality in different authors due to the fact that there is still no unified practically acceptable classification of peritonitis, although the first attempts to create a classification tion date back to 1886 AD Pavlovsky.

**Classification of peritonitis.** In the last of dy tend to concise classification of peritonitis. So, A.M. Karjakin (1968) divides peritonitis only to local and once cast, VI Pods with coauthors (1967) distinguishes local diffuse and diffuse (general) peritonitis. K.S. Simonyan (1971} believes that hospital incidence of peritonitis does not play a role and vyd Vigano classification in which peritonitis is considered from the point of view gaperergicheskikh reactions, releasing during peritonitis three stages - phases: reactive, toxic and terminal.

The simplest and most convenient for clinical practice is the classification of peritonitis given by B.D. Savchuk (1979).

### **I of . M ESTNO PERITONITIS .**

1. Limited - this accumulation of fluid in one, sometimes in two anatomical regions of the abdominal cavity, with a clear from the bordering suppurative process (Figure 1.). This corresponds to the concept of an abscess.

2 Unlimited - this accumulation of fluid in not more than two anatomical regions of the abdominal cavity, but without clearly distinguished Niya from other departments.

### **II . Widespread peritonitis**

1. Diffuse is an accumulation of exudate that occupies at least two, but not more than five anatomical regions of the abdominal cavity.

2. Spilled peritonitis is an accumulation of exudate that occupies more than five anatomical regions of the abdominal cavity, and most often the entire abdominal cavity.

By the nature of the effusion, peritonitis is subdivided into: serous, serous-purulent, purulent, fibrinogen-purulent, hemorrhagic, ichorous, anaerobic, urinary, biliary, pancreatic, dry.

### **By origin, peritonitis is distinguished:**

- **primary peritonitis** - is extremely rare. The following routes of infection take place:
  - hematogenous;
  - lymphogenous;
  - cryptogenic;
  - breakthrough (emptying an abscess from surrounding organs into tissues into the free abdominal cavity);
- **secondary peritonitis:**
  - appendicular;
  - cholecystopancreatic;
  - perforated (in case of ulcer and duodenal ulcer, Crohn's disease, etc.);
  - traumatic (with damage to the hollow organs of the abdominal cavity and without damage);
  - necrotic (with acute intestinal obstruction, with phlegmonous lesions of the alimentary tract, with purulent inflammation of the mesenteric lymph nodes, with rare inflammation of the abdominal organs (Meckel's diverticulum);
  - postoperative (surgery on stomach, small and large intestine, bile ducts and other organs);
  - gynecological (on the basis of inflammation of the tubes, ovaries, uterus, rupture of the tube, perforation of the uterus, trauma to the uterus during childbirth and due to the twisting of ovarian cysts, appendages and tumors).

In most cases, it is a polymicrobial peritonitis slaughtering *Levan*. *Coliform* retains the leading role, *odes Naco* in recent years, become an increasingly important role to play *Proteus vulgaris* and other mustache *Karlova* pathogenic bacteria significantly increased the role of anaerobes. *Pnev mokokki* and *Koch's bacillus* is rare.

In the clinical course of peritonitis, there are three stages of development of acute purulent peritonitis.

**1. Reactive stage of peritonitis** (first 24 hours, with perforated - 12 hours) - the stage of maximum expression of local manifestations: acute pain syndrome, protective muscle tension, vomiting, motor excitement, etc. Common symptoms: increased heart rate up to 120 ud moat, increased blood pressure, shortness of breath, etc., are typical manifestations more for painful shock than intoxication.

**2. Toxic stage of peritonitis** (24-72 h, with perforated - 24 h) - the stage of subsiding of local manifestations and the prevalence of general reactions characteristic of severe intoxication: sharpened facial features, pallor, inactivity, euphoria, pulse more than 120 beats, decrease BP later vomiting, hectic nature pace ture, considerable purulent toxic shift in blood

counts. From the local manifestations of the toxic stage is characterized by a decrease in left systolic blood pressure, stomach protective voltage, increasing flatulence.

**3. End-stage** (more than 72 hours, when perforated - more than 24 hours) - the stage of deep intoxication on the verge of reversibility: Hippocratic face, weakness, prostration, often intoxication delirium, significant respiratory distress and cardiovascular activity STI, profuse vomiting of fecal odor, dropping the temperature by not sharp-pyro-toxiches one shift in the formula of blood, sometimes tank teriemiya. From local manifestations characterized by a complete absence of peristalsis, significant bloating, diffuse pain throughout the abdomen.

### **Etiology and pathogenesis of peritonitis**

Acute peritonitis is an inflammation of the visceral and parietal peritoneum, which is accompanied by severe general symptoms of the disease of the body and, within a short time, leads to serious, often irreversible damage to vital organs and systems. In the overwhelming majority of cases, purulent inflammation of the peritoneum develops a second time, as a complication of a purulent disease of any organ of the abdominal cavity. The main sources of infection in the abdominal cavity are: the appendix (30-65%), the gallbladder (10-12%), the female genital organs (3-12%) and the intestines (3-5%). Less frequent causes of this are: traumatic injuries (up to 2.7%), pancreas (up to 1.0%), as well as postoperative peritonitis (up to 1.0%).

The most common etiological factor causing peritonitis is the microbial factor (infectious peritonitis); chemical and physical factors play a lesser role in the development of peritonitis (aseptic). In the following accession infection aseptic sky becomes infectious peritonitis (purulent). However, in some cases, the primary cause of peritonitis cannot be established even after autopsy. Such peritonitis is called cryptogenic. The main cause of peritonitis is the penetration into the abdominal cavity of pathogenic microorganisms, but in Copley many facts testifying to the fact that the presence of micro flora in the abdomen does not determine the occurrence of peritonitis.

A variety of etiologic factors causing peritonitis (acute destructive inflammation of the abdominal cavity), the set of kinds of agent and also show the variety of clinical manifestations poly etiology of this disease.

Catecholamines, histamine, corticoids, standing under vozdeystviem endotoxins can cause serious damage to parenchymal organs, deep hemodynamic disorder, significant Naru sheniya protein Vaga, water-salt metabolism and acid-base equal to equilibrium (gipoprotei-nemia, hypovolemia, hypoalbuminemia, hypokalemia, hyponatremia, hypocalcemia, and metabolic acidosis).

As a result of the destructive changes of the neuromuscular The equipment is the gastrointestinal tract occurring due humoral GOVERNMENTAL or nerve inhibitory effects, as well as due to a violation of the microcirculation in the intestinal wall in the midst of inflammation develop atony and intestinal paralysis. At the very beginning of the disease, intestinal paresis occurs, which is accompanied by stretching in the width of the intestinal loops, which leads to irritation of the mechanoreceptors of the intestinal wall. In response to this, more inhibited motor naya digestive system, ie developing entero-enteral brake reflex (AA Shalimov et al., 1981). Paralysis of the digestive system leads to stagnation of the food masses in it, and then to their fermentation, which increases the intoxication of the body. Proportionally with increasing progressively forming it increases the gas abdominal pressure, that with each hour of the disease increases poor circulation in the abdominal polo STI.

Thus, a variety of pathological changes resulting complex to which at least the rise of inflammation join additional irritating factors lead to time vityu as a vicious circle around the body, and at the level of the function functionals-term activity of the digestive system.

### **Clinic of peritonitis**

From a clinical point of view manifestations of peritonitis under conditional divided into general and local. The most typical early Symposium volumes are as follows:

- the general serious condition of the patient,

- forced position of the patient,
- a painful facial expression about pointed features (the face of Hip-pokrat),
- icteric staining of the skin and sclera, indicating tyazhe luyu intoxication,
- abdominal pain (by nature it may be somatic and visceral, somatic pain have a precise location and permanent nature, accompanied by tension of the abdominal muscles and visceral pain of colic appear as a characteristic radiating to her and do not have a specific location)
- nausea, vomiting; at the beginning of the disease, it has a reflex character, with the spread of the inflammatory process in the abdominal cavity, it is due to the paralytic state of the digestive system,
- delay stool and gas (depending on the severity of the paresis ki shechnika) rare frequent stools,
- tachycardia (120-150 beats per minute) of reflex origin (less often bradycardia - perforation of a stomach ulcer and 12 duodenal ulcer - up to 60 beats per minute),
- increased breathing rate, which is associated not only with the limitation of respiratory excursions of the diaphragm, but with the beginning or already developing pneumonia, especially the lower lobes of the lungs,
- tongue dry, like a "brush"
- an increase in body temperature to 38-40 ° C, although in the terminal stage of the disease, the temperature may decrease,
- the abdomen is retracted on examination, "board-like", in the later stages it is swollen due to intestinal paresis, passively or does not participate at all in the act of breathing, tense or sharply tense.

A positive Shchetkin-Blumberg symptom indicates the involvement of the parietal peritoneum in the inflammatory process. Disappeared novena hepatic dullness to percussion indicates the presence in the abdominal cavity exudate or free gas. Lack of peristaltically auscultated noise when talking about bowel paralysis.

Soreness pelvic peritoneum, and the protrusion of one of the walls of the rectum during rectal examination to indicate presence of exudate in small pelvis or infiltration.

Hemodynamic disorders occupy an important place in the clinical peritonitis, moreover, cardiovascular and rows hatelnye disorders are a major cause of deaths in advanced seedling inflammation of the peritoneum. Hemodynamic disturbances are considered to be the result of direct effects of endotoxin on myo card, and respiratory failure is attributable largely to Nepo sredstvenno exposure to toxin pulmonary vasculature, assuming a primary component in pulmonary hemodynamics tackle.

Accordingly, the first cause hemodynamic is a massive diffusion of the fluid from the vascular bed into the free abdominal cavity and internal organs, and therefore, Izv treatment liquid STI in the vascular bed of the intermediate spaces. In this situation, the abdominal cavity can move up to 50% of extracellular fluid op -organisms, that is 6-10 l. In the past, this fluid displacement was called sequestration because it was cut off from the circulation.

Most sequestered fluid vovle repents ultimately into the exudate and which proish DYT its loss, including electrolytes, proteins, active enzymes, etc. A smaller part of this fluid in the form of a pathological secretion penetrates into the intestinal lumen, where it absorbs numerous components of the disturbed intraintestinal metabolism. In significant quantities, it can also be lost with vomiting. Under these conditions, it is natural to expect a decrease in the total volume of circulating blood, changes in the dynamics of cardiac output, an increase in hematocrit, etc.

As the disease progresses, there comes a completely legitimate dimensional exhaustion of functional reserves of cardiovascular ICU threads, resulting in the deterioration of cardiac output parameters, a parallel reduction in the impact of cardiac output, a moderate decrease in total blood flow and a reduction coefficient is the effective-ness of circulation.

Severe suppurative disease were accompanied zhdayutsya sharp activation of metabolic processes and the displacement of hundred Ron catabolic reactions giving rise to the emergency Ener -energy needs of the body. Increased body temperature by 1 ° C, leads to

increased energy resou iCal costs to 15%. If we also consider that even normally locale ny exchange abdominal inwards is about 50% of the total body metabolism and in the latter increases the inflammatory process, it is necessary to prize nat that the energy needs of the patient severe peritonitis may be not less than 3000-3500 kcal / day.

Quantitative protein metabolism disorders marked by all the authors who have studied this issue, citing as the main argu- ments expressed hypoproteinemia and a sharp increase in external protein ter According to K.S.Simonyana (1971), the absolute nye protein loss in the urine, vomit, exudate can to Steagall 50-200 g / day, and these losses are not always accompanied by hypoproteinemia. V.D. Fedorov (1974), on the other hand, said essential Noah decrease in total plasma protein level; hypoproteinemia the Supervisory familiarize already at local peritonitis, reaching a maximum at "general and diffuse inflammation of the peritoneum." A.N. Cradle and V.Begunyak (1976) as well as demonstrated a significant reduction in circulating plasma proteins in prevalent forms of peritonitis.

In acute purulent peritonitis, qualitative violations of protein metabolism also occur. First of all, attention is drawn to gipoalbumi-nemia, which is absolute, as there is camping on the background of a general reduction of plasma protein. An especially sharp decrease in the level of albumin is observed with widespread peritonitis, and the tendency to decrease it increases up to the 10th day of observation.

Changes in the content of the globulin fraction are not so one-sided, although in general there is a very moderate tendency towards a general increase in the content of the globulin component of the plasma. This stain larly more pronounced at the local and at least - during peritonitis.

In peritonitis, the violation is also undergoing mineral ny exchange, causing changes in water and electrolyte balance in the orga nisms. As is well known, potassium ( $K^+$ ) is the main cellular Catió prefecture, besides most mobile. In conditions of impaired hydro static equilibrium tissue in inflammation potassium ion as the most mobile, and leaves the cell in the cellular structures is replaced with sodium ion, or (in the conditions of the anaerobic hydrolysis) uo prefecture hydrogen. In addition, a large amount of potassium is released as a result of massive destruction of cellular elements. Confirmed deniem this is the unusually high content of potassium in the inflammatory -inflammatory exudate in peritonitis, which reaches 8,1-10,1 mmol / l, i.e. 2 times higher than in plasma. Even more potassium shift occurs in the composition of the pathologically Menen contents of the gastrointestinal tract. Referring reinforced hydrochloric excretion of potassium, it can be assumed that in conditions of impaired tachechnoy reabsorption at peritonitis apparent at levels of renal tubules occurs potassium cation substitution of sodium ion or hydrogen, which leads to an increase in the potassium content in the urine.

At t o the same time, due to the enhanced potassium excretion in the urine, as well as the massive losses it with inflammatory exudate and vomiting, hyperkalemia rather quickly replaced by hypokalaemia that have the pigs fies the appearance of an absolute deficiency of potassium in the body. Finally, the increase in acute renal failure in the terminal stage of peritonitis sharply disrupts the excretion of cations (and primarily potassium) by the kidneys, which again leads to progressive hypokalemia, although the content of intracellular potassium remains low.

Needless to emphasize the importance of particular pathological potassium losses for the organism, because it plays an IP exclusively role in the conduction of nerve fibers. Apparently, the general deficiency of potassium is essential in originated tration enteroparesis in peritonitis, as well as in violation of the functional - regional myocardial ability. In turn, the latter circumstance is of certain importance in the genesis of those hemodynamic disturbances that occur during peritonitis.

Sodium metabolism ( $Na^+$ ) is characterized by a reverse tendency, that is, an increased tendency to retain this cation in the body. This is noticeable both by an increase in its content in cellular elements, and by the appearance of moderate hyponatremia and a decrease in sodium excretion in the urine. This sodium retention is explained by the increased



mineralocorticoid function of the adrenal glands, in particular by the increased production of aldosterone.

Given that the sodium cation has a leading role in a holding-Research Institute of osmotic balance and biological media should recognize gain tsroduktsii aldosterone're kind of protective action in a severe disruption of the balance of organisms ma. Proof of this is also relatively low with sodium and holding

Violations of the acid-base state (ACS) of the body during peritonitis have been the subject of close attention of clinicians for many years. Some authors (V.Ya.Shlapobarsky, 1958; P.L.Seltsovsky, 1963) believed that in conditions of peritonitis, especially widespread, pronounced acidosis always occurs. However, with the advent of Astrup's precise microelectrolyte express method, it was noted that this tendency in peritonitis is far from constant. Moreover, in case of peritonitis often observed pronounced ny alkalosis and acid-base balance indicators in such circumstances: can change rapidly.

Increasing paralytic intestinal obstruction complicates the course of peritonitis in 45-85% of cases. Not coincidentally, many authors vie DYT direct relationship between the degree of intestinal paresis, with the likely outcome of the disease. This complication, in the reactive stage of peritonitis, can be detected in 40%, in the toxic stage - in 80%, and in the terminal - in all patients. And, at places rated peritonitis expressed intestinal paresis can an observer in 54% of patients, and with common forms of peritonitis - in 82.7% of patients (BD Savchuk, 1979).

Thus, in the pathogenesis of peritonitis traced fairly strong correlation between the manifestations of paralytic ileus and the growth cha severity of the disease.

#### **DIAGNOSIS AND PERITONITIS**

Examination of patients with peritonitis should be systematic, comprehensive, and include the study of medical history, complaints, re inspection result,

Careful examination of the medical history is of paramount importance for the correct diagnosis, timely and informed treatment. The history should include above all accurate data on the early OS novnyh symptoms, therapeutic measures applied to the patient prior to admission to the surgical department.

One of the major manifestations of acute surgical abdominal diseases is pain, its localization, yn intensity character. The emergence of severe pain in the abdomen, accompanied by deterioration of general condition of the patient is one of the terrible symptoms, indicative of severe accident in the abdominal Polo STI. An important role in the diagnosis of peritonitis belongs to vomiting, its frequency, the nature of the vomit.

Studies of language is one of the main factors (at peritonitis tongue dry as a "brush") which may be associated with a developing liquid deposition and dehydration. The diagnos tic peritonitis is important to study the stomach.

When examining the abdomen, attention is paid to its shape (swelling or retraction), participation in the act of breathing, the color of the skin. There is a restriction of the mobility of the abdominal wall, which is more pronounced in the projection zone of the main inflammatory focus.

With superficial palpation of the abdomen, the protective tension of the muscles of the anterior abdominal wall is determined, respectively, in the zone of the inflammatory-altered parietal peritoneum. Muscle protection is especially pronounced in the case of perforation of a hollow organ ("board-shaped abdomen"). The protective tension of the muscles of the anterior abdominal wall may be insignificant when the inflammatory process is localized in the small pelvis, with damage to the posterior parietal peritoneum. In the first case, in the diagnosis of peritonitis, a rectal examination is valuable, in which it is possible to determine the overhang of the anterior rectal wall due to the accumulation of exudate, pain when pressing on the walls of the rectum. In women, during a vaginal examination, one can find an overhanging of the posterior fornix of the vagina, pain when the cervix is displaced. To identify signs of inflammation of the posterior parietal peritoneum, it is necessary to determine the muscle tone of the posterior abdominal wall.

Percussion of the abdomen is a research method that allows you to establish the presence of pneumoperitoneum, outflow of blood, effusion with peritonitis. With percussion, you can find a zone of pain corresponding to the area of the inflammatory altered peritoneum, high tympanitis (due to intestinal paresis), as well as dullness of the percussion sound when a significant amount of exudate accumulates in a particular area of the abdomen. Lack of peristalsis and noise auscultation indicates the presence of paralytic ileus.

Due paralytic ileus is generally marked by vomiting, hiccup and intestinal contents, indicating stimulation of the phrenic nerve. Stool and gas retention is also noteworthy.

It attaches great importance to the appearance of the patient studies of the cardiovascular system, oxygen breathing, as well as the measurement of the body temperature, which can provide additional information for diagnosis.

In a blood test, a high leukocytosis is noted, which then decreases and can be replaced by leukopenia when the body's defenses are depleted. Violations of the water-electrolyte balance, acid-base state reach a maximum. The electrocardiogram shows signs characteristic of toxic myocardial damage and electrolyte disorders (hypokalemia). In the study of coagulogram, signs of disseminated intravascular coagulation (DIC syndrome) are revealed, which disrupts microcirculation and aggravates the course of the disease. All these unfavorable factors lead to decompensation of the functions of vital organs and systems with the development of cardiovascular, pulmonary and hepatic-renal failure.

The methods of instrumental research used for the diagnosis of acute peritonitis can be divided into 2 groups.

**1. Non-invasive:** plain radiography, ultrasound examination, rheography. An important role is played by the radiological diagnosis, fluorography, thermal imaging, and ultrasound.

**Plain radiography of the abdominal cavity.** In this study, especially with perforation of a hollow organ (perforation of an ulcer or tumor of the stomach and duodenum, small intestine, etc.), it is possible to detect an accumulation of gas under the right or left dome of the diaphragm, with the localization of the pathological process in the upper floor of the abdominal cavity, restriction of mobility the diaphragm and the high standing of the dome of the diaphragm on the side of the lesion, exudative pleurisy (in the form of more or less fluid in the bone-diaphragmatic sinus). In some cases, it is possible to determine the paralytic, gas-bloated bowel adjacent to the site of inflammation, and in the later stages of peritonitis, the levels of fluid with gas in the bowel loops (Kloyber's bowls), characteristic of intestinal obstruction. Diagnostic possibilities radiographic method significantly extension rayutsya using pneumoperitoneography, retroperitoneography that can detect the inflammation of an organ in the early phase (body thickening cohesion it with neighbor their bodies and the walls early hyperplasia abdominal lymph nodes, which accompanies the inflammatory-ing process ).

**Ultrasound scanning of the abdominal cavity:** allows you to determine the accumulation of exudate in one or another part of the abdominal cavity, and in some cases, it is possible to determine the infiltration or destructive process in the gallbladder or pancreas, paralytic intestine swollen with gas, or a destructive process.

**Rheography** reveals a sharp increase in the height of diastolic Coy wave compared with systolic (normally the other way around), that makes us think about the stagnation of gastric vessels and ki shechnika.

**2. Invasive:** laparocentesis, the "walking" catheter method, diagnostic laparoscopy and diagnostic laparotomy.

**Laparocentesis**, being a simpler research method, is carried out by puncturing the abdominal wall with the introduction of a thin catheter into the abdominal cavity, through which peritoneal exudate is aspirated. She performed in diagnostic difficult cases when the operation is associated with a greater risk, reveals the presence of abdominal effusion aspirate it and under to graver microscopic examination. By the nature of the liquid obtained (blood, pus, etc.), one can conclude in the nature of changes in the abdominal cavity. By examining the effusion for pH, the content of amylase, erythrocytes, its appearance, odor, color, it is

possible to establish indications for laparotomy, and the use of the **"groping catheter" method** allows in 91% of cases to make the correct diagnosis.

**Laparoscopy** is a more reliable method, which poses Will detect directly the source of inflammation. The latter is indicated in the absence of certainty in the diagnosis, when non-invasive methods of research are not informative. With laparoscopy, you can examine almost all organs of the abdominal cavity, assess the condition of the parietal and visceral peritoneum, identify the presence or absence of exudate.

**Laparotomy and revision of the abdominal organs** cavity, in difficult cases, allows its temporarily establish the most correct diagnosis.

#### Differential diagnosis of peritonitis

In about 85% of cases, pathomorphological changes in any organ of the abdominal cavity develop in parallel with the symptoms and the diagnosis is not difficult. In this case, the diagnosis is made on the basis of a syndrome, which is a set of clearly expressed signs that characterize a particular disease. However, approximately 15% of cases of acute hirurgiches FIR local disease manifestations are unclear, blurry ha rakter, as can be vague and common symptoms. In such cases, an optionally go to pay special attention to the nature of the pain ata ki, pain crisis at acute destructive disease that manifests itself much more sharply than in functional disorders dey telnosti gastrointestinal tract. The second important differential feature is the nature of dyspeptic symptoms. In the absence of destruction, vomiting anamniotes se is a rare exception, whereas in the presence of degradation vomiting and dyspepsia in general - major signs Zabolev Niya. An important symptom is the positive Shchetkin-Blumberg symptom, since it indicates the involvement of the peritoneal sheets in the destructive process.

**Differential diagnosis** in the toxic and terminal stages of peritonitis, as a rule, does not present serious difficulties, but it is at these stages that the treatment of peritonitis is often ineffective. Recognition of peritonitis in its initial phase is much more difficult, since its clinical manifestations differ little from the symptoms of the disease that became the source of peritonitis (acute appendicitis, acute cholecystitis, etc.).

In acute pancreatitis, a number of symptoms characteristic of peritonitis can be identified. At the same time, with pancreatitis against the background of indomitable vomiting, there is no protective tension of the muscles of the anterior abdominal wall or it is not expressed. There are no symptoms of peritoneal irritation, the temperature at the onset of the disease remains normal. In the study of diastase in blood and urine, an increase in the concentration of the enzyme is found.

Acute mechanical intestinal obstruction clinically differs from peritonitis only in the early stages, and subsequently, in the absence of adequate treatment and bowel perforation, diffuse peritonitis also joins the intestinal obstruction. If, at the beginning of acute intestinal obstruction, the pains are rather intense (cramping) in nature, constant pain is characteristic of peritonitis. Peristalsis in intestinal obstruction is at first sharply increased, sometimes visible peristalsis is determined. Radiographically, with peritonitis, a characteristic characteristic of intestinal obstruction can also be determined - the Kloyber bowl.

Hepatic colic is characterized by paroxysmal pain in the right hypochondrium with irradiation to the right scapula, right shoulder girdle, vomiting of a small amount of gastric contents mixed with bile. Muscle tension in the right hypochondrium. not expressed, there are no symptoms of peritoneal irritation. The use of heat and antispasmodics quickly relieves an attack of hepatic colic.

It is much more difficult to make a differential diagnosis between acute cholecystitis and peritonitis. In acute phlegmonous cholecystitis, the symptoms most characteristic of local peritonitis can be identified: constant pain, protective tension. muscles, symptoms of peritoneal irritation, inhibition of intestinal peristaltic activity, hyperthermia, leukocytosis. Careful hourly observation of the patient with repeated determination of objective signs of the inflammatory process - heart rate temperature, blood pressure, leukocytosis, taking into account changes in the patient's complaints and objective research

data, will allow the doctor to correctly navigate the stage of the acute process in the gallbladder, the effectiveness of treatment and further patient treatment tactics.

With an exacerbation of peptic ulcer disease, especially with large callous or penetrating ulcers, when the peritoneum is involved in the inflammatory process, rather intense abdominal pain of a constant nature, protective muscle tension, sometimes a weakly positive symptom of Shchetkin-Blumberg can be noted. At the same time, in contrast to peritonitis, it is possible to reveal a slight decrease in pain after eating, the absence of oppression of peristalsis. The body temperature remains normal and there is no tachycardia, the tongue is moist, changes in the blood count are usually small.

Renal colic may be accompanied by pain in the abdomen, bloating, delayed passage of stools and gas, which happens with peritonitis. However, the characteristic localization of pain (mainly in the lumbar region, their paroxysmal nature and irradiation to the thigh, genitals, lack of connection of pain with a change in the position of the patient's body, restless behavior of the patient, absence of hyperthermia, symptoms of peritoneal irritation, leucocytosis, as well as characteristic changes in the analysis urine (hematuria, leukocyturia) allow a clear differential diagnostic line between these two diseases.

Some other diseases not associated with damage to the abdominal organs (basal pleurisy, pneumonia, myocardial infarction, multiple rib fractures), may be accompanied by symptoms characteristic of peritonitis. In these cases, a thorough examination of the organs of the chest cavity using instrumental research methods and, above all, X-ray, helps.

**Significant difficulties can be presented by the diagnosis of peritonitis in elderly and senile people**, when it is also difficult to collect atgamnesis of the disease, and due to a decrease in the reactivity of the body, pain and objective signs of the disease (muscle protection, hyperthermia, leukocytosis) may be poorly expressed.

**In children, the diagnosis of peritonitis is difficult** due to the lack of adequate contact with the patient and the inability to collect a full anamnesis of the disease. It should be remembered that in children, peritonitis often proceeds as a hyperergic reaction with severe pain sensations, sharp tension of the abdominal muscles, high hyperthermia and leukocytosis .

Postoperative peritonitis presents particular difficulties in diagnosis, when this formidable disease complicates the course of the postoperative period. The main source of infection in this case is the inconsistency of the seams of the previously imposed anastomoses between the organs in the abdominal cavity, the accumulation of blood, exudate followed by their suppuration, since microbes always enter the operating field during the operation. The difficulty in diagnostics is due to the fact that in the postoperative period, when the body mobilizes its defenses in response to an operating injury, the symptoms of peritonitis can be very scarce.

### **Basic principles of complex treatment of peritonitis.**

Emergency preoperative preparation of patients with peritonitis should be individual, taking into account concomitant diseases and intensive , with targeted correction of water-salt balance, acid base balance, protein metabolism and geodynamic disturbances, under the control of biochemical studies. It occupies a special place premedication and evacuation of the contents zhelud ka. The duration of preoperative preparation should not pre excess of 2 hours.

The method of choice of anesthesia for peritonitis is general endotracheal anesthesia with controlled breathing, which allows the elimination of pain, contributes to the correction and normalization of neurocirculatory and neurohumoral reactions of the body.

When establishing the diagnosis of acute peritonitis, in the vast majority of patients, a midline laparotomy is used as an operational access, since this access is less traumatic and makes it possible to conduct an adequate revision of the abdominal organs.

**If the source of peritonitis is an organ that can be removed** (appendix, gallbladder), and technical conditions allow this, it is advisable to radically remove the focus of infection from the abdominal cavity. In case of perforation of a hollow organ (for stomach ulcers, duodenal ulcers, colon diverticulum, stomach or colon cancer), suturing of the perforated hole is most often performed, especially if more than 6 hours have passed since the perforation and

massive bacterial contamination of the abdominal cavity can be expected. In the event of a ruptured diverticulum or cancer, suturing of the organ defect is usually not feasible. In these cases, resection of the affected organ is indicated (if technically feasible) or the imposition of a discharge stoma. In postoperative peritonitis caused by the failure of the sutures of the previously imposed anastomosis, as a rule, it is not possible to suture the defect in the anastomosis, due to pronounced inflammatory-infiltrative changes in the surrounding tissues, therefore, more often it is necessary to limit ourselves to bringing a double-lumen drainage tube to the hole for aspiration of the intestinal contents of this area to delimit the focus infection or the formation of a fistula, or the removal of the anastomosis (interintestinal) from the abdominal cavity in the form of a stoma, to the anterior abdominal wall. The abdominal cavity is thoroughly dried with an electric suction and gauze napkins, loose fibrin deposits are removed. Then you should rinse the abdominal cavity with a solution of antiseptic agents: solutions of furacilin, dioxidine, chlorhexidine.

Before suturing the laparotomic wound of the anterior abdominal wall, a prerequisite is drainage of the abdominal cavity through counterpunctures in the subcostal or iliac regions. Methods for draining the abdominal cavity completely depend on the degree of damage to the peritoneum. So, with local peritonitis, drainage is installed in the affected area, with diffuse peritonitis - 2 or 3 drains, for control and intra-abdominal administration of antibiotics.

For a practical doctor, diffuse purulent peritonitis, which is also an absolute indication for emergency surgical intervention, is of particular interest. Timely diagnosis of early forms of peritonitis and adequate surgical intervention are the key to success in the treatment of this formidable disease.

Operational intervention in this case should include:

- revision of the abdominal organs and elimination of the source of peritonitis,
- sampling exudate from the peritoneal cavity to express bacterioscopy, and bacteriological analysis of the microflora seeding for determining sensitivity to antibiotics.
- evacuating exudates, sanitation and abdominal lavage with ANTISEPT-Th Skim solutions (5-8 liters furatsilina solution, Ringer's solution, physiological saline or rivanol).
- novokainization of the root mesentery of the small intestine or mouth Credited-set mikroirrigatora for drip novocaine solution with a view to preventing intestinal atony.
- transnasal intestinal intubation by introducing a 2-lumen nasoenteric probe, for evacuation of the gastrointestinal tract contents, intestinal lavage and enteral tube feeding of the patient in the postoperative period.
- drainage of the abdominal cavity to control and conduct peritoneal lavage or dialysis in the postoperative period.

The operation is completed according to the indications: layer-by-layer suturing of the wound, suturing through all layers (tying them with a bow) or applying a zipper to the wound (for programmed revision of the abdominal organs) or leaving it open (laparostomy) for open management of patients.

**Open maintenance of the abdominal cavity - laparostomy.** Indications for laparostomy are:

- The terminal stage of widespread purulent peritonitis, complicated by intestinal fistulas,
- Widespread peritonitis, if it is impossible to eliminate the source of peritonitis at once,
- Severe postoperative peritonitis,
- Intestinal eventration into a purulent wound, with widespread peritonitis,
- Anaerobic peritonitis.

With this intervention, the intestinal loops are covered with a 2-layer gauze napkin, the edges of which are tucked under the abdominal wall by 5-6 cm, 6-8 gauze tampons are applied on top of the napkin. Under the napkin, in the upper corner of the wound, drainage is introduced for the administration of antibiotics.

Postoperative administration of patients with diffuse peritonitis.

**It consists of a targeted antibiotic therapy in Restoring disturbances of homeostasis and d etoksikatsionnoy forcing diuresis therapy, correction of concomitant diseases and immunokorregirujushchej therapy. At the same time, peritoneal dialysis (PD) or lavage of the abdominal cavity, adequate decompression of the intestine (DC) with intestinal lavage (CL) and enteral tube feeding (EGT) are of great importance.**

### **Peritoneal dialysis.**

Peritoneal dialysis can be performed or flow fraction onnym method, with solutions of the obligatory inclusion of the tensile thief antibiotics and novocaine. Dialysis can be carried out with solutions of Petrov, Ringer, Ringer-Locke, TSOLIPK, Darrow I and II , as well as saline.

Peritoneal dialysis contributes to:

- the fastest washing out of exudate, pus, blood clots, fibrinous films from the abdominal cavity, which reduces intoxication;
- regulation of the water balance in the body by changing the osmotic pressure of the dialysate;
- the introduction of antibiotics in the abdominal cavity, The necessity to render my concentration directly across sore poverhnos-minute peritoneum
  - the use of electrolyte compositions with an increased content of  $K^+$  ions in the dialysis fluid, allows you to regulate electrolyte metabolism,
  - the introduction of novocaine for the removal of reflex,
  - creating a local hypo terms in the abdominal cavity, by introducing the cooled dialysate,
- prevents the development of adhesions by introducing a liquid stock,
- the introduction of certain drugs to prevent the development of adhesions in the abdominal cavity (heparin, etc.),
- the removal of nitrogenous wastes (urea, creatinine, and residually of nitrogen).

In severe forms of diffuse peritonitis, for a complete washing and irrigation of the abdominal cavity are bodies etsya sufficient expenditure of the dialysis solution to I postoperative day - 13-15 l, 2-f -12-13 l, 3-and - 10- 12 liters, on the 4th day - 8-10 liters and on the 5th day - 6-7 liters of dialysate. At the same time, daily bacteriological and biochemical monitoring of the wash water and their electrolyte composition is required. For timely correction of haemodynamic homeostasis and necessary every 2-3 hours to determine the heart rate, central venous pressure, blood pressure, and to carry out biochemical studies of blood, urine and flushing water from the abdominal cavity ( $Na^+$ ,  $K^+$ ,  $Ca^{++}$ , hematocrit residual nitrogen mo Chevin, creatinine, total protein, etc.).

### **Enteral tube feeding in patients with peritonitis**

Arsenal of drugs used in the treatment of patients with peritonitis that parenteral nutrition is very large, but their use is associated with a number of difficulties. These include complications related nye deep vein catheterization (inflammatory and septic about the processes caused by prolonged exposure of the catheter in the vein), allergic reactions and work Nosta direct infusion of parenteral those rapii that is not always possible to calculate the necessary quantitative and qualitative composition of the ingredients introduced. In the context of parenteral therapy, the body is almost morning Chiva capacity for regulation of the processes. Obra Thus Zoom, facilitate more simple and less dangerous physiological replacement therapy methods are relevant for practical surgery.

### **Long-term intra-arterial catheter therapy (DVACT).**

In patients with acute diffuse peritonitis , it was used with success: Sh.I. Karimov et al., 1986, O.B. Kuntsaliev, 1988, V.I. Garkusha, 1993, A.A. Asrarov, 1996, B.D. Babadjanov, O. R. Teshaev, 2002, which envisaged the following goals:

1. Creation of high concentrations of drugs in the lesion focus.
2. Correction of disorders of regional hemodynamics and microcirculation.
3. Acceleration of the process of restoration of intestinal motility.

#### 4. Prevention and elimination of the initial stages of hepatic and renal failure.

##### **Intra-portal catheter therapy (IPCT).**

In the treatment of patients with acute purulent peritonitis (Fig. 8, 9), BV was successfully used. Petrovsky, 1986, A.P. Sedov, 1989, Sh. I. Karimov, I.A. Kim, 1992, Sh. I. Karimov, A.A. Asrarov, 1996.

In addition to the above drug therapy in patients with severe forms of acute diffuse peritonitis, the following extracorporeal detoxification methods can be used to detoxify the body: enterosorption, drainage of the thoracic lymphatic duct, lymphosorption, hemosorption, UFO, plasmapheresis, xenosorption and HBO.

**The prognosis for peritonitis** largely depends on the nature of the underlying disease that caused peritonitis, the timeliness of the surgical intervention, and the adequacy of the treatment.

##### **Separate forms of peritonitis.**

**Tuberculous peritonitis** in most cases develops by the hematogenous route from extra-abdominal sources (lungs, lymph nodes), as well as from the abdominal organs and mesenteric lymph nodes affected by tuberculosis. The clinical course of tuberculous peritonitis can be acute, subacute or chronic, with the latter form being the most common. There are exudative, caseous-ulcerative (pseudotumor) and fibrous forms. And depending on the form of the process, various symptoms prevail in the clinical picture - increasing ascites, partial or complete intestinal obstruction, diffuse peritonitis. Anamnesis (past tuberculosis), increased sensitivity to tuberculin, laparoscopy help in the diagnosis. Treatment: as a rule, medication, taking into account the modern principles of treatment of the tuberculous process, and only when symptoms of diffuse peritonitis or acute intestinal obstruction appear, surgical intervention is indicated.

**Gynecological peritonitis.** Allocate nonspecific and specific peritonitis. Nonspecific peritonitis occurs when pus breaks out into the abdominal cavity from an inflammatory tumor of the uterine appendages, parametrium abscesses, a festering ovarian cyst when its legs are twisted. The greatest difficulty in diagnosis is gynecological peritonitis developing in the postpartum period and after community-acquired septic abortion due to the spread of infection from the uterus (metroendometritis, metrothrombophlebitis) by lymphogenous or hematogenous pathway. Another possible cause of peritonitis is the ingress of microflora into the abdominal cavity with penetrating injuries of the uterus and vagina (perforation and rupture of the uterus, after cesarean section, etc.). At the same time, the inflammatory process can capture the pelvic cavity, causing the so-called pelveoperitonitis, but it can also spread to most of the surface of the peritoneum and then diffuse peritonitis occurs. Spilled peritonitis of gynecological origin proceeds in the same way as peritonitis with other most frequent sources of infection. Pelveoperitonitis is relatively benign. Dull pains in the lower abdomen observed at the beginning of the disease, tension of the muscles of the anterior abdominal wall, high body temperature under the influence of massive antibiotic therapy decrease after a while, the exudate undergoes resorption, and recovery occurs. With the progression of pelveoperitonitis, pain gradually increases, symptoms of purulent intoxication appear, and severe hyperthermia. In this case, surgical treatment is indicated.

**Specific pelveoperitonitis** is often caused by gonococcal flora. 15% of all patients with gonorrhea develop pelveoperitonitis. Microbes enter the abdominal cavity from the uterine appendages affected by gonorrhea. The process, as a rule, does not go beyond the pelvic cavity. In this case, there are intense pains in the lower abdomen, tenesmus, loose stools, and the body temperature rises. The abdomen is swollen, palpation reveals the tension of the muscles of the anterior abdominal wall, a positive symptom of Shchetkin-Blumberg. During rectal and vaginal examination, signs of inflammation of the pelvic peritoneum are revealed, and serous-purulent discharge is noted from the vagina. Bacteriological examination confirms the diagnosis. Treatment: medication for gonorrheal peritonitis. Prescribe detoxification and antibiotic therapy, an elevated position of the torso in bed.

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## TOPIC number 18: Intestinal fistulas

**The lecture is dedicated to:** *for 4th year students of the medical faculty*

**Substantiation of the topic:** Intestinal fistulas are a severe complication of various diseases and injuries of the abdominal organs. The most common are external intestinal fistulas, in which intestinal contents are secreted outside or into the abscess cavity with complete or partial disturbance of intestinal passage. The loss of intestinal contents depends on the level of the fistula, the size of the defect in the intestinal wall and the way the patient is fed. The higher the fistula is located in the intestine, where the more liquid and most active contents are, the more significant the loss of intestinal contents, and the place with it of water, proteins, electrolytes and enzymes, and the effect on the surrounding tissues is more destructive.

**The purpose of the lecture:** to acquaint students with diseases leading to the development of intestinal fistulas, the peculiarities of the clinical course of various forms. Acquaintance of students with the main methods of treatment of intestinal fistulas, pre- and postoperative management, rehabilitation of patients.

**Educational goals:** Students should know about intestinal fistulas, as a serious pathology of surgery, methods of preventing it, complications and understand the importance of both studying this problem and its significance and proportion in the development of the younger generation and the health of the entire population. The problem of identifying and treating intestinal fistulas is an important part of the work of general practice and many other specialties.

**Objectives of the lecture:** To give an idea of intestinal fistulas. Explain the causes and etiopathogenesis of the development of diseases. To acquaint students with the modern, most informative methods of examining patients.

**Questions to be analyzed, indicating the time allotted to the question:**



1. Give the concept of intestinal fistula. - 5 minutes.
2. Explain the causes and etiopathogenesis of the development of diseases. - 15 minutes.
3. Give a clinical picture of the options for the possible course of the disease. Principles of modern treatment. - 35 minutes
4. Conduct differential diagnosis with other diseases. - 10 min.
5. To acquaint students with the modern, most informative methods of examining patients. - 10 min.

### **Intestinal fistula**

Intestinal fistulas are a serious complication of various diseases and injuries of the abdominal organs. The most common are external intestinal fistulas, in which intestinal contents are secreted outside or into the abscess cavity with complete or partial disturbance of intestinal passage. The loss of intestinal contents depends on the level of the fistula, the size of the defect in the intestinal wall and the way the patient is fed. The higher the fistula is located in the intestine, where the more liquid and most active contents are, the more significant the loss of intestinal contents, and the place with it of water, proteins, electrolytes and enzymes, and the effect on the surrounding tissues is more destructive.

Intestinal fistula treatment is the most difficult section of gastrointestinal surgery. If the treatment of formed intestinal fistulas to some extent can be recognized as an already well-developed section of surgery with developed clear indications and contraindications for surgical treatment with relatively low postoperative mortality, then in the treatment of patients with unformed intestinal fistulas there are many controversial and insufficiently resolved issues. The most difficult is the treatment of high small intestinal fistulas, accompanied by rapidly progressive exhaustion of patients and severe pyoinflammatory processes, especially occurring against the background of peritonitis, interintestinal abscesses and intestinal obstruction. In such cases, it is necessary to solve not only purely surgical tasks, but also to correct the pathophysiological disorders of water, electrolyte, protein and enzyme metabolism, and restore the function of the digestive tract.

**Etiology, pathogenesis and structure of intestinal fistulas.** The reasons for the formation of intestinal fistulas are diverse. Analysis of the literature and our own observations allowed us to classify intestinal fistulas by etiological basis.

Intestinal fistulas can be congenital and acquired. Congenital intestinal fistulas are relatively rare. They are the result of malformations of the gastrointestinal tract. With anomalies associated with a delay in the reverse development of the yolk duct, the yolk-intestinal duct does not become clogged and the intestinal contents are released outward in the navel. In addition, various disorders in the development of the anal and ampullar part of the rectum lead to the fact that the final section of the intestine opens into the vagina, scrotum or bladder.

A special group is made up of small bowel fistulas due to suspended enterostomy, performed in the "classic" form, ie, when the intestine is not sutured to the peritoneum, but is fixed by "hanging" it with a rubber tube to the anterior abdominal wall in the expectation of gluing the intestine with the parietal peritoneum. The tube is removed on the 8-10th day. The fistula should stop functioning and gradually heal, but, unfortunately, this is not always the case. As a result of a decrease in the plastic properties of the peritoneum in weakened patients, the intestine can move away from the anterior abdominal wall, and the intestinal contents will flow not only outside, but also into the abdominal cavity. Often, the intestinal fistula, after removing the rubber tube, does not heal within the prescribed period, but continues to function abundantly and leads to exhaustion and even death of the patient.

Diseases that can lead to the formation of spontaneous intestinal fistulas are as follows: a) malignant tumors (intestinal perforation due to the disintegration of a tumor that has developed both in the intestinal wall itself and in the vicinity of it); b) acute and chronic inflammatory processes in the abdominal organs (appendicular infiltration, actinomycosis, typhoid fever, tuberculosis of the intestine or other organs, ulcerative colitis, colon diverticulitis, terminal ileitis, etc.); c) destructive changes in the intestinal wall resulting from

circulatory disorders in it (strangulated hernia, diseases and damage to the vessels of the mesentery, etc.). In all cases, external intestinal fistulas spontaneously form only if the affected intestinal loop before perforation was already delimited from the free abdominal cavity and with the further development of the process, the contents of the intestine find a way out through the abdominal wall. Postoperative intestinal fistulas can occur after any surgical interventions on the abdominal organs. The percentage of postoperative fistulas among all intestinal fistulas is 66.92 [Gritzman Yu. Ya., 1972]. Most often, intestinal fistulas occur after appendectomy.

There are two categories of leading reasons: the first is the presence of a purulent-inflammatory process in the abdominal cavity at the time of the operation, caused either by a violation of blood circulation in the intestinal wall, or by an inflammatory process in it; the second - tactical and technical mistakes made both during surgical intervention and in the management of the postoperative period. One of the leading causes of intestinal fistulas after surgery is the progression of the main pyoinflammatory process in the abdominal cavity, for which the patient was operated on. The formation of intestinal fistulas is observed after opening and draining abscesses of the abdominal cavity due to perforated inoperable malignant tumors, advanced forms of acute appendicitis with increasing infiltration, and sometimes destruction of the dome of the cecum. In such cases, the surgeon fears the formation of an intestinal fistula in the postoperative period, but despite this, he sometimes even contributes to its formation, tightly tamponing the ileocecal region, for example, with bleeding after appendectomy in the infiltrate stage. Of course, it is sometimes very difficult to say exactly what exactly caused the formation of an intestinal fistula, since there is often a combination of various conditions that predispose to this complication (anemia, intoxication, exhaustion). In such cases, any error made during the operation or in the postoperative period can serve as a predisposing factor for the formation of an intestinal fistula. Tactical mistakes that entail technical difficulties include the wrong choice of pain relief.

Operations for destructive processes in the abdominal cavity require general anesthesia and good relaxation of the muscles of the anterior abdominal wall. Therefore, even an appendectomy with a destructive process is recommended to be performed under anesthesia. Access for such an operation should be wide enough. An incorrectly chosen approach or a small incision creates significant difficulties for the operation and a thorough revision of the abdominal cavity. Careful handling of tissues altered by the inflammatory process is necessary. When separating adhesions and isolating the appendix, it is necessary to strictly monitor so as not to damage the intestinal wall, therefore, it is better not to isolate the organ from a dense infiltrate. All areas of the intestine deserosed when the appendix is isolated should be peritonized. During any operation, the volume of surgical intervention should be adequate to the changes that are detected. All tissues questionable in terms of viability should be removed, if possible, and the interintestinal anastomosis should be applied only within healthy areas. A thorough toilet of the abdominal cavity and good drainage of it in the postoperative period are necessary. It should be borne in mind that the deaf suturing of the wound of the abdominal wall during the inflammatory process often leads to suppuration with the formation of an intestinal fistula. Of the most common technical errors, it should be noted a rough surgical technique, excessive trauma to soft tissues and organs, excessive "skeletonization" of the anastomosed ends of the intestine, through stitching of the wall when applying serous-serous sutures, as well as accidental stitching of the intestine to the wound of the anterior abdominal wall in the presence of swollen loops and insufficient muscle relaxation.

The structure of intestinal fistulas. An intestinal fistula is a pathological communication of the intestinal lumen with the surface of the skin or an internal organ. With an internal fistula, intestinal contents enter the cavity of another organ - into the intestine, gallbladder and extrahepatic bile ducts, urinary tract (ureter, bladder) or into the vagina. With an external fistula, the intestinal contents enter the external environment. External intestinal fistulas can be formed and unformed. Unformed intestinal fistulas occur in the early stages of their formation, when the purulent-inflammatory process has not yet been eliminated and there is diffuse or limited peritonitis with signs of purulent intoxication. The leakage of

intestinal contents aggravates all these phenomena, and also causes dehydration of the body, loss of electrolytes and maceration of the skin. Among the unformed external intestinal fistulas, two types are distinguished: a fistula through the cavity and a gaping fistula. Fistulas through the cavity in the wound are not visible. Its lumen communicates with the external environment through a cavity delimited from the free abdominal cavity by adhesions, or opens into deep pockets of a purulent or granulating wound. With a gaping fistula, the mucous membrane or intestinal lumen is visible directly in the wound. This type of fistula usually occurs on partially everted bowel loops and at the bottom of granulating wounds. Formed intestinal fistulas, in turn, are divided into labial, tubular and transitional. A lip-shaped fistula is characterized by the fact that the intestinal mucosa grows together with the skin and sometimes protrudes above it, forming, as it were, a lip. In the labial fistula, the opening of the fistula is distinguished, the front wall carrying this opening, the posterior wall, leading and outgoing sections of the intestine. The fistula opening can be of various sizes - from very small to several centimeters in diameter. Through the pinhole, intestinal contents may not be released to the outside. The large opening promotes the excretion of almost all intestinal contents. The anterior intestinal wall, which is involved in the formation of a fistula, is often funnel-shaped. Intestinal contents can flow both outside and into the lumen of the discharge intestine. In cases where not all intestinal contents are released outward, intestinal fistulas are called incomplete. With such fistulas, both the adducting and abducting sections of the intestine function normally, the patient has stools and there is no pronounced atrophy in the abducting part of the intestine. In the development and functioning of lip-shaped fistulas, the so-called spur is of great importance - the prolapse of the posterior wall of the intestine through the opening of the fistula. The release of the posterior wall of the intestine is facilitated by increased intra-abdominal pressure, large sizes of the fistulous opening with the presence of a defect in the abdominal wall, inflammation and scars. The spur prevents intestinal contents from entering the discharge part of the intestine and promotes the release of all intestinal contents outward. The fistula becomes complete.

In a transitional fistula, there are simultaneously signs of both tubular and labial fistula. If in the transitional intestinal fistula the granulation tissue becomes cicatricial, such a deformation of the fistulous opening is possible, in which a part of the intestinal mucosa, adhered to the skin, can sometimes sink deeper, and the fistula turns into a tubular one. And vice versa, the purulent-inflammatory process around the fistulous tract can lead to rejection of the surrounding tissues, an increase in the size of the fistulous opening, and the approach of the intestinal mucosa to the skin. In the future, the formation of a lip-shaped fistula is possible.

Intestinal fistulas can be simple (uncomplicated), when the intestinal wall and surrounding tissues are not changed, and complicated when there are significant changes in the intestinal wall, surrounding tissues and adjacent organs - fecal phlegmon, abscesses of the abdominal cavity and abdominal wall, consequences of damage to the bladder, pelvic bones, etc. Intestinal fistulas can be single and multiple. Fistulas located close to each other along the intestinal loop are called adjacent multiple, and fistulas located in different parts of the gastrointestinal tract are called remotely located multiple fistulas. If fistulas are localized in the small and large intestine at the same time, they are usually called mixed.

Lip-shaped fistulas, depending on the structure of the fistulous opening, distinguish between single-mouth (single-barreled) or double-mouth (double-barreled). With a small defect in the wall, the intestinal lumen can communicate with the external environment in the form of a single-oral fistulous opening. In contrast, with a large defect in the intestinal wall, the fistula can have two holes, i.e. be double-verbal. With such fistulas, one hole belongs to the adductor, the other to the discharge section of the intestine. Often between these holes there is a section of the back wall - a spur. Monocostal labial fistulas are most often incomplete, bilateral - only complete. The localization of the internal opening of the external intestinal fistula can be different and depends, as a rule, on the pathological focus in the abdominal cavity, which caused the development of the intestinal fistula. The location of the external opening of the intestinal fistula can also be different, but mainly in the projection or near the pathological focus.

**Clinic and diagnostics.** The clinical course of intestinal fistulas depends on the nature of the main pathological process, localization and period of formation of the fistula, the amount and composition of intestinal discharge, associated complications. In the initial period of the onset of an unformed intestinal fistula, the inflammatory process predominates. Clinically, this process is manifested by pain in the wound, fever up to 38 ° C, chills, leukocytosis, purulent intoxication. Increased pain, as a rule, indicates a delay in purulent discharge and insufficient drainage of the wound. The higher the fistula is located, the faster and more intensively various changes in the body, characteristic of a high fistula, occur. Abundant secretion of small intestinal contents to the outside leads to dehydration. Thirst, increasing weakness, rapid fatigue, lack of appetite, and increased irritability appear. The patient's eyes sink deeply. The skin becomes dry and loses turgor, a pinkish-cyanotic marbling appears on the skin of the limbs. The saphenous veins collapse. The limbs feel cold to the touch; tachycardia is noted. Due to the reduced renal filtration, urine output decreases. Against the background of a decrease in blood pressure and electrolyte disturbances, fibrillar twitching of the muscles of the extremities occurs, often turning into convulsive contractions. All these pathological changes cause in a short time a significant loss of body weight, reaching 50% of the initial. In patients with fistulas localized in the lower parts of the ileum, the clinical picture is characterized by the fact that in some cases, from the moment of fistula formation for a long time, the patient's condition may remain satisfactory. Patients during this period are active, retain their appetite, they do not experience significant weight loss. Diuresis is normal. Functional and biochemical blood parameters without significant deviations from the norm. During this period, the intestinal fistula can finally form. In the clinical picture of colonic fistulas, purulent-inflammatory processes take the leading place, and disorders of water-electrolyte metabolism and malnutrition of the patient recede into the background. In the early stage of the formation of a large intestinal fistula, as a rule, the loop of the intestine carrying the fistula lies in a purulent wound filled with intestinal discharge. In the acute period, the fistula is just forming, so it will become labial or tubular - it will depend on the further course of the inflammatory process. This period is the most dangerous for the patient and requires special attention; at this time, severe purulent complications are most common - fecal phlegmon of the anterior abdominal wall, retroperitoneal space and pelvic cavity. These complications are characterized by the rapid development of an inflammatory, often necrotic, extensive and widespread process in the subcutaneous tissue, proceeding with severe intoxication, prolonged temperature reaction and chills. Phlegmons have a very severe course against the background of fistulas of the sigmoid and rectum. They develop like necrotic phlegmon with pronounced intoxication. Along with the general symptoms of intoxication and a febrile state, patients have expressed local inflammatory processes. Purulent soaking of the surrounding tissues around the fistula is combined with leaks deep into the lumbar region and into the small pelvis. The spread of a purulent-inflammatory process along the retroperitoneal tissue is accompanied by the appearance of pain along the ilium and lower back. A common complication of fistulas are abdominal abscesses, which are localized in the right iliac region, subhepatic and subphrenic spaces, between the loops of the small intestine and in the pelvic cavity. Such abscesses also arise as concomitants due to the transferred general peritonitis. An isolated accumulation of pus can sometimes manifest itself almost in nothing for a long time, which, apparently, is due to the unresponsiveness of a sharply weakened organism. However, if the abscess was not recognized in a timely manner and measures were not taken to eliminate it, it breaks into the free abdominal cavity, and a picture of rapidly progressing peritonitis develops. Less often, the abscess opens into the lumen of the intestine lying nearby, which can lead to self-healing.

The complex for diagnosing intestinal fistulas includes determining the type and localization, nature and length of the fistulous course, as well as clarifying the patency of the abducting knee of the bowel loop carrying the fistula, and its relationship with the surrounding organs. A comprehensive examination includes a visual examination of a wound with a fistula, the use of dyes inside or through an enema, X-ray and endoscopic examination. An approximate diagnosis is usually not difficult, since the presence of an

external intestinal fistula is indicated by the appearance of intestinal contents in the wound. How easy it is to establish the presence of a fistula, the more difficult, and often impossible, to determine its level. Fistulas of the ileum, in particular those located near the ileocecal flap, have a discharge in the form of liquid feces. Fistulas of the large intestine, especially its left half, secrete more or less shaped feces, which do not have a "digesting" effect and do not cause skin maceration so quickly. However, this kind of diagnosis is not reliable enough, and in some cases it is erroneous. The location of the fistula on the surface of the skin also provides some additional information about the level of the fistula. So, in the epigastric region, fistulas of the transverse colon more often open, in the mesogastric - ileum, in the hypogastric - ileum, on the lateral walls of the abdomen and in the lumbar region - of the large intestine.

The outflow of fluid in a strong stream through the peripheral segment of the intestine carrying the fistula allows one to think about its sufficient patency, which is further confirmed by X-ray examination and directly during the operation. Another way to ascertain an external intestinal fistula is to examine the discharge from the wound for the presence of bilirubin, diastase or urea. In most cases, the type and size of the fistula, the presence of a spur and its mobility are established using simple techniques of visual and digital examination. However, in large deep wounds and with fistulas through the cavity, such an examination is difficult. In these cases, you can resort to using endoscopic devices, in particular a laparoscope. Probing a fresh fistula with a metal or rubber catheter is not recommended. The leading method for diagnosing intestinal fistulas is X-ray. In most cases, it can be used to solve all the previously listed tasks. In view of the significant variety of intestinal fistulas, requiring a differentiated choice of diagnostic methods, as well as taking into account the serious condition of most patients, the least traumatic research method should be selected in each individual case.

The earlier the X-ray examination is carried out, the faster the correct diagnosis will be made. The general serious condition of the patient and the presence of a purulent wound are not a contraindication to X-ray examination. The X-ray examination technique depends on the period of the disease. In the early stages of fistula formation, in the acute period, this technique should include a survey polypositional study of the chest and abdominal cavity, as well as contrast methods - fistulography, passage of barium through the intestines and irrigoscopy. If the mouth of the fistula can be probed, fistulography is preferred. When barium is taken inside, small intestinal fistulas are contrasted, with the help of irrigoscopy - fistulas of the large intestine. In some cases, it is necessary to use both methods in one complex. Comparison of X-ray data with clinical observation provides early and accurate diagnosis of not only the fistula itself, but also complications that often arise in the acute period. Reactive changes in the organs of the chest (basal pneumonia, atelectasis of the lower lobes of the lungs) effusion in the pleura, high standing of the diaphragm and limitation of its mobility) is an indirect sign of a purulent focus in the abdominal cavity. The closer the focus is to the diaphragm, the more pronounced the reactive changes. X-ray survey of patients in the acute period of intestinal fistula formation reveals only indirect signs of a purulent process in the abdominal cavity. Such a study is also important for the identification of purulent-necrotic processes localized in the retroperitoneal space (destructive pancreatitis, phlegmon of retroperitoneal tissue, pelvic phlegmon, etc.), which have a certain X-ray semiotics. The question of the presence, nature and localization of the external intestinal fistula can be finally resolved only with the use of contrast research methods. X-ray diagnosis at a later date with an already formed intestinal fistula is less complicated. By this time, as a rule, the purulent-inflammatory process ends both in the area of the wound and in the abdominal cavity. Consequently, the cause of reactive changes in the intestines, diaphragm, lungs and pleura, characteristic of the early stage of intestinal fistula formation, is eliminated. In the complex of X-ray methods used during this period, the role of contrast research methods, especially fistulography, significantly increases. Fistulography is performed as follows: a liquid contrast agent is injected through a thin catheter located in the fistulous course and an X-ray is taken. The photographs establish the shape of the course and localization. Various contrast agents are used for fistulography - barium, iodolipol, cardiotrast, etc. The amount and choice of the drug are dictated by the size of the fistula. Unlike barium suspension, liquid

contrast agents penetrate well even into small holes in the intestinal wall. In other cases, especially if a rubber catheter can be inserted directly into the intestinal lumen, it is preferable to inject a liquid barium suspension. Rubber drains for fistulography should be selected taking into account the outer diameter of the fistula; tightness is achieved using gauze swabs or foam sponge. The introduction of a contrast agent not directly into the intestine, but through the fistulous tract or cavity should be carried out with caution and if pain in the abdomen occurs, stop it immediately, as complications in the form of penetration of the contrast agent into the free abdominal cavity are possible. **Fistulography** is a valuable method for diagnosing intestinal fistulas because the configuration of the fistulous course revealed with its help in some cases allows choosing the most correct method of treatment. However, when conducting a study, it is sometimes necessary to perform simultaneously fluorofistuloscopy with the participation of a specialist radiologist in order to clarify the type and location of the intestine carrying the fistula.

**Irrigoscopy** or X-ray examination with the intake of barium inside is carried out in the usual way. With irrigoscopy, it is possible to roughly establish the level of the colon fistula and pathological changes in its wall. On radiographs made during fractional passage at predetermined time intervals from taking a contrast agent, it is also possible to only roughly determine the level of the fistula. The importance of X-ray examination of patients with intestinal fistulas can hardly be overestimated. A thorough examination, performed by the surgeon together with the radiologist, allows you to obtain reliable information that is the key to the correct choice of treatment. X-ray examination can be combined with endoscopic methods. Endoscopic intubation fistulography, counter fistulography and fistuloscopy with selective fistulography have already found application in the diagnosis of fistulas of the colon.

**Treatment of** external intestinal fistulas is challenging. It touches upon not only purely surgical issues, but also issues related to parenteral nutrition and correction of homeostasis disorders. Treatment should be comprehensive and highly individual, depending on the form and stage of development of the fistula.

Methods of conservative and surgical treatment of intestinal fistulas do not exclude, but complement each other and can be used both simultaneously and separately in the corresponding observations and in the corresponding period. The general principles of treatment of patients with external intestinal fistulas consist of three factors: 1) local treatment; 2) general treatment; 3) operational methods for eliminating intestinal fistula. Local treatment. Currently, local treatment of external intestinal fistulas is used, which consists of: a) treatment of purulent wounds; b) protection of the tissues surrounding the fistula from the effects of intestinal discharge; c) reducing or stopping the loss of intestinal discharge. The principles of treatment of purulent wounds in the presence of intestinal fistula are the same as in the treatment of infected wounds. Depending on the timing and stage of the wound process, dressings are used with hypertonic solutions, antiseptics and enzyme preparations, various ointments and emulsions. In practical medical institutions, treatment of wounds with intestinal fistulas with ointment dressings is widespread. In some cases, this is justified: ointment and balm promote the growth of granulations, cleanse the wound, with small fistulas, they have an obstructive effect. However, the use of Vishnevsky ointment on exposed bowel loops should be careful, as this can lead to additional destruction of the intestinal wall. Vishnevsky's ointment does not neutralize the chemical and biological activity of intestinal discharge, which is especially important in the treatment of small intestinal fistulas. Wipes with this ointment are hygroscopic and even hypertensive, get wet quickly, thus creating a kind of "fecal compress". Therefore, preference should be given to drugs that neutralize the effect of intestinal secretions. The means proposed for obturation of intestinal fistulas can be divided into several groups: 1. Obstructive agents used externally, without their introduction into the intestinal lumen. Calo receivers can also be referred to them. 2. Obturators inserted into the intestinal lumen through the fistula and occluding the fistulous opening from the inside. 3. Various devices and apparatus for aspiration of intestinal secretions, etc. its subsequent introduction into the discharge section of the intestine carrying the fistula. The best obturators are those that not only block the fistula, but also ensure the normal passage of intestinal contents.

Most often, intestinal fistulas are covered with tampons soaked in food that inactivate the action of enzymes (oil, proteins, meat broth, etc.). A pressure bandage is applied over the tampon. In the prevention of dermatitis caused by contact with the skin of intestinal discharge, and a kind of obstruction of the intestinal fistula, plaster bandages are used. The use of gypsum in the treatment of external intestinal fistulas was especially widespread during the Great Patriotic War of 1941-1945.

With the help of a bandage and a rubber pad, the reservoir is tightly fixed to the abdomen. General treatment. The complex of general treatment of patients with external intestinal fistulas includes: 1) limitation and elimination of the inflammatory process in the abdominal cavity and the anterior abdominal wall; 2) Conducting a balanced diet; 3) correction of homeostasis and reduction of intoxication; 4) stimulation of the body's defenses and regenerative processes. To fight infection and intoxication, antibacterial and detoxification therapy is used. Nutrition plays an important role in the treatment of intestinal fistulas, since the disease specifically affects this particular function of the body.

**Operative methods of treating** intestinal fistula. The problem of surgical treatment of intestinal fistulas involves the determination of indications, the choice of the optimal period of intervention and its nature. In each individual observation, these issues should be resolved individually. Indications for surgery are determined by the stage of development and localization of the fistula, the amount and nature of intestinal discharge, the effectiveness of conservative therapy, concomitant complications, etc. Formed labial fistulas of the small and large intestine do not heal on their own, therefore their presence is a direct indication for surgical treatment. The greatest difficulties in establishing indications for surgical intervention arise with unformed intestinal fistulas at an early stage of their formation. With colonic fistulas, surgical tactics are more specific. The indication for surgery is the presence of formed and not amenable to conservative therapy of labial and cicatricial tubular fistulas. The term of the surgical intervention is set taking into account the condition of the patient and the wound, as well as general contraindications to the operation. The most favorable local condition for the operation is complete wound healing up to the mouth of the fistula. Of the features of the operation, it should be noted the need for hermetic suturing of the external opening of the intestinal fistula before opening the abdominal cavity in order to prevent possible infection. In the surgical treatment of intestinal fistulas in the ileocecal region, especially the cecum, one should first try to perform a parietal resection of the cecum (since it is quite often feasible), and if the attempt fails, a right-sided hemicolectomy. If the cause of the fistula was malignant neoplasms, tuberculosis, actinomycosis, or X-ray therapy was performed, the surgical intervention should be more extensive. Irradiated tissues do not create conditions for self-closure of the fistula.

The main reason for the negative results of surgical treatment of intestinal fistulas is the failure of the sutures. Many factors predispose to this, and primarily hypoproteinemia, metabolic disorders, and the presence of infection. An important link in the pathogenesis of complications is postoperative intestinal paresis. In patients in serious condition, especially against the background of limited abscesses or infiltrates localized in the abdominal cavity, resection of the bowel loop carrying the fistula may be recommended, followed by restoration of the intestinal tract patency using an end-to-side or side-to-side interintestinal anastomosis and the simultaneous formation of a unloading enterostomy on the proximal segment of the intestine. The enterostomy can subsequently close on its own or be sutured. The postoperative management of patients does not differ significantly from that of operations on the intestines in general, only it is necessary to carefully monitor the condition of the postoperative wound due to the rather frequent suppuration in this group of patients.

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# TRAINING TECHNOLOGY PRACTICAL EXERCISE

## THEME № 1. SUBJECT OF FACULTY SURGERY. Curation of patients expected to H. abdominal hernia.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters, tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### 2. Duration of study of the topic

The number of hours is 5, 5.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students g red-haired s abdomen, causes their development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, reabilit a tion patients.

#### Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with c s Jamie abdomen;
- **learn special methods of examination.**

#### *The student should be able to:*

- Perform practical skills - to acquire certain practical nav s ki in the evaluation of patients with abdominal hernias, perform special techniques are surveyed about Bani these patients, to determine the indications and contraindications for surgical im e -interference.

### 4. Motivation

Suggestion students need adequate timely surgery to isolator and Tia threatening complications, and in their development - meeting the most informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is the operation and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### 5. Intersubject and intrasubject communications

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### 6. Content of the lesson

#### 6.1. Theoretical part

Inguinal hernias account for 80-90% of other types of hernias. Cf. e di patients with inguinal hernias are men 90--97%, and women -3-10%. More frequent occurrence of the groin of the O hernias in men is associated with the peculiarities of the anatomical structure and the groin area in men. Inguinal hernias are congenital and acquired.

Congenital inguinal hernia. If the vaginal process of the peritoneum remains completely unsealed, its cavity communicates freely with the peritoneal cavity. Later formed congenital inguinal hernia, where the processus vaginalis I to wish to set up hernia sac.

Acquired inguinal hernia. Distinguish between oblique external inguinal hernia and direct (internal) inguinal hernia. Oblique inguinal hernia Prokh about dit through the

external inguinal fossa; straight - through medial inguinal I m ku. In the initial stage of oblique inguinal hernia eye in hernial s pyachivanie unnoticed. In the inguinal-scrotal form, the hernia descends into the scrotum, stretching it.

Direct inguinal hernia comes from the abdominal cavity through the medial hole in s pyachivaya transverse fascia (the back wall of the inguinal canal). Having passed through the external opening of the inguinal canal, it is located at the root of the scrotum above the pupar ligament in the in and de rounded formation. The transverse fascia prevents the direct inguinal hernia from descending into the scrotum. Often straight pas hovaya hernia is dv from a third party.

There is a special group of intramural (interstitial) inguinal hernias. With these hernias, the hernial sac is located between the different layers of the abdominal wall.

Allocate preperitoneal hernia, when the hernial sac is located between the peritoneum and the transverse fascia, intermuscular hernia, when the Games zhevoy dis bag of false between the different layers of muscle and aponeurosis; Surface hernia, when the hernial sac Raspaud false for the superficial inguinal ring between the external oblique aponeurosis muscle belly and n of superficially fascia.

Clinic and diagnosis: to identify the formed crotch g s Ms difficult. A typical anamnesis: sudden occurrence of herniation at the time of physical stress or gradual development hernial No. I Chivanov appearance protrusions abdominal straining, the patient's body in an upright position and imbedding e of hernias in the horizontal position of the patient. Patients concerned about pain in the hernia area, abdominal pain, discomfort when walking, dyspeptic symptoms, while chipping s zyaschi bladder hernias occur dysuria.

Examination of the patient in an upright position gives a representation of the asymmetry of the inguinal regions. If there are protrusions of the abdominal wall can be determined posted e ry and shape of a hernia. Palpation determined surface texture herniation, rumbling bowel percussion - percussion sound (tympanitis, besides n Leniye). Finger examination of the external opening of the inguinal canal is performed in the mountains and in the zonal position of the patient after the contents of the hernial sac have been repositioned.

Diagnosis of inguinal hernias in women is based on examination and palpation, since the introduction of a finger into the external opening of the inguinal canal is not possible .

Differential diagnosis between inguinal hernia and femoral hernia is to identify them on t wear to the inguinal ligament.

Nevpravimaya inguinal-hernia scrotal, causing an increase in softening e moat scrotum acquires similarity with leading n Coy egg shells.

Diaphanoscopy (transillumination) gives a positive result with dropsy of the testicle.

With inguinal hernia has similarities varicose veins seme n Nogo cord (varicocele), wherein the upright patient has blunt ra with pyran pain and there is a slight increase in the size of the scrotum. On palpation can detect "kites Dr. Noah" veins of the spermatic cord.

Dilated veins collapse easily when pressed on them or when the scrotum is lifted up.

Treatment: surgical.

There are several ways to repair the inguinal canal.

Girard's method strengthens the anterior wall of the inguinal canal.

The method is a modification of the method Spasokukotsky Girard and differs from it only in that simultaneously to the inguinal ligament sutured to muscles inside of shove a transverse and together with the upper flap of the external oblique muscle aponeurosis alive on that.

The Kimbarovski seam provides a connection of one - name fabrics.

Method Bassini - strengthens the rear wall to the inguinal and Nala.

Kukudzhanov's method. We propose to direct and complex forms of the groin of the O hernias.

Postempskogo method consists in the complete elimination of the inguinal to a Nala, inguinal gap and the creation of the inguinal canal with completely n of vym direction.

### FEMORAL HERNIA

Femoral hernias are located on the thigh in the region of the Scarp triangle. Education in frequency they make up 5-8% of all hernias alive about that.

The greatest frequency of femoral hernias in women is explained by a wider and more rokim pelvis, which leads to a greater severity of muscle and vascular lacunae and a lower strength of the pupar ligament.

Clinical picture and diagnosis: a femoral hernia in the process of formation goes through three stages: initial, canal and complete.

In the initial stage, the hernial protrusion does not extend beyond the inner femoral ring.

In an incomplete (canal) stage, the hernial protrusion is located near the nasal bundle, does not go beyond the superficial fascia, and does not penetrate into the subcutaneous tissue of the Scarp triangle.

In the full step femoral hernia goes all the femoral canal, s goes through its outer opening in the subcutaneous tissue of the thigh.

The diagnosis of primary and channel femoral hernia is labor d NOSTA.

Suspect such herniation can only be based on complaints of pain in the groin, in the audio w therein abdomen, the upper thigh section, increasing with walking, physical exertion, changes in the weather.

Differential diagnosis: performed most often between femoral and inguinal hernia.

For femoral irreducible hernia can be taken lipoma, pa with relying in the upper skarpovskogo triangle. Lipoma has lobed structure, not attached , I linked to the outer opening of the femoral canal. Preperitoneal lipoma exiting through the femoral canal and IME th conductive connection with it more difficult to distinguish from the femoral hernia, in which can also be preperitoneal lipoma. Hernia and preperitoneal lipoma require the same operation - closing the internal hole thigh n Nogo channel.

Simulate femoral hernia can be enlarged lymph nodes in the region and the STI skarpovskogo triangle (chronic lymphadenitis, metastatic tumor in limfat and cal nodes). The lymph node can be, seizing fingers, pull, and to establish the absence of its association with baa d rennym channel.

The similarity with the femoral hernia is large in aneurysmal expansion d cutaneous vein at a place where it flows into the femoral vein.

Treatment: surgical.

Bassini's method - the incision is made parallel to the inguinal ligament and below it above the hernia with the protrusion.

Operation femoral inguinal hernia method (method of Rudge) - d e bark incision as an inguinal hernia.

### Umbilical hernia

Umbilical hernia call going out of the abdominal cavity through the abdominal wall defect in the pu p ka. With normal development, the umbilical ring is completely overgrown. The umbilical fascia and peritoneum are directly presented to the skin.

Symptoms: abdominal pain, calling the child anxiety protrusion in the umbilicus, vanishing pressure sensitive expansion Pupo hours ring of.

Umbilical hernias in children are usually not prejudiced, but this complication poss w but. The child's parents should be informed about the signs of infringement of hernia and to embrace a thread need immediate hospitalization of the child in the development of this complicated e Nia.

Treatment: in young children with the development of the abdominal wall may Samoa of treatment between the ages of 6 months to 3 years, sometimes to 6 years. If the

hernia does not bother the child, conservative treatment is used. Prescribe a massage, a therapeutic hymn and a stick that promotes the development and strengthening of the abdominal wall.

The indications for surgery at a younger age are frequent partial infringement hernia rapid withdrawn and chenie hernia sizes.

Umbilical hernias in adults account for 5% of all external abdominal hernias. Elaborate and term umbilical hernia is more common in women older than 40 years (80%). Causes of umbilical hernia congenital defects of the umbilical region, repeated pregnancy proceeded without the necessary compliance regime, physical neglect practicing e niyami and gymnastics.

Treatment: only surgical plastic according to the Sapezhko method and the Mayo method.

#### WHITE LINE HERNIA

White belly line form a tightly fitting to each other a fiber tufts of GOVERNMENTAL fibers aponeuroses broad abdominal muscles. There are gaps between them and the angle b Lenia, which may serve as predisposing anatomic factors in the mod and mations hernia linea alba. At first, the preperitoneal

fiber forming preperitoneal lipoma and then formed c s zhevoy bag.

Symptoms: pain in the epigastric region, aggravated after eating, with increased intra-abdominal pressure. The appearance of pain in patients with hernia linea alba explain or temporary usche m leniem hernias, or gastric gland tension, fixed to the hernia sac, or pressure on the nerves parietal br th bus (hernial sac).

When examining the patient, a dense painful formation is found in the white line of the abdomen. When free hernia can sometimes test the crevice etc. nye hernial.

Treatment: surgical. The operation consists in isolating the hernial sac, removing it and closing the opening in the aponeurosis by applying a purse-string suture or separate interrupted sutures. For large hernias of white line of the abdomen using Method C and pezhko. With a concomitant hernia of divergence of the rectus abdominis muscles, the N and palkov method is used .

#### **Used in this lesson, new educational technologies, "Che p ny box", "Web".**

##### USING THE BLACK BOX METHOD

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then discussing the answers and are, given addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

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Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
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3. One of the participants is given a skein of thread, and he asks his prepared n ny question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. S members continue and give questions and answer them, until everything will be in the web.

5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

## 6.2. Analytical part

### Situational tasks:

A 60-year-old patient, during the consultation, a direct inguinal hernia and prostate adenoma were found. Residual urine 100 ml.

I of . Your recommendations:

A. Hernia repair

B. adenomectomy, then hernia repair \*

B. conservative treatment

G. hernia repair, then adenomectomy

D. hernia repair, conservative treatment of adenoma

II . Necessary plastic surgery of the inguinal canal:

A. Postemsky \*

B. Girard

V. Ru-Oppel

G. Bassini

## 6.3. Practical part

A quest for practical skills (to hold the differential di and prognosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, nasogastric intubation ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND JUSTIFY

#### FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                             | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                          | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                   | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis. | 0                 | 40                             |
|     | Total                                                                                                                                                             | 0                 | 100                            |

### 2. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not<br>ful l Neal | Completely<br>correctly s full |
|------|------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                               | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                       | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0                 | 20                             |

|   |                     |   |     |
|---|---------------------|---|-----|
| 6 | Preventive measures | 0 | 20  |
|   | <b>Total</b>        | 0 | 100 |

### 3 . Definition of the symptom of " Cough impulse " .

**Objective:** definition of hernia complications (impairment), determining that a tick treatment

| No.   | stages                                                                                        | INCOMP l nile | fulfilled |
|-------|-----------------------------------------------------------------------------------------------|---------------|-----------|
| 1     | A patient in a supine or sitting Pos e SRI                                                    | 0             | ten       |
| 2     | Examination of the bulge area                                                                 | 0             | ten       |
| 3     | Taking anamnesis                                                                              | 0             | ten       |
| 4     | The palm of the right hand on the area of swelling on STI                                     | 0             | ten       |
| five  | Ask to cough                                                                                  | 0             | ten       |
| 6     | Determine the push of a bulge                                                                 | 0             | ten       |
| 7     | If you push during the cough is identified, sim p is a positive, not a hernia strangulated    | 0             | 20        |
| eight | If the push during cough is not detected, the symptom is negative, the hernia is strangulated | 0             | 20        |
|       | <b>Total</b>                                                                                  | 0             | 100       |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                                                                                                      |
|-----|-----------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer.<br>Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent "five" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situation and onny problems correctly, with a creative approach, with justification of the answer.<br>Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                            |
| 3   | 86 - 90%              | Excellent "five" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                      |
| 4   | 81-85%                | Good             | Questions raised covered full of Stu, but there                                                                                                                                                                                                                                                                                              |

|          |        |                             |                                                                                                                                                                                                                                                                                                            |
|----------|--------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        | "4"                         | are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, speaks with confidence, has accurate ideas. Situation n nye problems are solved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five     | 76-80% | Good "4"                    | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                              |
| 6        | 71-75% | Good "4"                    | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas . On situational tasks gives incomplete solutions.                                                                                                                         |
| 7        | 66-70% | Satisfied literally "3"     | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                   |
| eight    | 61-65% | Satisfied literally "3"     | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Admits mistakes in solving sieve and tional.                                                                                                              |
| nine     | 55-60% | Satisfied literally "3"     | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but.                                                                                                                                                          |
| ten      | 50-54% | Not satisfied literally "2" | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                     |
| eleven   | 46-49% | Unsatisfied sly "2"         | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                    |
| 12       | 41-45% | Unsatisfied sly "2"         | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                                                                      |
| 13       | 36-40% | Unsatisfied sly "2"         | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                                                                    |
| fourteen | 31-35% | Unsatisfied sly "2"         | Doesn't give answers to questions.                                                                                                                                                                                                                                                                         |

## 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                        | Lesson forms                                                                                                                   | Prolonged s NOSTA min. 90 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                     |                                                                                                                                | five                      |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilm, etc.)          | A survey explaining e of                                                                                                       | 25                        |
| 3    | Summing up the discussion                                                                                                                                                                                   |                                                                                                                                | five                      |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                         |                                                                                                                                | ten                       |
| five | Independent work of students from a military skills                                                                                                                                                         |                                                                                                                                | fifteen                   |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group           | Oral questioning, written on the item grew up, tests, verification of the results Practical e tion work, di a Kuss discussion. | 25                        |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions ) | Information, questions for self-preparation                                                                                    | five                      |

### 10. Test questions

1. Anatomical and topographic data of the groin area.
2. Clinic, recognition, treatment of inguinal hernias.
3. Anatomical and topographic data of the femoral triangle.
4. Clinic, recognition, treatment of femoral hernias.
5. Anatomical and topographic data of the umbilical ring.
6. Clinic, recognition, treatment of umbilical hernias.
7. Anatomical and topographic data of the white line of the abdomen.
8. Clinic, recognition, treatment of hernias of the white line of the abdomen.
9. Diastases of the rectus abdominis muscles .

### 11. Recommended reading

1. A.P. Krymov "The doctrine of hernias" 1960
2. Kuzin M.I. "Surgical diseases" 1985
3. Astapenko A.G. "A Practical Guide to surgically Bole of yum" 1984
4. Littman I. "Operative surgery" 1982
5. Karimov Sh.I. "The surgeon casalliklar" 1991
6. Azamkhodzhaev S.M. "The surgeon casalliklar" 1991
7. V. I. Rusakov "Fundamentals of Private Surgery" 1975
8. Vinogradov V. "Clinical Surgery" 1984

Internet addresses related to the lecture:

[http://www.tma.tmn.ru/Vest\\_nik](http://www.tma.tmn.ru/Vest_nik)

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)



## **THEME № 2. GR S LIVING OF THE WHITE LINE OF THE ABDOMINAL, Umbilical, Femoral groin.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### **2. Duration of study of the topic**

The number of hours is 5 , 5 .

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students g red-haired s abdomen, causes their development, clinical features, differential diagnosis, optimal methods leche e Nia, postoperative care, reabilit a tion patients.

#### **Tasks**

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with c s Jamie abdomen;
- learn special methods of examination.

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical nav s ki in the evaluation of patients with abdominal hernias, perform special techniques are surveyed about Bani these patients, to determine the indications and contraindications for surgical im e -interference.

### **4. Motivation**

Suggestion students need adequate timely surgery to isolator and Tia threatening complications and in their development - meeting the most informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is the operation and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this subject is based on the knowledge of the students the basics of anatomy, but p mal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

Inguinal hernias account for 80-90% of other types of hernias. Cf. e di patients with inguinal hernias are men 90--97%, and women -3-10%. More frequent occurrence of the groin of the O hernias in men is associated with the peculiarities of the anatomical structure and the groin area in men. Inguinal hernias are congenital and acquired.

Congenital inguinal hernia. If the vaginal process of the peritoneum remains completely unsealed, its cavity communicates freely with the peritoneal cavity. Later formed congenital inguinal hernia, where the processus vaginalis I to wish to set up hernia sac.

Acquired inguinal hernia. Distinguish between oblique external inguinal hernia and direct (internal) inguinal hernia. Oblique inguinal hernia Prokh about dit through the external inguinal

fossa; straight - through medial inguinal I m ku. In the initial stage of oblique inguinal hernia eye in hernial s pyachivanie unnoticed. In the inguinal-scrotal form, the hernia descends into the scrotum, stretching it.

Direct inguinal hernia comes from the abdominal cavity through the medial hole in s pyachivaya transverse fascia (the back wall of the inguinal canal). Having passed through the external opening of the inguinal canal, it is located at the root of the scrotum above the pupar ligament in the in and de rounded formation. The transverse fascia prevents the direct inguinal hernia from descending into the scrotum. Often straight pas hovaya hernia is dv from a third party.

There is a special group of intramural (interstitial) inguinal hernias. With these hernias, the hernial sac is located between the different layers of the abdominal wall.

Allocate preperitoneal hernia, when the hernial sac is located between the peritoneum and the transverse fascia, intermuscular hernia, when the Games zhevoy dis bag of false between the different layers of muscle and aponeurosis; Surface hernia, when the hernial sac Raspaud false for the superficial inguinal ring between the external oblique aponeurosis muscle belly and n of superficially fascia.

Clinic and diagnosis: to identify the formed crotch g s Ms difficult. A typical anamnesis: sudden occurrence of herniation at the time of physical stress or gradual development hernial No. I Chivanov appearance protrusions abdominal straining, the patient's body in an upright position and imbedding e of hernias in the horizontal position of the patient. Patients concerned about pain in the hernia area, abdominal pain, discomfort when walking, dyspeptic symptoms, while chipping s zyaslih bladder hernias occur dysuria.

Examination of the patient in an upright position gives a representation of the asymmetry of the inguinal regions. If there are protrusions of the abdominal wall can be determined posted e ry and shape of a hernia. Palpation determined surface texture herniation, rumbling bowel percussion - percussion sound (tympanitis, besides n Leniye). Finger examination of the external opening of the inguinal canal is performed in the mountains and in the zonal position of the patient after the contents of the hernial sac have been repositioned.

Diagnosis of inguinal hernias in women is based on examination and palpation, since the introduction of a finger into the external opening of the inguinal canal is not possible.

Differential diagnosis between inguinal hernia and femoral hernia is to identify them on t wear to the inguinal ligament.

Nevpravimaya inguinal-hernia scrotal, causing an increase in softening e moat scrotum acquires similarity with leading n Coy egg shells.

Diaphanoscopy (transillumination) gives a positive result with dropsy of the testicle.

With inguinal hernia has similarities varicose veins seme n Nogo cord (varicocele), wherein the upright patient has blunt ra with pyran pain and there is a slight increase in the size of the scrotum. On palpation can detect "kites Dr. Noah" veins of the spermatic cord.

Dilated veins collapse easily when pressed on them or when the scrotum is lifted up.

Treatment: surgical.

There are several ways to repair the inguinal canal.

Girard's method strengthens the anterior wall of the inguinal canal.

The method is a modification of the method Spasokukotsky Girard and differs from it only in that one to the inguinal ligament temporarily sutured to the inner muscles of shove a transverse and together with the upper flap of the external oblique muscle aponeurosis alive on that.

The Kimbarovski seam provides a connection of one - name fabrics.

Method Bassini - strengthens the rear wall to the inguinal and Nala.

Kukudzhanov's method. We propose to direct and complex forms of the groin of the O hernias.

Postempskogo method consists in the complete elimination of the inguinal to a Nala, inguinal gap and the creation of the inguinal canal with completely n of vym direction.

## FEMORAL HERNIA

Femoral hernias are located on the thigh in the region of the Scarp triangle. Education in frequency they make up 5-8% of all hernias alive about that.

The greatest frequency of femoral hernias in women is explained by a wider and more rokim pelvis, which leads to a greater severity of muscle and vascular lacunae and a lower strength of the pupar ligament.

Clinical picture and diagnosis: a femoral hernia in the process of formation goes through three stages: initial, canal and complete.

In the initial stage, the hernial protrusion does not extend beyond the inner femoral ring.

In an incomplete (canal) stage, the hernial protrusion is located near the nasal bundle, does not go beyond the superficial fascia, and does not penetrate into the subcutaneous tissue of the Scarp triangle.

In the full step femoral hernia goes all the femoral canal, s goes through its outer opening in the subcutaneous tissue of the thigh.

The diagnosis of primary and channel femoral hernia is labor d NOSTA.

Suspect such herniation can only be based on complaints of pain in the groin, in the audio w therein abdomen, the upper thigh section, increasing with walking, physical exertion, changes in the weather.

Differential diagnosis: performed most often between femoral and inguinal hernia.

For femoral irreducible hernia can be taken lipoma, pa with relying in the upper skarpovskogo triangle. Lipoma has lobed structure, not attached, I linked to the outer opening of the femoral canal. Preperitoneal lipoma exiting through the femoral canal and IME th conductive connection with it more difficult to distinguish from the femoral hernia, in which can also be preperitoneal lipoma. Hernia and preperitoneal lipoma require the same operation - closing the internal hole thigh n Nogo channel.

Simulate femoral hernia can be enlarged lymph nodes in the region and the STI skarpovskogo triangle (chronic lymphadenitis, metastatic tumor in limfat and cal nodes). The lymph node can be, seizing fingers, pull, and to establish the absence of its association with baa d rennym channel.

The similarity with the femoral hernia is large in aneurysmal expansion d cutaneous vein at a place where it flows into the femoral vein.

Treatment: surgical.

Bassini's method - the incision is made parallel to the inguinal ligament and below it above the hernia with the protrusion.

Operation femoral inguinal hernia method (method of Rudge) - d e bark incision as an inguinal hernia.

#### Umbilical hernia

Umbilical hernia call going out of the abdominal cavity through the abdominal wall defect in the pu p ka. With normal development, the umbilical ring is completely overgrown. The umbilical fascia and peritoneum are directly presented to the skin.

Symptoms: pain in the abdomen, causing the child's anxiety, a protrusion in a B domain navel, disappearing on pressure, expansion Pupo h ring of.

Umbilical hernias in children are usually not prejudiced, but this complication poss w but. The child's parents should be informed about the signs of infringement of hernia and to embrace a thread need immediate hospitalization of the child in the development of this complicated e Nia.

Treatment: in young children with the development of the abdominal wall may Samoa of treatment between the ages of 6 months to 3 years, sometimes to 6 years. If the hernia does not bother the child, conservative treatment is used. Prescribe a massage, a therapeutic hymn and a stick that promotes the development and strengthening of the abdominal wall.

The indications for surgery at a younger age are frequent partial infringement hernia rapid withdrawn and chenie hernia sizes.

Umbilical hernias in adults account for 5% of all external abdominal hernias. Elaborate and term umbilical hernia is more common in women older than 40 years (80%). Causes of umbilical hernia congenital defects of the umbilical region, repeated pregnancy proceeded without the necessary compliance regime, physical neglect practicing e niyami and gymnastics.

Treatment: only surgical plastic according to the Sapezhko method and the Mayo method.

#### WHITE LINE HERNIA

White belly line form a tightly fitting to each other a fiber tufts of GOVERNMENTAL fibers aponeuroses broad abdominal muscles. There are gaps between them and the angle b Lenia, which may serve as predisposing anatomic factors in the mod and mations hernia linea alba. At first, the preperitoneal

fiber forming preperitoneal lipoma and then formed c s zhevoy bag.

Symptoms: pain in the epigastric region, aggravated after eating, with increased intra-abdominal pressure. The appearance of pain in patients with hernia linea alba explain or temporary usche m leniem hernias, or gastric gland tension, fixed to the hernia sac, or pressure on the nerves parietal br th bus (hernial sac).

When examining the patient, a dense painful formation is found in the white line of the abdomen. When free hernia can sometimes test the crevice etc. nye hernial.

Treatment: surgical. The operation consists in isolating the hernial sac, removing it and closing the opening in the aponeurosis by applying a purse-string suture or separate interrupted sutures. For large hernias of the white line of the abdomen, use the Sapezhko method. With a concomitant hernia of divergence of the rectus abdominis muscles, the N and palkov method is used .

**Used in this lesson, new educational technologies, "Che p ny box", "Web".**

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The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

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Steps:

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3. One of the participants is given a skein of thread, and he asks his prepared n ny question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. S members continue and give questions and answer them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

### **6.2. Analytical part**

#### **Situational tasks:**

A 60-year-old patient, during the consultation, a direct inguinal hernia and prostate adenoma were found. Residual urine 100 ml.

I of . Your recommendations:

- A. Hernia repair
- B. adenomectomy, then hernia repair \*
- B. conservative treatment
- G. hernia repair, then adenomectomy
- D. hernia repair, conservative treatment of adenoma

II . Necessary plastic surgery of the inguinal canal:

- A. Postemsky \*
- B. Girard
- V. Ru-Oppel
- G. Bassini

### **6.3. Practical part**

A quest for practical skills (to hold the differential di and prognosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, nasogastric intubation ).

## 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                             | Not fulfilled | Completely fulfilled |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                          | 0             | 25                   |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                   | 0             | 35                   |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis. | 0             | 40                   |
|     | <b>Total</b>                                                                                                                                                      | 0             | 100                  |

## 2. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not fulfilled | Completely fulfilled |
|------|------------------------------------------------------------------------------------------------|---------------|----------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0             | ten                  |
| 2    | Choosing the right diet table for your diagnosis                                               | 0             | ten                  |
| 3    | Evaluation of the usefulness of the diet                                                       | 0             | 20                   |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0             | 20                   |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0             | 20                   |
| 6    | Preventive measures                                                                            | 0             | 20                   |
|      | <b>Total</b>                                                                                   | 0             | 100                  |

## 3 . Definition of the symptom of " Cough impulse " .

**Objective:** definition of hernia complications (impairment), determining that a tick treatment

| No.   | stages                                                                                        | INCOMP l nile | fulfilled |
|-------|-----------------------------------------------------------------------------------------------|---------------|-----------|
| 1     | A patient in a supine or sitting Pos e SRI                                                    | 0             | ten       |
| 2     | Examination of the bulge area                                                                 | 0             | ten       |
| 3     | Taking anamnesis                                                                              | 0             | ten       |
| 4     | The palm of the right hand on the area of swelling on STI                                     | 0             | ten       |
| five  | Ask to cough                                                                                  | 0             | ten       |
| 6     | Determine the push of a bulge                                                                 | 0             | ten       |
| 7     | If you push during the cough is identified, sim p is a positive, not a hernia strangulated    | 0             | 20        |
| eight | If the push during cough is not detected, the symptom is negative, the hernia is strangulated | 0             | 20        |
|       | <b>Total</b>                                                                                  | 0             | 100       |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

## 8. Criteria for assessing monitoring

| No.   | Academic progress in% | Assessment              | Student knowledge level                                                                                                                                                                                                                                                                                                                                                  |
|-------|-----------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | 96-100%               | Excellent "five"        | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse.                                |
| 2     | 91-95 %               | Excellent "five"        | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situation and onny problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                                           |
| 3     | 86 - 90%              | Excellent "five"        | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                                     |
| 4     | 81-85%                | Good "4"                | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies to right- to tick, understands the essence of the question, he says HC e Renno has a precise representation. Situation n nye problems are solved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%                | Good "4"                | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                                            |
| 6     | 71-75%                | Good "4"                | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas . On situational tasks gives incomplete solutions.                                                                                                                                                                                       |
| 7     | 66-70%                | Satisfied literally "3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                                 |
| eight | 61-65%                | Satisfied literally "3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Admits mistakes in solving sieve and tional.                                                                                                                                                                            |

|          |        |                             |                                                                                                                                                   |
|----------|--------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| nine     | 55-60% | Satisfied literally "3"     | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but. |
| ten      | 50-54% | Not satisfied literally "2" | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                            |
| eleven   | 46-49% | Unsatisfied sly "2"         | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                           |
| 12       | 41-45% | Unsatisfied sly "2"         | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                             |
| 13       | 36-40% | Unsatisfied sly "2"         | Covering 1/10 of the questions with the wrong approach.                                                                                           |
| fourteen | 31-35% | Unsatisfied sly "2"         | Doesn't give answers to questions.                                                                                                                |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                   | Lesson forms                                                                                                                   | Prolonged s NOSTA min. 90 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                |                                                                                                                                | five                      |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.)    | A survey explaining e of                                                                                                       | 25                        |
| 3    | Summing up the discussion                                                                                                                                                                              |                                                                                                                                | five                      |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                    |                                                                                                                                | ten                       |
| five | Independent work of students from a military skills                                                                                                                                                    |                                                                                                                                | fifteen                   |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group      | Oral questioning, written on the item grew up, tests, verification of the results Practical e tion work, di a Kuss discussion. | 25                        |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge by 100 point s and a system and its announcement. Cottage tasks for the next th present occupation (set of questions) | Information Problems of sy for self I tion training                                                                            | five                      |

### 10. Test questions

1. Anatomical and topographic data of the groin area.
2. Clinic, recognition, treatment of inguinal hernias.
3. Anatomical and topographic data of the femoral triangle.
4. Clinic, recognition, treatment of femoral hernias.
5. Anatomical and topographic data of the umbilical ring.
6. Clinic, recognition, treatment of umbilical hernias.

7. Anatomical and topographic data of the white line of the abdomen.
8. Clinic, recognition, treatment of hernias of the white line of the abdomen.
9. Diastases of the rectus abdominis muscles .

### **11. Recommended reading**

1. A.P. Krymov "The doctrine of hernias" 1960
2. Kuzin M.I. "Surgical diseases" 1985
3. Astapenko A.G. "A Practical Guide to surgically Bole of yum" 1984
4. Littman I. "Operative surgery" 1982
5. Karimov Sh.I. "The surgeon casalliklar" 1991
6. Azamkhozhayev S.M. "The surgeon casalliklar" 1991
7. V. I. Rusakov "Fundamentals of Private Surgery" 1975
8. Vinogradov V. "Clinical Surgery" 1984

Internet addresses related to the lecture:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **TOPIC №3. POSTOPERATIVE AND RARE FORMS OF EXTERNAL HERNIA. COMPLICATION OF HERNIA (INFLAMMATION, COPROSTASIS, INCREASING, INCREDIBLE).**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, radiographs, and deofilms.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students complications hernia causes their development characteristics Klinichev e Skog flow, differential diagnosis, optimal methods of treatment, postoperative care, reabilit a tion patients.

#### **Tasks**

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies to justify and Nia diagnosis and rational treatment of choice;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, know their OS of singularity;
- to prevent complications during and after operations;
- to acquire certain practical skills in examining patients with complications of hernias;
- **learn special methods of examination.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examining patients with complications of hernias, perform special techniques of used of following these patients to determine the indications and contraindications for x and rurgicheskim interventions.

### **4. Motivation**

Suggestion to students the need for timely development of appropriate operations to gro s GOVERNMENTAL complications , and in their development - meeting the most informative and modern m e todami diagnostics, surgical treatment, familiarity with the possible of a complication in the operation and is operating period of, prevention. Development of students' clinical



thinking. Developing modern view on the problem of the issue from the perspective of medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical disciplines.

## **6. Content of the lesson**

### **6.1. Theoretical part**

Complications of external abdominal hernias: infringement, coprostasis, irreducibility, inflammation. Infringement of hernia is the most frequent and serious complication hernia requiring immediate surgical treatment. The organs released into the hernial sac are subjected to compression more often at the level of the neck of the hernial sac in the hernial orifice. Impingement bodies in the hernial sac are possible in one of the chambers of the hernial sac, the presence of cicatricial strands pinch of organs bodies when glued to each other and with the hernial sac (at irreducible hernia). According to the mechanism of occurrence, they distinguish between elastic, fecal and mixed, or combined, infringement. Elastic pinching occurs upon sudden increase of internal and abdominal pressure during exercise, coughing, straining, etc.. This occurs due to stretching hernial ring, resulting in the hernial sac leaves longer than normal organs. Return hernial ring in preoperative state leads to the infringement of the contents of the hernia. When the compression elastic infringement published in hernial sac and newly occurs outside. Fecal infringement occurs with a weakening of intestinal motility and, more often observed in elderly people. Due to the accumulation of large amounts and antipaque contents in the bowel which is in the hernial sac occurs compression feeder loop of the bowel, and is then amplified in hernial ring by the contents of the hernia and fecal joins elastic pinching thus arises mixed form infringement.

Types of infringement of hernias and their recognition. Clinical manifestations infringement hernia head and infrapubic infringement on the shape, the restrained body, the time elapsed since the infringement. About a novyni infringement hernia symptoms are pain in the hernia and neprav and bridges hernia reduce a previously free. The intensity of the pain is different. A sharp pain can cause the WSO of rock, a state of shock. Local signs of infringement of hernia, hernial protrusion sharply painful on palpation, dense, and adjoint. The symptom of a cough shock cannot be detected. When percussion blunting determined if the hernial sac contains gland uric n y zyr "hernial water." The percussion sound is tympanic if there is a gut containing gas in the hernial sac. Elastic restraint. Starting complicated hernia associated with increased intra-abdominal pressure (physical labor, cough, defecation et al.). Suddenly, a strong pain in the constant herniation, nepravimost previously vpravimoy c s Ms, increase voltage and sharp soreness herniation. It should be borne in and out that the infringement may be the first manifestation of a hernia that has arisen. Infringement of bowel is a form of strangulation intestinal neproh about gence. In these cases, joined by signs of intestinal obstruction on the background of constant acute pain in the abdomen, caused by compression of nerves and blood vessels of the mesentery strangulated bowel, cramping pain occurs, St. I zannaya with increased motility, delayed stool and gas, possible vomiting. During auscultation of g and vota, continuous intestinal noises are heard. When fluoroscopic observation neck of the stomach in lyayutsya stretched bowel loops with horizontal layers of liquid and gas over them (the "bowl Kloyber"). Later it develops n e Rytion.

Diagnosis: in typical cases, it is not difficult. Main symptoms: acute fuss to Shaya pain and nepravimost previously free hernia. Typically pinching occurs in the n and ruzhnom hole inguinal canal. When the patient study are found in the groin bole of nennoe, stress, nepravimoe hernial protrusion. If the intestinal loop is restrained, the symptoms of intestinal strangulation obstruction are present. Possible infringement in the internal opening of the inguinal canal (parietal infringement). That is why, in the absence of a hernial protrusion, it is necessary to conduct a digital examination of the inguinal canal and not be limited to examining only the external inguinal ring. Permission to

fell pahovyi channel s CEM can be felt a little painful seal at the inner hole smelled of Vågã channel Retrograde infringement. Retrogradely increasingly infringed small intestine probably p e trogradnoe pinching colon omentum et al. Retrogra d Noe pinching occurs when the hernial sac intestinal loops are several (two or more) and interm h nye coupling loops are in their abdomen. Infringement are exposed to a greater art e penalties binders intestinal loops. Necrosis begins earlier in these intestinal loops location with n GOVERNMENTAL above prejudicing ring. At this time, the intestinal loops in the hernial sac may still be viable. It is impossible to establish a diagnosis before surgery. During operas and tion surgeon to find a hernial sac two intestinal loops after dissection has infringed I guide ring to withdraw from the abdominal cavity binder intestinal loop and determine the nature of any edited e neny throughout strangulated intestinal loop. If during the operation is not recognized retrograde infringement as surgeon examined binding intestinal loop is I schuyusya in the abdomen of the patient will develop peritonitis. The source of the peritonitis is necrotizing a bathroom connecting bowel loop. Parietal impairment occurs in a narrow number infringes s tse, when infringed only part of the intestinal wall opposite the line of attachment of the mesentery. Pr and wall infringement of the small intestine is observed more often in femoral and inguinal hernias, less often in umbilical hernias. Disorder of blood and lymph circulation in the restrained area of the intestine leads to the development of destructive changes to necrosis and perforation of the intestine. Diagnosis is bol s Chiyah difficulties. In terms of clinical manifestations, parietal entrapment of the intestine differs from entrapment of the intestine with its mesentery. No shock phenomena. Symptoms of ileus may be omitted since there is free passage of the contents distally n and board. Diarrhea is sometimes observed. There is constant pain in the place of infringement of the intestinal wall in the hernia where you can feel a small painful dense formation. Mild pain regex and wife as the mesentery, respectively, the disadvantaged section of the intestine is free. It is especially difficult to know parietal infringement when it is the first clinical manifestation of a hernia that has arisen. Obese women are particularly difficult to probe a small swelling under the inguinal svya of hell. The general condition of the patient at first may remain satisfactory, then progress to, but worsens due to the development of phlegmon peritonitis of the tissues surrounding the hernial sac. Patients with z and let loose a form of infringement of the wall in femoral hernia development of inflammation in the surrounding tissues of the hernia sac can simulate pahovyi acute lymphadenitis or hell e noflegmonu. Inspection of the skin of the lower half of the abdominal wall, legs, buttocks, and so on mezhnosti m. E. The areas for which the inguinal lymph nodes are by regional OAPC of lit. identify atrium (boils, wound scratches, cracks between fingers item of nN). If the diagnosis is unclear, the last diagnostic method is surgery. At the time of discharge is, for the tissues below the inguinal ligament find a strangulated hernia or increased PLAYBACK and lennye lymph nodes.

Coprostasis (stagnation of stool) and fecal infringement. Coprostaia - about a complication in the hernia, when the contents of the hernia sac is a colon. It develops as a result of a disorder of the motor function of the intestine associated with a sharp decrease in the tone of the intestinal wall. Od b exist coprostaia irreducible hernia, a sedentary lifestyle, abundant food. Coprostaia observed more frequently in obese elderly patients, in men with inguinal hernias have also called Shin with omphalocele. Symptoms: supporting constipation, abdominal pain, nausea, rarely vomiting. The protrusion slowly increases as the colon fills with feces.

Treatment: emptying the colon from the contents. When it is necessary to free hernia Art and ratsya hold a hernia in reduction state, it is easier to achieve the recovery lane and bowel staltiki. Apply a small enema with hypertonic sodium chloride n and Tria, glycerol or repetitive siphon enema deeply inserted probe to Sigma of a prominent cancer. The use of laxatives is contraindicated, since the overflow of the adductor loop with the holder can cause the transition of coprostaia to the fecal form of hernia infringement. Coprostaia m of Jet due to compression in the hernial ring move into the escaping hinge fecal shape usche m Lenia hernia. Signs of obstructive intestinal obstruction are growing. The pain in the abdomen increases and intensifies, acquires a cramping character, and vomiting becomes more frequent. Subsequently owing n e repolneniya stool

bowel which is in the hernial sac occurs compression hernial entire intestine loops and mesentery it. It appeared as a mixed form of infringement intestine. From this moment, there are signs of strangulated intestinal obstruction. Infringement of the greater omentum causes constant pain in the area of the hernial protrusion. The greater omentum is usually impaired in umbilical and large epigastric hernias. Bladder pinching occurs when sliding inguinal and femoral hernias, accompanied by frequent painful urination, sometimes DELAY x Coy urination, decrease in urine output due to a reflex reduction of renal function. False infringement of a hernia. In acute abdominal disease (acute appendicitis, acute cholecystitis, ulcer perforation twelfth and duodenum or stomach, intestinal obstruction) exudate entering the hernial sac neusche m lennoy hernia, it causes inflammation development. The hernial protrusion increases in size, becomes painful and tense. These attributes correspond to the attributes usche m Lenia hernia.

**Used in this lesson, new educational technologies, "Che p ny box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options questions are attached.) Article in denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then, the answers are discussed, dao t Xia addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 32-year-old patient complains of pain and formation in the right groin, nausea, vomiting. From anamnesis with hernias, the patient has been ill for 6 years. General condition is satisfactory, skin is loose and dry. Tongue with leucorrhoea. Belly distended few, when viewed in the right groin area defined education dimensions 4x5 cm, fell s patsii painful, not reduce a into the abdominal cavity, cough shock symptom negative Your e and agnosia.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), hold the thread end and throwing the skein any item in Dent.
4. The student who received the skein answers the question (while the participant who asked him comments and answers the question) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., until all "pa s matyvaniya" coil.

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

### **6.2. Analytical part**

**Situational tasks:**

A 32-year-old patient complains of pain and formation in the right groin, nausea, vomiting. From anamnesis with hernias, the patient has been ill for 6 years. General condition is satisfactory, skin is loose and dry. Tongue with leucorrhoea. Belly distended few, when viewed in the right groin area defined education dimensions 4x5 cm, fell s patsii painful, not reduce a into the abdominal cavity, cough shock symptom negative Your e and agnosia.

- A. Uncomplicated inguinal hernia \*
- B. Restrained inguinal hernia

- B. Inguinal lymphadenitis
- G. sinus abscess
- II . Tactics:
  - A. Emergency operation \*
  - B. Scheduled operation
  - B. Delayed surgery
  - D. Conservative treatment

### 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, etc. and signs of impairment ).

#### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**The goal :** to train to conduct differential diagnosis and justify the final diagnosis.

| No. | Event                                                                                                                                                                    | Not fulfilled | Completely satisfied |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0             | 25                   |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                          | 0             | 35                   |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0             | 40                   |
|     | Total                                                                                                                                                                    | 0             | 100                  |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not fulfilled | Completely satisfied |
|------|------------------------------------------------------------------------------------------------|---------------|----------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0             | ten                  |
| 2    | Choosing the right diet table for your diagnosis                                               | 0             | ten                  |
| 3    | Evaluation of the usefulness of the diet                                                       | 0             | 20                   |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0             | 20                   |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0             | 20                   |
| 6    | Preventive measures                                                                            | 0             | 20                   |
|      | Total                                                                                          | 0             | 100                  |

#### 3. Signs of infringement

**Goal:** during the diagnosis and to choose the right tactics I e cheniya

| No. | Event                                                                  | Not fulfilled | Completely satisfied |
|-----|------------------------------------------------------------------------|---------------|----------------------|
| 1   | Reassure the patient, explain the course of the upcoming manipulation. | 0             | ten                  |
| 2   | Wear rubber gloves.                                                    | 0             | ten                  |
| 3   | To lay the boy                                                         | 0             | ten                  |
| 4   | Examination of the abdomen                                             | 0             | ten                  |

|       |                                                                            |   |     |
|-------|----------------------------------------------------------------------------|---|-----|
| five  | Determine the size and consistency of hernias                              | 0 | ten |
| 6     | Not reduce a hernia in the abdominal n of smallness                        | 0 | ten |
| 7     | Symptom cough shock Negative s ny                                          | 0 | ten |
| eight | On palpation, it is sharply painful                                        | 0 | ten |
| nine  | Signs of OKN                                                               | 0 | ten |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution. | 0 | ten |
|       | Total                                                                      | 0 | ten |

### 7. Forms of control of knowledge, skills and abilities

- oral ;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse.               |
| 2    | 91-95%                | Excellent "five" | Complete correct answer to questions. Thinks creatively, analyzes independently. Situational problems are solved, etc. and correctly, with a creative approach, with Expl about vaniem response. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                |
| 3    | 86 - 90%              | Excellent "five" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good "4"         | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good "4"         | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                      |
| 6    | 71-75%                | Good             | Correct, but incomplete coverage of the                                                                                                                                                                                                                                                                                                             |

|          |        |                               |                                                                                                                                                                                                                                                                          |
|----------|--------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        | "4"                           | issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                     |
| 7        | 66-70% | Satisfied literally "3"       | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer. |
| eight    | 61-65% | Satisfied literally "3"       | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                           |
| nine     | 55-60% | Satisfied literally "3"       | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has a partial idea of the topic. Situational tasks solved n e is true.                                                                                                                          |
| ten      | 50-54% | Not satisfied literally " 2 " | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                   |
| eleven   | 46-49% | Unsatisfied sly "2"           | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                  |
| 12       | 41-45% | Unsatisfied sly "2"           | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                                    |
| 13       | 36-40% | Unsatisfied sly "2"           | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                                  |
| fourteen | 31-35% | Unsatisfied sly "2"           | Doesn't give answers to questions.                                                                                                                                                                                                                                       |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                | Lesson forms           | Prolonged s NOSTA min. 90 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                             |                        | five                      |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.) | Poll, explanation      | 25                        |
| 3    | Summing up the discussion                                                                                                                                                                           |                        | five                      |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                 |                        | ten                       |
| five | Independent work of students from a military skills                                                                                                                                                 |                        | fifteen                   |
| 6    | Clarification of the extent to which the target                                                                                                                                                     | Oral survey IPR s meny | 25                        |

|   |                                                                                                                                                                                                            |                                                                                    |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------|
|   | classes based on the disburshed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group                                                         | survey tests, checking Practical results and cal work, discussion obsu Well denie. |      |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | Information, questions for self - preparation                                      | five |

### 10. Test questions

1. Types of complications.
2. Infringement of hernias.
3. Changes in the body with strangulated hernias
4. Coprostasis
5. Hernia irreversibility
6. Hernia inflammation

### 11. Recommended reading

1. A.P. Krymov "The doctrine of hernias" 1960
2. Kuzin M.I. "Surgical diseases" 1985
3. Astapenko A.G. "A Practical Guide to surgically Bole of yum" 1984
4. Littman I. "Operative surgery" 1982
5. Karimov Sh.I. "Surgeon casalliklar" 19 91
6. Azamkhozhaev S.M. "The surgeon casalliklar" 1991
7. V. I. Rusakov "Fundamentals of Private Surgery" 1975
8. Vinogradov V. "Clinical Surgery" 1984

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC №4. ACUTE APPENDICITIS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, ward, dressing room
- posters, tables, the classification scheme of the disease, the treatment regimen, ren t genogram, video films.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Justification of topics, indicating the importance for professional Prepare to students ki. Acquaintance of students with acute appendicitis, the causes of its development, features of the clinical course, differential diagnosis, optimal treatment methods, postoperative management, rehabilitation and rehabilitation of patients.

Tasks

*the student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;

- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with acute appendicitis;
- learn special methods of examination.

***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examining patients with acute appendicitis, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical interference.

#### **4. Motivation**

Suggest students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is the operation and the operational period of, prevention. Development Klinichev e Skog students thinking. Developing modern view on the problem of the issue from the perspective of modern medicine and general practitioners.

#### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical disciplines.

#### **6. Content of the lesson**

##### **6.1. Theoretical part**

Acute appendicitis is a nonspecific inflammation of the appendix, the most common surgical disease. Appendicitis has worried X and Rurks for many decades. Despite the fact that the disease this small body, not having its own receptacle and cheniya, fight a large army of surgeons around the world, until complete victory is still far.

One of the largest Russian surgeons - Ivan Grekov - called acute inflammation of the screw shaped ridge hamelionopodobnym disease, which is not where expected and discover where about it with a whole do not think. This can be fully attributed to appendicitis treatment: removal cherveo used a different process is considered easy operation, available to students of 4-5 courses, but there are cases when the operation requires great skill and experience of the solidity of the first surgeon.

#### **Etiology and pathogenesis**

In questions of the etiology and pathogenesis of acute appendicitis, much is unclear. Obviously, a one and to that acute appendicitis - is a non-specific inflammation of the appendix, to develop and vayuscheesya as a result of the changed relationships between biological organisms chelov e ka and microbes. Infectious agents in acute appendicitis can be stafiloko to ki, E. coli, mixed and anaerobic flora. But still no answer to the question: why on d them people have acute appendicitis, while others do not, why one patient quickly pa of Viva destructive forms, and the other - kataral persists for several days s Noah inflammation. Or in other words: what is the cause of appendicitis and factor objectified e - governing its genesis?

For an explanation of these issues, there are different theories: stagnation, helminthic infestation, angioneurotic, infectious, cortico-vistseral Nye theory linking Arise e of acute appendicitis with a sore throat, dysfunction bauginievoy damper etc. Vysk.. And is called the view about the role of allergy in the origin of acute appendicitis, in that in the inflammatory process in acute appendicitis, the allergic factor plays a dominant role. It is believed that the allergic theory sheds more light on the etiology, and the neurogenic, vascular and infectious theories - the pathogenesis of acute appendicitis.

However, none of them can provide an exhaustive explanation of the etiology and pathogenesis of acute appendicitis. Each of these theories contains a rational kernel - it explains some aspects of the origin of acute appendicitis.



## Classification

There are three types of acute appendicitis:

- 1) simple or catarrhal,
- 2) destructive,
- 3) complicated.

The destructive appendicitis includes phlegmonous, gangrenous and perforated. For complicated forms of acute appendicitis include Oslo Well nennye:

- 1) peritonitis,
- 2) sepsis,
- 3) infiltration,
- 4) an abscess,
- 5) pylephlebitis.

## Pathological anatomy

Pathological changes that develop in acute appendicitis concern not only the appendix. Range lesions large: from mild hyperemia serosa of the appendix at k and taralnom appendicitis to severe peritonitis or pileflebita involving in purulent process all the organs of the abdominal cavity Accompanying x Xia profound metabolic disturbances and irreparable anatomical and functional shifts in life n but important organs.

More than 100 symptoms of acute appendicitis have been described. Knowing all of these symptoms does not tol s to not need, but also harmful. Most of them do not matter and only confuses the doctor thinking and eventually delay time of the first withdrawal of diagnosis and treatment. Some of the symptoms include tapping the pelvis of the patient on a hard table, tapping cool and com X- II rib, the introduction of the inguinal canal fingertip fourfold finger pressure on the stomach is divided into four quadrants, checking the symptoms of irritable bryush and us in Petit triangle, and so on. d. The described pressure points Mc Burneya, Kümmel and Lanza no value in diagnosing appendicitis not they e dissolved. It suffices to carry out by seven symptoms: 1) Shchetkina-Blumberg, 2) Voskresenskiy (slip), 3) form of Tsova 4) Sitkovskiy 5) Bartome-Michelson, 6) and 7 Rovzinga) Ivanova.

**Differential diagnosis** is based on a deep and comprehensive knowledge of all the features of the clinical course of acute appendicitis and a good awareness of diseases that can simulate acute appendicitis. Fully explain the differential diagnosis of acute appendicitis is impossible - too many faces Klinichev e Skye picture of this disease. Of course, in most patients, differential diagnosis does not cause much difficulty. In difficult cases, as already indicated above, should be solved on the pros is not a diagnosis, but a tactic: if a patient needs at a given confusing clinical picture in an emergency operation or its condition allows, etc. about continue the surveillance and deepen the study.

**Treatment.** Currently, the only valid method of treatment of acute APME n ditsita is operative - appendectomy. The sooner the operation is performed, the fewer complications and the better the results. Each ball v hydrochloric acute appendicitis, regardless of age, gender, duration of disease, subject to immediate surgical leche e NIJ.

The only contraindication to surgery is the infiltrative form of the appendix and cyte, and even then only in those cases when the process is localized and there are no signs of increasing peritonitis.

Today, there is a tendency to switch to minimally invasive methods of intervention, using special instruments. Laparosc of scopic appendectomy is one of them. To perform this type of intervention, the abdominal cavity is inflated with gas - in 95% of cases, carbon dioxide is used. This is done in order to solder etc. nyat abdominal wall in the shape of a dome over the bodies and to provide a good overview and access to them.

After introduction of the laparoscope looks around the abdominal cavity and has a to n Trol view administered another 2 - 4 of the trocar. Tools allow, in principle, to carry out all the same manip have lyatsii as with traditional surgical techniques. Bleeding from large vessels can be stopped by clipping (the imposition of titanium clips), bandaging them with a shock material.

**Postoperative period.** Postoperatively special treatment bol s nym is not carried out. Prescribe only physiotherapy exercises and painkillers at night (if necessary). For special

indications given to the patient, disease and other medications. More important than neck important therapeutic exercise, which should be carried out in all patients. Patients can walk the next day after the operation. It is necessary to allow getting up and walking taking into account the individual characteristics and condition of the patient. The stitches are removed 5-6 days after the operation.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the busy I tiyah each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Possible questions are attached.) Students should provide a detailed justification for their answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, an addition is given on the etiopathogenesis, clinical course. As to Mr. Tse method teacher commented correct answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their pl e of, analyze the answers to band members - participants in this competi p sa.

#### **Annotation option:**

A 32-year-old patient complains of pain in the right iliac region, nausea, vomiting. The general condition is satisfactory, the skin is flabby, with u haya. Tongue with thorns bloom. The abdomen is somewhat distended, painful on palpation in the right iliac region, a positive symptom of Rovzing, Sitkovsky. Your q and agnose.

#### **USING THE WEB METHOD**

##### **Steps:**

1. Pre students are given time to prepare questions Passed Mr. Nome occupation.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), hold the thread end and throwing the skein Telegram of th student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Etc. Participants of continues to ask questions and answer them, until everything will be in the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Caution students that we should be attentive to each of holes is, that because they do not know who to throw a hank.

## **6.2. Analytical part**

### **Situational tasks:**

A 32-year-old patient complains of pain in the right iliac region, nausea, vomiting. The general condition is satisfactory, the skin is flabby, with u haya. Tongue with leucorrhoea. Belly few swollen, painful on palpation in the right iliac region, positive symptom Rovzinga, Sitko in Skogen.

Your dia g ERA:

- A. acute appendicitis \*
  - B. acute pancreatitis
  - B. acute cholecystitis
  - G. acute gastritis
  - D. cusp enteritis
- II . Tactics
- A. Appendectomy \*
  - B. Infusion therapy
  - B. Antibiotic therapy

### 6.3. Practical part

A quest for practical skills (to hold the differential s ny diagnosis and justify the final diagnosis, assign an appropriate diet and routine treatment, nasogastric intubation ).

#### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**The goal:** to train to conduct differential diagnosis and justify the Finishing and -negative diagnosis.

| No. | Event                                                                                                                                                                               | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List disease, clinical symptoms, which are similar to the data of a bolevaniem                                                                                                      | 0                 | 25                             |
| 2   | Perform differential diagnosis of Ba in GOVERNMENTAL clinical syndromes                                                                                                             | 0                 | 35                             |
| 3   | On the basis of complaints, anamnesis, objective data and the results of Lab and Thorn instrumental studies, as well as diff e differential diagnosis put definitive s ny diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                                               | 0                 | 100                            |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                                       | Not s full | Completely<br>correctly s full |
|------|-------------------------------------------------------------------------------------------------------------|------------|--------------------------------|
| 1    | The study of the characteristics of leche b GOVERNMENTAL tables on Pevzner                                  | 0          | ten                            |
| 2    | The right choice of diet in the table with a responsible with diagnosis                                     | 0          | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                                    | 0          | 20                             |
| 4    | According to the diagnosis, severity of Zab about Levan and the main stage of the appointment ter and FDI   | 0          | 20                             |
| five | According to the diagnosis, severity of Zab about Levan stage and appointment of symptomatic e tion therapy | 0          | 20                             |
| 6    | Preventive measures                                                                                         | 0          | 20                             |
|      | Total                                                                                                       | 0          | 100                            |

#### 3. Razdolsky's symptom

**Purpose:** to make the correct diagnosis and carry out differential diagnostics.

| No.   | Event                                                                           | Not<br>ful l Neal | Completely<br>correctly s full |
|-------|---------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1     | Reassure the patient, explain the course Representat I conductive manipulation. | 0                 | ten                            |
| 2     | Wear rubber gloves.                                                             | 0                 | ten                            |
| 3     | To lay down the patient                                                         | 0                 | ten                            |
| 4     | The doctor himself sit to the right of the patient oh th                        | 0                 | ten                            |
| five  | Perform abdominal examination                                                   | 0                 | ten                            |
| 6     | Conduct surface palpal and tion                                                 | 0                 | ten                            |
| 7     | Conduct percussion                                                              | 0                 | ten                            |
| eight | Identify the most painful point                                                 | 0                 | ten                            |
| nine  | This point is located in the right podvzdo w Noi                                | 0                 | ten                            |

|     |                                                                         |   |     |
|-----|-------------------------------------------------------------------------|---|-----|
|     | area                                                                    |   |     |
| ten | Remove gloves and place them in a container with disinfectant solution. | 0 | ten |
|     | Total                                                                   | 0 | ten |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

## 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment                     | Student knowledge level                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5"              | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Situational problems are solved correctly, with a creative approach, with full justification of t veto.<br>Actively, creatively participates in interactive games, makes well-grounded decisions and summarizes, analyzes and ruts.                           |
| 2    | 91-95%                | Excellent<br>" 5"              | Complete correct answer to questions. Thinks creatively, analyzes independently. Situational problems are solved correctly, with a creative approach, with the justification of holes e ta.<br>Actively and creatively involved in interactive and g rah, right decisions.                                                                                                     |
| 3    | 86 - 90%              | Excellent<br>" 5"              | The questions posed are fully covered, but there are 1-2 inaccuracies in the answer. Analyzes independently. Inaccuracies in the decision of situational problems, but with the right of Dr. During.<br>Actively participates in interactive games, bringing as a correct decision.                                                                                            |
| 4    | 81-85%                | Good<br>" 4"                   | The questions posed are fully covered, but there are 2-3 inaccuracies and errors. Applies in practice, understands the essence of the issue, speaks with confidence, has accurate ideas. Situational problems are solved correctly, but the answer is not sufficient justification for l but.<br>Actively participates in interactive games, rules, s but the decision-makers. |
| five | 76-80%                | Good<br>" 4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas. Actively participates in interactive games. On case studies gives Nepo l decisions.                                                                                                                                                           |
| 6    | 71-75%                | Good<br>" 4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas . On the situation and tional problem gives partial solutions.                                                                                                                                                                                 |
| 7    | 66-70%                | Satisfied<br>literally<br>" 3" | The correct answer to half of the questions posed. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain                                                                                                                                                                                                                                |

|          |        |                                  |                                                                                                                                                                                  |
|----------|--------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                  | issues of the topic. Situational tasks solved correctly, but there is about a Considerations for response.                                                                       |
| eight    | 61-65% | Satisfied literally<br>" 3"      | The correct answer to half of the questions posed. Tells uncertainly, has accurate ideas only on certain issues of the topic. Makes mistakes when solving situations and onnyh . |
| nine     | 55-60% | Satisfied literally<br>" 3"      | Answer with errors to half of the questions asked. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but.                                   |
| ten      | 50-54% | Not satisfied literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if an indirect and Villeneuve approach.                                                     |
| eleven   | 46-49% | Unsatisfied sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if an indirect and Villeneuve approach.                                                     |
| 12       | 41-45% | Unsatisfied sly<br>" 2"          | Coverage of 1/5 of the questions posed with errors. It gives incomplete and partially incorrect holes f you questions.                                                           |
| 13       | 36-40% | Unsatisfied sly<br>" 2"          | 1/10 coverage of the issues at the wrong Podhom about de.                                                                                                                        |
| fourteen | 31-35% | Unsatisfied sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                               |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                   | Lesson forms                                                                                                      | Prolonged s NOSTA<br>min. 90 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                                |                                                                                                                   | five                         |
| 2    | Discussion of the topic of the practical lesson, assessment of the initial knowledge of students using new pedagogical technologies (small groups, situational tasks, business games, slides, video about films, etc.) | Poll, explanation                                                                                                 | 25                           |
| 3    | Summing up the discussion                                                                                                                                                                                              |                                                                                                                   | five                         |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                    |                                                                                                                   | ten                          |
| five | Independent work of students from a military skills                                                                                                                                                                    |                                                                                                                   | fifteen                      |
| 6    | Clarification of the extent to which the target classes based on the mastering of theoretical knowledge and practical conference on the results and cal operation and in view of the assessment of the group           | Oral questioning, written questioning, tests, checking the results of practical work, discussion obsu Well denie. | 25                           |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation                                | Information, questions for self - preparation                                                                     | five                         |

|  |                    |  |  |
|--|--------------------|--|--|
|  | (set of questions) |  |  |
|--|--------------------|--|--|

### 10. Test questions

1. Definition of acute appendicitis, the frequency etiopatogenez, clinical features, diagnosis, and le chenie.
2. Principles of diagnosis of acute appendicitis.
3. Teach diff. the diagnosis of acute appendicitis, preoperative Getting on Preparations
4. The indications for surgical treatment of pancreatic diseases des e PS.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991 g .
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "Practical Guide to Surgical Diseases" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with duodenal ulcer. // Surgery 2002 №7 p. 19-

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Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://buxdti.uz>

## TOPIC №5. COMPLICATION OF ACUTE APPENDICITIS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### 2. Duration of study of the topic

The number of hours is 4, 9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students gallbladder and biliary tract, causes its development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, rehabilit a tion patients.

Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with falls ill and s colon;
- learn special methods of examination.

#### *The student should be able to:*

- Perform practical skills - to acquire certain practical skills in examining patients with acute appendicitis disease and that and its complications, to carry out special inspection methods yes n GOVERNMENTAL patients to determine the indications and contraindications for surgery the intervention s properties.

### 4. Motivation

Suggestion students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is the operation and the operational period of, prevention. Development Klinichev e Skog students thinking. Developing modern view on the problem of the issue from the perspective of m and rovoy medicine and general practitioners.

### 5. Intersubject and intrasubject communications

Teaching this subject is based on the knowledge of the students the basics of anatomy, but p mal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

## 6. Content of the lesson

### 6.1. Theoretical part

Acute appendicitis is a non-specific inflammation of the appendix, the most common surgical disease. Appendicitis worried many surgeons d e syatiletiya. Despite the fact that the disease this small body, not having its own receptacle and cheniya, fight a large army of surgeons around the world, until complete victory is still far.

One of the largest Russian surgeons - Ivan Grekov - called acute inflammation of the screw e shaped ridge hamelonopodobnym disease, which is not where expected and discover where it's not about thinking. This fully mo w but attributed to appendicitis treatment: removal of the appendix is considered easy operation, available to students of 4-5 courses, but there are cases when the operation requires a great deal of art and op s is the solid surgeon.

**Complicated forms of acute appendicitis** have their own pathological features. The very name of these forms indicates the character of complications developing gam 's camping in acute appendicitis. Most often complicated forms occur when destructive in GOVERNMENTAL appendicitis.

Diffuse inflammation of the peritoneum occurs with significant virulence of the infection and a prolonged course of acute appendicitis. In these cases, vanishing klendusity p really adequate, and local inflammatory process in the abdominal cavity becomes widespread - in the process of attracting the all the abdominal organs, and seriously affected the entire body of growing intoxication, dehydration and profound changes in all and sharing rows.

Sometimes, in the presence of a virulent infection and a significant decrease in the body's defenses, acute inflammation of the appendix, which has not been removed in a timely manner by surgery , can proceed as *sepsis and septicopyemia* . Such cases are rare. Most often complicated by sepsis and pyosepticemia duration of the current n th ritionity and abscesses.

Quite often *infiltrative forms of acute appendicitis* , with a kind of postmortem picture, unusual clinical tech e of requiring a special approach in the treatment. Beginning infiltrative forms are destructive fo r we appendicitis in cases where the process is quick and blizlezh delimited gland and conductive tissues and organs, which subsequently also involved in the inflammatory, etc. of processes. Occurs abrupt swelling of the cecum and small bowel loops gland, they lose gran and zu together. Inflammatory infiltration of tissues converts these bodies one splo w hydrochloric conglomerate tightly associated with the front, rear or side walls of the stomach. Infil s spending come in various sizes. They can be up to 5-6 cm in diameter and cannot be detected by palpation, and sometimes reach enormous sizes, occupying the entire right half of the abdomen from the small pelvis to the hypochondrium.

An infiltrate can have two outcomes: resorption or abscess formation. If absts e dirovaniya, sometimes coming quite fast, talk about acute appendicitis, *complications Mr. nom abscesses* . Features of the abscess, its localization and size depend on the virulence of the infection, the position of the appendix and the reactivity of the organism. With the formation of an infiltrate, the acute process is quickly separated from the abdominal cavity and is local in nature. However, despite the formation of infiltration, inflammation, etc. of the process of progress and can cause increasing hospital of *peritonitis* . These forms of infiltration are of great practical importance - the tactics in their treatment are different.

*Pylephlebitis* is a very rare complication. This purulent thrombophlebitis, spreading first camping up the superior mesenteric vein and rolling on the portal vein and liver tissue (sample and form a multiple abscesses). During extremely heavy, ending in most patients l e tal outcome.

In a patient with simple appendicitis in the formation of mucous plugs or fecal, occlusive clearance process, there are all conditions for the development of cellulitis or EMPI is, we process and abscess form of appendicitis when virulent flora, melted fabrics and thrombosis enters perf of proliferative or gangrenous. These examples do not only stem from the foundations of the teachings of inflammation, but also supported by the daily clinical observations I mi. Therefore, there is no reason to declare categorically that "all forms of acute appendicitis develop in the first 24 hours and are committed n but independent"

**Clinic and diagnostics.** The disease begins in full health, without any precursors, most often in the afternoon or at night. There are cutting or giving me boiling epigastric pain, then spreading across the abdomen, and a n e number of hours localized in the right iliac region. Sometimes the pains are cramping. The occurrence of pain in acute appendicitis in epigas t Rhee is very typical and is due to the spread of pain from the appendix of the superior mesenteric plexus. A feature of the innervation to explain I etsya irradiation of pain throughout the abdomen. Pains are mild, but sometimes very strong or weak, few troubling and E of the patient. The intensity of pain does not always correspond to the severity of the process. Pain may occur once in the right iliac of the b domain and only then radiate to the various departments of the abdomen. It is clear that the localization and spread of pain are associated with the position of the appendix. So, when retrotsekalnom position of the appendix, touching th schegosya ureter, the pain may radiate to the back, in the external genitals and accompanied by frequent urination, sometimes feigning an attack of renal colic. The high position of the appendix can give symptoms of cholecystitis with tipi h nym spread of pain along the phrenic nerve.

The vast majority of patients with pain radiating to the right leg, and often h and makes it difficult walking. The lumbosacral muscle straining when walking displaces the cecum and increases pain. The pains are accompanied by nausea and vomiting, sometimes repeated. Vomiting does not give relief, which is characteristic of acute appendicitis. Constant companion and E acute appendicitis are delayed stool, gas and bloating. Very rarely and predominantly children have loose stools.

The disease is accompanied by weakness, malaise, sleep disturbance and fever. The temperature rises to 38-38.5 ° and almost never reaches high numbers. The pulse quickens according to the temperature rise. The tendency to hyperthermia in acute appendicitis is found in children.

An objective study can find many symptoms that indicate the presence of acute appendicitis. The patient comes to the emergency room or the office of the doctor, stepping carefully on his right leg and both p y kami holding the right side of the abdomen. The face is focused, you can read the periods of increased pain, coinciding with sudden movements and careless changes in body position. If the patient pre d lay down lie down on the couch, he falls slowly, lying gently on his right side, and pulls his knees to his stomach. At the same time, you can hear faint groans and outcries lungs caused increased pain when Motion th Research Institute.

**Appendicular infiltration and abscesses.** The clinical picture in patients with infiltration begins with the usual attack of acute appendicitis. Infiltrate forming so camping in 2-3 days after the attack. Therefore, it is a complicated form of acute APME n ditsita appears in patients admitted to the hospital in the later stages, when localized inflammation of valsya and acquired another form.

The general condition of the patients is satisfactory, the time will do e Nia in pain clinic become weaker in the abdomen. The signs of an acute inflammatory process come to the fore: high temperature (up to 38-39 °), corresponding pulse, facial hyperemia. Furthermore mind e rennyh and sometimes quite strong pulsating pain and fever, patients complain about the delay of the chair, weakness, malaise. Language region of the wives of white bloom, wet. Abdomen right shape or jutting into the right iliac region, which is reflected on uch a stii



front abdominal breathing. When percussion detected soreness and blunting the right iliac region and on palpation - dense fixed bole of nennoe formation of various sizes. The boundaries of the infiltrate are usually clear. Symptoms of peritoneal irritation otsuts t exist or mild. There are no signs of inflammation of the peritoneum in other parts of the abdomen or they are insignificant. Chair detained, not urinating page and gives. At low infiltration arrangement may be tenesmus, rapid chair and learning n Noe painful urination.

The further course of appendicular infiltration can go along three paths: 1) the progression of the process with an increase in infiltration and an increase in signs of diffuse peritonitis; 2) resorption; 3) abscessed of vanie.

In the first case, the patient's condition worsens, the pain is increasing, the temperature is kept high figures, joins repeated frequent vomiting, becomes dry language, appears bloating, do not depart gases, no chair, reduced the daily amount of urine, picking up of pathological e skie changes in blood and urine ...

With a favorable course of the disease pain subside gradually reduces the temperature t Xia to normal, pathological changes of blood disappear recovering bowel function is improved condition bol s Nogo, infiltration decreases and disappears within 10-14 days.

In some patients there comes abstsedirovanie infiltration: the general satisfying and remains high temperature (rising in the evening), they are pale, listless, lose weight, infiltration does not tend to decrease, its boundaries are more clear-inflammatory state.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Possible questions are attached.) Students should provide a detailed justification for their answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, an addition is given on the etiopathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of student speech, forming the basis of critical about the first thought, because In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

#### **Annotation option:**

A 33-year-old patient was admitted with complaints of pain in the right iliac region. From the anamnesis , 4 days before admission, pain appeared in the epigastrium, then throughout the life and was localized in the right iliac region. there was a single vomiting. Received home and small antibiotics and painkillers drugs. On palpation in the right iliac region, a dense formation is determined, painful on palpation. Sipmtom Shchetkina Blue m berg negative. Your diagnosis.

#### **USING THE WEB METHOD**

##### **Steps:**

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), hold the thread end and throwing the skein Telegram of th student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. S members continue and give questions and answer them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive to each of holes is, that because they do not know who to throw a hank.

## 6.2. Analytical part

### Situational tasks:

A 33-year-old patient was admitted with complaints of pain in the right iliac region. From the anamnesis, 4 days before admission, pain appeared in the epigastrium, then throughout the life and was localized in the right iliac region. there was a single vomiting. Received home and small antibiotics and painkillers drugs. On palpation in the right iliac region, a dense formation is determined, painful on palpation. Sipmtom Shchetkina Blue m berg negative. Your diagnosis.

- A. appendicular infiltrate \*
- B. acute appendicitis
- B. Perforation of the ulcer
- D. Acute cholecystitis
- D. pancreatitis

## 6.3. Practical part

Completing the assignment on practical skills (to carry out differential q and agnosis and substantiate the final diagnosis, prescribe an appropriate diet and planned treatment, ultrasound, X-ray, endoscopy).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                                           | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                        | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                                 | 0                 | 35                             |
| 3   | Based on complaints, history, obe to tive data and results of Lab and Thorn instrumental studies and differential dia g - diagnosis expose the Finishing and Tel'nykh diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                                           | 0                 | 100                            |

### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Purpose:** Treating the disease

| No.  | Event                                                                                          | Not<br>ful l Neal | Completely<br>correctly s full |
|------|------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                               | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                       | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and stage assignment                       | 0                 | 20                             |

|   |                                 |   |     |
|---|---------------------------------|---|-----|
|   | sim p -automatic therapy        |   |     |
| 6 | Preparation for planned surgery | 0 | 20  |
|   | Total                           | 0 | 100 |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment        | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, an a lyse.                 |
| 2    | 91-95%                | Excellent<br>" 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes p e sheniya.                                                                               |
| 3    | 86 - 90%              | Excellent<br>" 5" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>" 4"      | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                       |
| 6    | 71-75%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                        |

|          |        |                                     |                                                                                                                                                                                                                                                   |
|----------|--------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions asked. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Admits mistakes in solving sieve and tional.                                                                    |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but.                                                                                                    |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                 |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                 |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                             |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                           |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                                                |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                 | Lesson forms                                                                                             | Prolonged s NOSTA<br>min. 90 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                                                                                                          | five                         |
| 2    | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation                                                                                        | 25                           |
| 3    | Summing up the discussion                                                                                                                                                                                            |                                                                                                          | five                         |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                                                                                                          | ten                          |
| five | Independent work of students from a military skills                                                                                                                                                                  |                                                                                                          | fifteen                      |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group                    | Oral survey<br>IPR s menmy survey<br>tests, checking<br>Practical<br>results and cal work,<br>discussion | 25                           |

|   |                                                                                                                                                                                                            |                                               |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------|
|   |                                                                                                                                                                                                            | obsu Well denie.                              |      |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | Information, questions for self - preparation | five |

### 10. Test questions

1. Types of complications of acute appendicitis
2. Appendicular infiltration
3. Appendicular infiltrate, treatment
4. Appendicular abscess
5. Pylephlebitis
6. **Peritonitis, retroperitoneal phlegmon**

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with duodenal ulcer. // Surgery 2002 №7 p. 19-22
7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. About ext and rhenium indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>  
<http://medi.ru/doc/83.htm>  
<http://www.rmj.net/index.htm>  
<http://www.consilium-medicum.com/media/refer>  
<http://www.mediasphera.aha.ru>  
<http://buxdti.uz>

## THEME № 6. PURPOSE OF THE STOMACH AND TWELVE PENAL.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters, tables, disease classification schemes, treatment schemes, radiographs, and deofilms.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Introducing students with gastric ulcer and duodenal ulcers, causes develop it and ment, clinical features, differential diagnosis, optimal met on the treatment of rows, postoperative care, rehabilitation patients.

#### Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, know their OS of singularity;

- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with peptic ulcer of the stomach and duodenum;
- learn special methods of examination.

**The student should be able to:**

- Perform practical skills - to acquire certain practical skills in examining patients with gastric and duodenal ulcers, to carry out special inspection methods yes n GOVERNMENTAL patients to determine the indications and contraindications for surgical im e -interference.

#### 4. Motivation

Suggestion students need adequate timely surgery to isolator and Tia threatening complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is op e talkie and operating period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

#### 5. Intersubject and intrasubject communications

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

#### 6. Content of the lesson

##### 6.1. Theoretical part

Peptic ulcer and 12 duodenal ulcer is one of the main problems g and stroenterologii. According to V.Kh. Vasilenko and I.G. Kochergina (1991), in Russia in 1985, 1000 people have registered 4 cl at tea peptic ulcer disease, and in 1989 4.3 g.- case.

Women suffer from peptic ulcer disease less often than men. Many researchers attribute this to the biological properties of sexual hormones, as evidenced by favorable tech e Niemi ulcer disease during pregnancy. Currently, the ratio of men and women with a peptic ulcer 12 duodenal ulcer is 4: 1, and with peptic ulcer w e ludka -2: 1.

Peptic ulcer and 12 duodenal ulcer - heterogeneous, with different periodicity of Stu chronic relapsing disease, with different variants of the course and progress and Niya, in some patients leading to serious complications.

Many theories have been proposed for the pathogenesis of peptic ulcer disease, but the pathogenesis of peptic ulcer disease is complex and in many respects not entirely clear. Additional protection factors often isolated resist t NOSTA mucosa to corrosive factors, presence of mucus, which is capable of neutrons and ripple acid and inhibit peptic digestion, regeneration of the epithelium, adequate blood supply, neutralizing od b NOSTA "mixture" consisting of the contents of allocated 12 -ti duodenum, gallbladder and pancreas. A certain value in a stalemate on the genesis of peptic ulcer disease and motor disorders are in gastroduodenal B with the topic.

Localization: chronic ulcer 12 duodenal ulcer in 94% of patients with localized in the bow of the Vice ulcer (ulcer onion). Simultaneously, there can be two ulcers on the front and rear walls ( "intact at yuschiesya ulcers"). Rarely, ulcers develop below the bulb (extrabulbous ulcers). The diameter of the ulcer Oba hours but not more than 1.5 cm.

Clinical picture and diagnosis: duodenal ulcer disease begins, as a rule, at a young and middle age. Mostly men get sick. Lead ulcer symptom N hydrochloric disease 12 duodenal ulcer - epigastric pain. Analysis of the anamnestic characteristics of the left syndrome allows us to make a fairly reasonable assumption about the presence of duodenal ulcer disease. Characteristic frequency of the disease with sezo n GOVERNMENTAL exacerbations (in the spring and autumn period) daily rhythm pain, pain connection with food intake. In patients with ulcer Mr. Noah disease 12 duodenal ulcer pain arise later - through a 0.5- 3 hours after a meal, night and hunger pains. The pain is usually relieved by eating, vomiting, and antacids. Heartburn - one of the most common symptoms can go into a feeling of burning pain, it has a circadian rhythm in s penetration.

Vomiting occurs at the height of the pain, brings relief to the patient. PBO m nye masses have a sour taste, a large number of gastric contents with no impurity observed in food giperse to secretion of gastric juice.

An objective study of patients does not reveal pathognomonic signs. Patients with asthenic constitution predominate. Meals for patients is normal, often dressings become all due to frequent meals. Less commonly observed weight loss as a result of complications (stenosis, bleeding, debilitating pain during penetration ulcers, sleep disorder but h GOVERNMENTAL pain). Tongue coated with white bloom. On palpation of the abdomen is determined by pain and muscle tension in the upper right quadrant, in the same field of percussion show the painful area of STI.

Upper endoscopy is the most informative method of research, OAPC on -governing diagnose an ulcer 12 duodenal ulcer and combined with her defeat of the esophagus and we ludka (esophagitis with violation of the provisions of the cardia and without it, gastritis, Bulba combination ulcers with eras of ziyami).

Differential diagnosis: the diagnosis of peptic ulcer disease 12 duodenal ulcer with typical clinical manifestations is not difficult - the seasonal periodicity of course ill and Niya, the circadian rhythm of pain associated with food intake, characteristic for the ill and Niya. However, we must bear in mind that the pain inherent in duodenal ulcer, can be observed in the localization of ulcers in the stomach, as well as the development of the first hour but-ulcerative form of gastric cancer.

The clinical course of ulcer disease 12 duodenal ulcer when pristupoobra of naya pain localized in the right upper quadrant, can resemble cholelithiasis, chronic e sky cholecystitis. However, at a stomach ulcer there is a seasonal exacerbation Prodo l zhitelnostyu 3-4 weeks, daily circadian rhythm of pain, loss of pain after vomiting, while biliary colic occur sporadically item on follows a fatty fried foods, the pain does not go away after vomiting. During an attack, patients are restless, looking for a comfortable position, and stupas are short-lived. The use of antispasmodics relieves pain. For carrying di p differential diagnosis of important results of X-ray examination of the stomach and 12 duodenal ulcer and holetsistografii.

Chronic pancreatitis, in which increased pain in the upper abdomen is associated with food intake, may have similarities with duodenal ulcer disease. However, when xp about nical pancreatitis pain often takes the surrounding nature does not disappear from the reception and Mr. tatsidov may intensify after vomiting.

Treatment: general principles of conservative and surgical treatment of peptic ulcer disease 12 duodenal ulcer based on the elimination of dis t Via aggressive acid-peptic factor in the mucosa 12 duodenal ulcer. Conservative treatment includes Le chebnoe food, drugs that suppress acid production, antacids, drugs that improve the condition of a protective about th mucosal barrier enhancing mucosal regeneration, sedatives. In the early stages zaboleaniya in 70% of patients with complex medicines of Noah and the spa treatment provides a lasting positive effect.

The indications for surgical treatment of the patient with a peptic ulcer 12 duodenal ulcer are: failure of complex conservative treatment of frequent exacerbations and bolevaniya reducing patient disabled; callous ulcers, penetrating; multiple ulcers with high acidity of gastric juice; a history of repeated bleeding; relapse peptich e tion after ulcer suturing perforated ulcer history.

The goal of surgical treatment of peptic ulcer disease 12 duodenal ulcer - protect bol s Foot from a life-threatening complications from perforation of the ulcer, profuse bleeding, stenosis, and to ensure the prevention p e tsidivov disease.

Surgical treatment of duodenal ulcer should be aimed at reducing the production of hydrochloric acid. This can be achieved in various ways: di extensive with tal resection gastric vagotomy application. When resection gastric antral removed in s ops gastrin, and a significant portion of the stomach body being acidogenic zone, inevitably intersect branch blu w giving nerves and mobilize at the intersection of the lesser curvature of the stomach. After gastrectomy continuity gastrointestinal Restore and navlivayut via gastrodoudeno-anastomosis by Method Billroth-I or an gastrojejunal and stomoza the method Billroth-I I.

An advantage of the method Billroth-I is to maintain the passage of food through 12 pers m hydrochloric intestine. However, this method is not always feasible because of the

presence of infiltration, the scar deformation 12 duodenal ulcers, because of the potential hazards and anastomotic tension differences seams.

Relapses of ulcers occur in 1-7% of patients. Post-operative mortality was 3-5%. In the first year after gastric resection, about half of the operated patients are disabled. In 10-15% of gastric resection syndrome develop postgastrorezekeksionnye about we, the severity of which is often much greater than manifestations of peptic ulcer disease and is the cause of reoperations and disability. To reduce acid production by the gastric glands, vagotomy is used. Vagus nerves are secretory and motor nerves of the stomach.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each item in the dent, the teacher works with the whole group.

Each student gets a question out of the black box. (Options questions are attached.) Article in denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 32-year-old patient complains of epigastric pain, nausea, vomiting, weight loss, weakness and convulsions. 6 years suffers ulcer 12ti duodenum repeatedly floor in Getting treatment. The general condition is satisfactory, the skin is loose and dry. Tongue with leucorrhoea. Stomach ne as swollen, painful to palpation in epigastrium, positive symptom splashing, X-ray after 24 hours in the stomach about 50% contrast. Your dia g nos.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Members continue to ask questions and holes e chat to them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., until all "posted a tyvaniya" coil.

Note: Caution students that we should be attentive to each answer, n about how much they do not know who will throw a hank.

### **6.2. Analytical part**

#### **Situational tasks:**

A 32-year-old patient complains of epigastric pain, nausea, vomiting, weight loss, weakness and convulsions. 6 years suffers ulcer 12ti duodenum repeatedly floor in Getting treatment. The general condition is satisfactory, the skin is loose and dry. Tongue with leucorrhoea. Stomach ne as swollen, painful to palpation in epigastrium, positive symptom splashing, X-ray after 24 hours in the stomach about 50% contrast. Your dia g ERA:

- A. decompensated pyloric stenosis \*
- B. subcompensated pyloric stenosis
- B. malignancy
- D. penetration
- D. perforation
- II . Operation volume:
- A. Gastric resection \*
- B. Vagotomy with drainage operation



- B. Gastroenteroanostomosis
- G. SPv
- D. Selective vagotomy with pyloroplasty

### 6.3. Practical part

Performing an assignment on practical skills (to carry out a differential diagnosis and substantiate the final diagnosis, prescribe an appropriate diet and planned treatment, gastric tube and probe ).

#### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                              | Not full | Completely full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0        | 25              |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                    | 0        | 35              |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnostics, make a final diagnosis | 0        | 40              |
|     | Total                                                                                                                                                              | 0        | 100             |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                             | Not full | Completely full |
|------|---------------------------------------------------------------------------------------------------|----------|-----------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                           | 0        | ten             |
| 2    | Choosing the right diet table for your diagnosis                                                  | 0        | ten             |
| 3    | Evaluation of the usefulness of the diet                                                          | 0        | 20              |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy    | 0        | 20              |
| five | In accordance with the diagnosis, COG e Stu disease and stage assignment sim p -automatic therapy | 0        | 20              |
| 6    | Preventive measures                                                                               | 0        | 20              |
|      | Total                                                                                             | 0        | 100             |

#### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia by the contents of the stomach, emptying the stomach from the contents, preparing the stomach for surgery, bleeding from the stomach and 12 duodenum, gastrostasis.

| No. | Event                                                                  | Not full | Completely full |
|-----|------------------------------------------------------------------------|----------|-----------------|
| 1   | Reassure the patient, explain the course of the upcoming manipulation. | 0        | ten             |
| 2   | Wear rubber gloves.                                                    | 0        | ten             |
| 3   | Measure the distance from the mouth to the stomach.                    | 0        | ten             |
| 4   | Enter through the nasal passage des thin at zling probe.               | 0        | ten             |

|       |                                                                                                                           |   |     |
|-------|---------------------------------------------------------------------------------------------------------------------------|---|-----|
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0 | ten |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0 | ten |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0 | ten |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0 | ten |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0 | ten |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0 | ten |
|       | Total                                                                                                                     | 0 | ten |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse.                              |
| 2    | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                                            |
| 3    | 86 - 90%              | Excellent " 5" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                               |
| 4    | 81-85%                | Good " 4"      | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies to right- to tick, understands the essence of the question, he says HC e Renno has a precise representation. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good " 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately                                                                                                                                                                                                                                  |

|          |        |                                     |                                                                                                                                                                                                                                                             |
|----------|--------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                                                                |
| 6        | 71-75% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                               |
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions asked. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                             |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                                                     |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                       |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                     |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                                                          |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                                                                                                                                                                                 | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|
| 1   | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                   | five                                |
| 2   | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation | 25                                  |
| 3   | Summing up the discussion                                                                                                                                                                                            |                   | five                                |
| 4   | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                   | ten                                 |

|      |                                                                                                                                                                                                                       |                                                                                                           |         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------|
| five | Independent work of students from a military skills                                                                                                                                                                   |                                                                                                           | fifteen |
| 6    | Determination of the degree of achievement of objectives and nyatiya on the basis of the developed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group | Oral survey IPR s meny survey tests, checking Practical results and cal work, discussion obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge by 100 point s and a system and its announcement. Cottage tasks for the next th present occupation (set of questions)                | The information in a millet to myself about pendent Getting on Preparations                               | five    |

### 10. Test questions

1. How many percent does the incidence of complications of gastric ulcer and duodenal ulcer reach ?
2. The reasons for the development of gastric ulcer and duodenal ulcer.
3. The most frequent localization of chronic duodenal ulcers.
4. The main disorders arising from gastric ulcer and dvenadtsatipers so Noah intestine.
5. Indications for urgent surgical treatment for stomach ulcers and dven and dtsatiperstnoy intestine.
6. The purpose of the surgical treatment of patients with duodenal ulcer.
7. Methods restore the continuity of the gastrointestinal tract after resection w e ludka, their advantages and disadvantages.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
  2. M.I. Kuzin "Surgical diseases", 1995
  3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
  4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
  5. Voitenko. Operations on the abdominal organs. 2000 year
  6. Babalich A.K. Surgical treatment of patients with peptic ulcer ki w ki. // Surgery 2002 №7 p. 19-22
  7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. Expansion of indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.
- Internet addresses related to the topic of the lesson:
- <http://www.tma.tmn.ru/Vestnik>
- <http://medi.ru/doc/83.htm>
- <http://www.rmj.net/index.htm>
- <http://www.consilium-medicum.com/media/refer>
- <http://www.mediasphera.aha.ru>
- <http://buxdti.uz>

## TOPIC №7. COMPLICATIONS Ulcerative Soreness of the Stomach and Duodenum (Bleeding, Perforation).

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, sling h naya
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

## 2. Duration of study of the topic

The number of hours is 4.9.

## 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Introducing students to the complications of gastric ulcer and 12 duodenal ulcer, the reasons for their development, clinical features, differential diagnostic and Coy, optimal treatment methods, conducting the postoperative of the second period, the rehabilitation of patients.

### Tasks

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies for about a Considerations for the diagnosis and choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with complicated e niyami gastric ulcer and 12 duodenal ulcer;
- **learn special methods of examination.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examining patients with complications of gastric ulcer and 12 duodenal ulcer, carry out special methods of examination data of patients to determine the indications and contraindications for Hira p cal interventions.

## 4. Motivation

Suggestion students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is the operation and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

## 5. Intersubject and intrasubject communications

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

## 6. Content of the lesson

### 6.1. Theoretical part

When peptic ulcer bleeding are hidden and overt (moderate and weight in GOVERNMENTAL) Sources bleeding artery, veins, capillaries. Bleeding from the capillaries per diapedesin can be detected by chemical tests in gastric contents, and fecal occult blood) are small (low) blood loss (less 50 ml) furnished to a lovy e masses have a black color. With blood loss of more than 50 ml, liquid black stool takes on a tarry appearance (melena).

The frequency of complications of peptic ulcer disease with acute bleeding reaches 20%. Krovotech e Nia as a direct cause of death of patients with peptic ulcer disease are on the first place.

Acute blood loss is accompanied by hypovolemia. Knowledge of these laws autoregulatory protective and compensatory reactions to blood loss volemic facilitates the diagnosis of disorders and is the basis for therapeutic CELEBRATION I Tille.

The main disorders that develop with bleeding:

- 1) hypovolemic shock due to volume reduction circus at liruyuschey blood;
- 2) renal failure due to decreased filtration and hypoxia of the renal parenchyma;
- 3) hepatic failure due to hepatic blood flow and reduce hy a PSMM
- 4) oxygen starvation of the myocardium - myocardial infarction;

- 5) cerebral hypoxia - cerebral edema;
- 6) intoxication with products of hydrolysis of blood proteins, poured into the to and the cervix.

Clinic, diagnostics, treatment. Early signs of bleeding are common, etc. and signs of anemia: weakness, dizziness, palpitations, fainting. Later there is a shelter and Vai vomiting blood, stomach overflow, and then melena. Character vomit when n of localization of the source of bleeding in the stomach, blood clots and scarlet dark cherry color, color liquid coffee grounds. Bloody vomit may be absent when n is, a lot of bleeding from the stomach, when the time to evacuate blood from the stomach. Bloody vomiting can also be observed when the source of bleeding is localized in the duodenum due to the throwing of the duodenal contents into the stomach. Repeated vomiting with attached e Niemi subsequently abundant liquid tarry stools observed in massive cr on votechenii. Vomiting, repeated at short intervals, the rate of cont and yuschegosya bleeding. Long intervals between vomiting are a sign of resumption of blood flow.

Physical examination data. The patient is frightened, restless. The skin is pale and cyanotic, moist, cold. The pulse is quickened. Blood pressure can be normal, low, low. The shock index (the ratio of the pulse to systolic blood pressure) is more than 0.5 - an indicator of a decrease in the volume of the circus in the flowing blood. (Pulse rate and systoles At deficiency bcc to 30% shock index raised to 1 and about 100 cal pressure) shock index of 2.0 corresponds to the deficiency amount qi p kuliruyushey blood to 70%. Breathing is quickened.

Take the following actions immediately:

1), subclavian vein catheterization holding replenishment circulating volume deficit in guide blood, central venous pressure measurement:

- 2) gastric sounding, gastric lavage with cold water;
- 3) emergency esophagogastroduodenoscopy;
- 4) oxygen therapy
- 5) autotransfusion (leg bandaging);
- 6) cardiotherapy;
- 7) determination of the degree of blood loss;
- 8) continuous catheterization of the bladder.

In severe hypotension main task of first aid - PLAYBACK l nenie BCC. Transfusion therapy begins with the intravenous administration of blood products (direct e Paratov dextran, starch, gelatin, polyvinyl compounds).

The following diagnostic event is an emergency ezofagogastroduoden of Skopje.

Objective assessment of the severity of the patient's condition and the size krovop of ter possible with clinical data registered in combination with indicators BCC and its components h and stnosti globular volume. The severity of bleeding (according to V.I. Struchkov, E.V. Lutsevich).

After the endoscopic examination conducted in the absence of indications to eq with friction operations continue to conservative treatment and monitoring of patients. The activities are as follows:

- 1) intravenous replenishment of circulating blood deficiency (plasma, albumin, blood, crystalloid solutions);
- 2) oxygen therapy;
- 3) constant sounding of the stomach;
- 4) cardiotherapy;
- 5) autotransfusion (leg bandaging);
- 6) suppression of gastric secretion (histamine H2 receptor blockers), antacids and dy;
- 7) low head position;
- 8) cleansing enemas to remove outflowing blood from the intestines;
- 9) prevention of heat loss (but not warming with heating pads);
- 10) catheterization of the bladder.

It is necessary to monitor the hemodynamic parameters (pulse, arterial and venous pressure, shock index, ECG) and the indicators of anal and blood call (hemoglobin, hematocrit, acid-base state, electrolytes, creatinine, urea, coagulum about a gram).

In the absence of indications for emergency or urgent surgery further therapeutic events gathered should be aimed at reducing the likelihood of rebleeding and antiulcer treatment systems. Patients with signs of hypocoagulation are shown intravenous administration of solutions of calcium chloride, epsilon-aminocaproic acid, intravenous and muscle injections of vicasol

Indications for urgent surgical intervention: hopelessness or failure of conservative treatment (bleeding cannot be stopped or after stopping there is a threat of its relapse); Massive in Nosta blood loss; localization of ulcers in hazardous areas with abundant blood supply; Adverse endoscopic Prizna and ki (deep ulcer with exposed or thrombosed vessels); old age of the patient. The operation should be performed at the optimal time for the patient. Eck with friction surgery is indicated in patients: in a state of hemorrhagic shock; with massive bleeding when conservative measures gathered ineffective; with recurrent bleeding occurring after its stop as a result of conservative treatment in state of Nara.

Expedient to make an emergency operation for 24-48 hours (the time period required for preparation) with massive bleeding when, despite fracture and vanie 1500 ml of blood, the patient's condition has stabilized, hemoglobin remains bcc and m camping on the same level or decrease, urine is secreted 60 - 70 ml / h.

The purpose of the operation is, firstly, to stop bleeding and save the patient's life, and secondly, to cure the patient from peptic ulcer disease.

Methods of surgery For duodenal ulcer: suturing of a bleeding vessel (or excision of an anterior wall ulcer) in combination with pyloroplasty and vagotomy. For combined duodenal and gastric ulcers, vagotomy with pyloric and trumectomy is performed.

In case of gastric ulcer: 1) gastric resection with removal of a bleeding ulcer in patients with a relatively low degree of operational risk; 2) elderly patients with a high degree of operational risk - excision of ulcers in combination with a vagotomy or pyloroplasty and gastrotomicheskoe through hole in flashing bleeding vessel in s soko situated ulcer in combination with vagotomy and pyloroplasty.

Pyloroduodenal cause stenosis are often duodenal ulcers, rarely prepiloricheskie sores and ulcers pyloric kan and la. Narrowing of the lumen with a certain degree of obstruction of the narrowed portion results from the periulteroznogo and n filtrate edema, spasm and scarring of the ulcer final judgment on the extent of rumen restriction it can only be made after a course of anti-ulcer treatment, to about GDSs disappear periulterozny infiltration, edema, spasms ...

The development of cicatricial stenosis is preceded by an ulcerative history of varying duration. The progressive decrease in the lumen of the narrowed area makes it difficult to evacuate from the stomach. First gastric emptying of soda p extensible carried out due to gain of hypertrophied muscle contractions of the stomach. In the future, the contractile ability of muscles OSL and Bevan, and the expansion of the stomach occurs (gastroektaziya).

Clinical picture and diagnosis: in the clinical course of stenosis, three stages are distinguished: compensated and compensated, subcompensated and decompensated.

Compensated stage has not any marked clinical, etc. and signs, since the stomach is relatively easy to overcome the difficulty of the passage of food through the narrowed area. The general condition of the patients is satisfactory. Against the background of a common symptom of mov peptic ulcer patients report a feeling of fullness and heaviness in the epigastric region and the STI, especially after a heavy meal, more often than before, there is heartburn, acid regurgitation and occasionally vomiting, gastric contents with a pronounced ki with lym flavor. After vomiting, pain in the epigastric region disappears. On X-ray examination, the stomach is normal in size or slightly enlarged, its peristalsis is strengthened, the pyloroduodenal canal is narrowed. EV and kuatsiya from the stomach timely or delayed for up to 6-12 hours.

In step subcompensation patients enhanced feeling of heaviness and fullness in WPP and stralnoy region appears belching odorous due to rotten eggs and tion delay food in

the stomach. Patients are often worried about sharp colicky pain associated with increased gastric motility. These pains are accompanied by transfusion, at p chaniem in the abdomen. Almost daily there is profuse vomiting, which brings relief, so it is not uncommon for patients to artificially vomit. Vomit contains an admixture of food received 1 that long before vomiting. For subcompensation stage characterized by general weakness, fatigue, weight loss, impaired water-salt metabolism and acid-base state I Niya. Physical examination reveals a "splash noise" in the stomach on an empty stomach. In lean patients seen undulating motility w e ludka that changes the contours of the abdominal wall. On X-ray examination, the stomach is dilated, on an empty stomach contains fluid, and its peristalsis is weakened. The pyloroduodenal canal is narrowed. Expressed evacuation deceleration contras m hydrochloric mass, 6-12 hours in the stomach, there are residues contrast mass at 24 hours to the stomach does not contain n -contrast weight.

The stage of decompensation is characterized by a feeling of fullness in the epigastric region, profuse daily vomiting, sometimes many times. In the absence of emesis independent patients have to artificially induce vomiting or resort to gastric lavage h e Res probe. Vomit contains fetid, decomposing food debris from many days ago. After emptying the stomach, relief comes, for several hours, thirst arises, urine output decreases as a result of dehydration. Insufficient and accurate flow of the intestines of food and water is the cause of constipation. In some patients, diarrhea occurs due to the flow of fermentation products from the stomach into the intestines. Patients with decompensated stenosis are severely emaciated, dehydrated, inferior, and numb. The skin is dry, easily folds, the skin turgor is reduced. The tongue and mucous membranes of the mouth are dry. Through the abdominal wall the outlines of a stretched stomach, overflowing content, at times it may be noted convulsive peristalsis w e ludka. A jerky shaking of the abdominal wall by the hand causes a "splash noise" in the stomach. When X-ray stomach significantly expanded with bol s PWM quantity of contents fasting adopted aqueous slurry sulfate (sulfate) barium accumulates in the lower part of the stomach in the form of a bowl with a wide upper horizontal level above which visible layer of the liquid contents of the stomach. Lower stomach pole is low, sometimes at the level of the symphysis pubis peristalsis w e ludka weakened. At the time of receipt of the study contrast mass in dvenadtsatipers tons hydrochloric gut there. The evacuation of the contrast mass from the stomach was delayed for more than 24 hours.

With the progression of decompensation further expansion of the stomach resulting in re of whom thinning of its walls, to the loss of the possibility of restoration of motor-evacuation function of the stomach. Along with this, there is microbial colonization of the gastric mucosa due gnilos m Nogo fermented food stagnant

When subcompensated decompensated stenosis and exit from the stomach stepping and guides the body metabolic disorders are caused by inability adekva m Nogo food through the mouth, with the loss of large quantities of vomit gastric juice, with a holding electrolytes. These factors lead to a progressive exhaustion, dehydration set and vaniyu, upset the balance of electrolytes, acid-base with on standing.

The consequence of disturbances of water and electrolyte balance can be a decrease in volume of the circulating fluid in the bloodstream, blood clots, "centralization circulatory e Nia", hypokalemia, hypochloremia, metabolic alkalosis. Hard Of Signs volemic e Nij: dizziness and fainting when lifting a bed; rapid pulse, reducing Arterial s pressure, tendency to collapse: cutaneous pallor and cooling n of blood; decreased urine output.

Differential diagnosis: carried out between pyloroduodenal stenosis of ulcerative origin and stenosis due to cancer of the outlet of the stomach. Differences in disease dynamics must be taken into account. In patients with peptic ulcer disease has contin s ny (for several years) history of chronic recurrent disease. We bol s GOVERNMENTAL stomach history of cancer is usually shorter, faster depletion occurs. When fallen s patsii stomach sometimes defined tumor. In the case of cancer stenosis at radiological issl e dovanii filling defect can be detected in the output compartment of the stomach, no znach and Tel'nykh expansion and severe gastric motility.



Treatment: for cicatricial stenosis of the outlet of the stomach, regardless of the severity of clinical manifestations, the degree of expansion of the stomach and the delay in evacuation revealed by X-ray examination, surgical treatment is indicated. Bol s nym with active ulcers features necessary to conduct a course of antiulcer therapy (2-3 weeks), resulting in about torogo disappear edema, infiltration periultserozny and may even occur of a zhivlenie ulcers.

Patients with decompensated stenosis subcompensated and having severe disorders of water and electrolyte balance and to and slotno-base status, require a comprehensive preoperative preparation, which should be included carrying out the following measures for enterprises.

1. Treatment of volemic disorders (administration of solutions of dextran, albumin, protein, isotonic sodium chloride solution). For correlator to tion violations of water-electrolyte balance and acid-base status necessary to introduce crystalloid solutions containing  $K^+$ ,  $Na^+$ ,  $Cl^-$ . Attention! Potassium preparations can be administered only after diuresis is restored. To maintain the water balance of the patient should the floor in chat isotonic glucose solution of 500 ml every 6-8 hours for proceeding Control leche. E Niemi: general condition of the patient assessment, hemodynamic parameters (heart rate, blood and in Leniye, shock index hourly diuresis) BCC and its components, indicators of acid-base state, plasma electrolytes, hemoglobin, heme a tokrit, creatinine, urea.

2. Parenteral nutrition that provides the daily caloric requirements.

3. Antiulcer treatment.

4. Systematic decompression of the stomach (aspiration of gastric contents through a tube 2-3 times a day).

The choice of the method of operation. The goal of surgery for cicatricial stenosis of the stomach outlet obstruction removal and creation of conditions for a formation of motor-evacuation function of the operated stomach, rad e chenie from peptic ulcer.

When choosing a method of operation should be noted that the clinical manifestations and radiographic signs of stenosis severity of the violation of evacuation are not closely related to the degree of gastric constriction in his s Khodnev department.

Selective proximal vagotomy can be performed with compensated stenosis with sufficient patency of the pylorobulbar zone. If after pilorobulba p ny separated fails to hold thick gavage during surgery, selective proximal vagotomy must be supplemented by draining stomach operation. Vagothyl about mia with drainage surgeries shown at subcompensated walls of se.

2/3 gastric resection or vagotomy with piloroantrumektomiya are shown at a) decompensated stenosis, b) co form peptic ulcer, when along with piloroduod e onal stenosis has gastric ulcer, c) the presence of intraoperative duodeno signs of stasis.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, an addition is given on the etiopathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of student speech, form the foundations of the critical e Skog thinking because In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 32-year-old patient complains of epigastric pain, nausea, vomiting, weight loss, weakness and on the road. For 6 years he has been suffering from duodenal ulcer disease, has repeatedly received treatment. The general condition is satisfactory s Noah, flabby skin,

dry. Tongue with leucorrhoea. Abdomen somewhat swollen, painful to palpation in epigastrium, positive B m ptom splashing, X-ray after 24 hours in the stomach about 50% contrast. Your dia g nos.

## USING THE WEB METHOD

Steps:

1. Pre students are given time to prepare questions on the passed associated I Tia.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), hold the thread end and throwing hank l th Bohm student.
4. A student who has received a skein, answers the question (the participant, who asked him to m menting response) and passes the baton to the issue further. Participants continue to ask and answer questions until everyone is on the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to the full for the first "unwinding" of the coil.

Note: Caution students that we should be attentive to each of holes is, that because they do not know who to throw a hank.

## 6.2. Analytical part

### Situational tasks:

A 32-year-old patient complains of epigastric pain, nausea, vomiting, weight loss, weakness and on the road. For 6 years he has been suffering from duodenal ulcer disease, has repeatedly received treatment. The general condition is satisfactory s Noah, flabby skin, dry. Tongue with leucorrhoea. Abdomen somewhat swollen, painful to palpation in epigastrium, positive B m ptom splashing, X-ray after 24 hours in the stomach about 50% contrast. Your dia g ERA:

- A. decompensated pyloric stenosis \*
- B. subcompensated pyloric stenosis
- B. malignancy
- D. penetration
- D. perforation
- II . Operation volume:
- A. Gastric resection \*
- B. Vagotomy with drainage operation
- B. Gastroenteroanostomosis
- G. SPv
- D. Selective vagotomy with pyloroplasty

## 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, nasogastric intubation ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**The goal :** to train to conduct differential diagnosis and justify the final di and prognosis.

| No. | Event                                                                                    | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                          | 0                 | 35                             |

|   |                                                                                                                                                                         |   |     |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|
| 3 | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis | 0 | 40  |
|   | Total                                                                                                                                                                   | 0 | 100 |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not<br>ful l Neal | Completely<br>correctly s full |
|------|------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                               | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                       | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0                 | 20                             |
| 6    | Preventive measures                                                                            | 0                 | 20                             |
|      | Total                                                                                          | 0                 | 100                            |

#### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying for content on the go, prepare the stomach for surgical interventions, the bleeding of the stomach and 12 Persian t Noah intestine gastrostasis.

| No.   | Event                                                                                                                     | Not<br>ful l Neal | Completely<br>correctly s full |
|-------|---------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0                 | ten                            |
| 2     | Wear rubber gloves.                                                                                                       | 0                 | ten                            |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0                 | ten                            |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0                 | ten                            |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0                 | ten                            |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0                 | ten                            |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0                 | ten                            |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0                 | ten                            |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0                 | ten                            |
| ten   | Remove the gloves and put them in e m a                                                                                   | 0                 | ten                            |

|  |                                    |   |     |
|--|------------------------------------|---|-----|
|  | bone with a disinfectant solution. |   |     |
|  | Total                              | 0 | ten |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment          | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>"five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse.               |
| 2    | 91-95%                | Excellent<br>"five" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                             |
| 3    | 86 - 90%              | Excellent<br>"five" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>"4"         | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>"4"         | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                       |
| 6    | 71-75%                | Good<br>"4"         | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                        |
| 7    | 66-70%                | Satisfied           | The correct answer to half of                                                                                                                                                                                                                                                                                                                       |

|          |        |                                     |                                                                                                                                                                                                                                            |
|----------|--------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        | literally<br>"3"                    | fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer. |
| eight    | 61-65% | Satisfied<br>literally<br>"3"       | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                             |
| nine     | 55-60% | Satisfied<br>literally<br>"3"       | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has a partial idea of the topic. Situational tasks solved n e is true.                                                                                            |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                     |
| eleven   | 46-49% | Unsatisfied<br>sly<br>"2"           | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                    |
| 12       | 41-45% | Unsatisfied<br>sly<br>"2"           | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                      |
| 13       | 36-40% | Unsatisfied<br>sly<br>"2"           | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                    |
| fourteen | 31-35% | Unsatisfied<br>sly<br>"2"           | Doesn't give answers to questions.                                                                                                                                                                                                         |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                                                                                                                                                                | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|
| 1   | Introductory word of the teacher (justification t e we)                                                                                                                                             |                   | five                                |
| 2   | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.) | Poll, explanation | 25                                  |
| 3   | Summing up the discussion                                                                                                                                                                           |                   | five                                |
| 4   | Providing students with visual                                                                                                                                                                      |                   | ten                                 |

|      |                                                                                                                                                                                                            |                                                                                                            |         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------|
|      | aids and giving explanations to them                                                                                                                                                                       |                                                                                                            |         |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                            | fifteen |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey IPR s menny survey tests, checking Practical results and cal work, discussion obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations                                | five    |

### 10. Test questions

1. What percentage reaches the frequency of complications of peptic ulcer acute the blood flow f cheniem?
2. The reasons for the development of bleeding.
3. The main disorders arising from bleeding.
4. The main objective of assisting in severe hypotension, vsle etc. Corollary bleeding from the gastrointestinal tract.
5. Indications for urgent surgical treatment for bleeding ulcers.
6. Causes of pyloroduodenal stenosis.
7. Clinical stages of the course of stenosis.

### 11. Recommended reading

1. Apigorchev S.G., Koryttsev V.K. Surgical tactics for ulcerative duodenal bleeding // Surgery 2001 №6 p. 20-22
2. Zaitsev V.G., Laganda A.E., Leopatyagin G.F., Baikov V.V. Choose how Vagothyl on a mission in the treatment of duodenal ulcer // Clinical Surgery 2003. №4 with. 47-52
3. Zubarev PN, Kachetkov AV, Combined vagotomy in the surgical treatment of patients with duodenal ulcer. // Bulletin of surgery 2000. №4 p.25-28
4. Ratner G.L., Koryttsev V.N., Katkov S.A., Afanasenko V.P. Bleeding ulcer dven and dtsatiperstnoy Cancer: Management of hemostasis unreliable. // Surgery 2003. No. 6 p.23-24.
5. Melton LJ 3-rd., Crowson CS, Khasla S et. al. Fracture risk after surgery for peptic ulcer disease a population - based cohort study. // Bone. 2000. No. 25 (1) P.61-67
6. Bitsch V. Gastric secretory pattens before and after vogotomy // Lancer - 2000 Vol. 1, No. 7450 - p.1288-1291
7. Hoffman J., Fisher A., Jensen H., Unsuccesful exrerience with closure of Japoulay gastrodu o denostomosis in the treatment of postvagotomy dumping and diarrhea // Ann. Surg . 2000. vol . 198. No. 2 p . 142-145

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

## **TOPIC №8. COMPLICATIONS Ulcerative Soreness of the Stomach and Duodenum (STENOSIS, PENETRATION, MALIGNIZATION).**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing  
- posters, tables, disease classification schemes, treatment schemes, radiographs, and deofilms.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with complications of gastric ulcer and 12 duodenal ulcer, etc. and ranks them development, clinical features, differential diagnosis, optimal treatment methods, postoperative care, rehabilitation bol s GOVERNMENTAL.

#### **Tasks**

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, know their OS of singularity;
- to prevent complications during and after operations;
- to acquire certain practical skills in examining patients with complications of gastric ulcer and 12 duodenal ulcer;
- **learn special methods of examination.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examining patients with complications of gastric ulcer and 12 duodenal ulcer, carry out special methods of examination data of patients to determine the indications and contraindications for Hira p cal interventions.

### **4. Motivation**

Suggestion students need adequate timely surgery to isolator and Tia threatening complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is op e talkie and operating period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

Perforated more often ulcers of the anterior wall of the duodenum (2/3 of cases), then - prepyloric ulcers.

Ulcer perforation occurs during the exacerbation of peptic ulcer, but may occur in people who had no previous symptoms of peptic ulcer (frequency "dumb ulcers" with a rate is about 20%). The danger of an open ulcer perforation associated with the expiry of the abdominal cavity or the contents of the stomach, peritoneum acting as the Financials e sky,

chemical and bacterial stimulus. Ulcer perforation quickly leads to the isolator and Tia peritonitis.

Clinical manifestations are due to the body's reaction to sudden irritation of the abdomen and the spilled gastroduodenal contents and the subsequent development of peritonitis. The wedge and Český complications during conditionally divided into three periods: the first period - first shock, the second period "imaginary wellbeing" dec third period and of peritonitis.

The first period is the period of primary shock (lasts 3-6 hours).

The first perforation of ulcer symptoms - pain, very sharp, permanent, "knife" in s arises suddenly in the epigastric region.

Irradiation of pain under the right or left shoulder, in the supraclavicular region is the result of stimulation of the phrenic endings not p va.

Vomiting or retching is a fickle symptom. Body temperature but lowered or p - formal. Pulse initially good filling slowed to 50-60 per minute (vagal pulse) or moderately speeded (80 min), the art e ble reduced pressure.

The type of breathing is chest, breathing is shallow, quickened. The tongue and mucous membranes of the mouth are moist. The abdomen is retracted, has a scaphoid shape due to the sharp tension of the muscles of the abdominal wall. Young people lean rectus abdominis konturiruyutsya well as longitudinal shafts separated in the transverse direction is dry on the vein jumpers. Constant tonic tension of the abdominal wall muscles characterize figuratively speaking , and it - "the belly as a board."

In old people and in people with a flabby abdominal wall, the tension of the muscles of the abdominal wall may not be expressed. It may not be present in individuals who are in a state of alcohol on the first intoxication. Obese people stress abdominal muscles is masked studded s Noah subcutaneous fatty tissue in the abdominal wall. Palpation of the abdomen sharply Bole of nenna. Blumberg-Shchetkin's symptom is positive. Free gas in the abdominal cavity (pneumoperitoneum) is a characteristic sign of perforation of an organ containing gas. Going through Punch and insulating hole in ulcer, gas accumulates under the liver under the diaphragm. To identify the right of free gas by e diaphragmatic space should be in the position of the patient on the left side to make percussion on the right mid-axillary line. Instead usually detectable liver dullness over the area will timpanichesky - positive symptom Spizharskogo (revealed I etsya at 65- 70% of patients).

X-ray examination shows a restriction of the mobility of the diaphragm and free gas in the abdominal cavity (in 75-80% of patients). When examining a patient in a standing position , free gas is determined under the diaphragm in the form of a crescent stripe of enlightenment. When examining a patient on a lateroscope in the supine position, one can see an accumulation of gas in the form of a strip under the liver or in front of the liver; in the patient's position on the left side, an enlightenment strip is located on the side of the liver.

The second period is the period of "imaginary well-being" (after 6 hours). As a result of adaptation to sta with these diluted hydrochloric acid in the abdominal cavity exudate action of endorphins pronounced symptoms smoothing m Xia, the patient feels better, reduced abdominal pain.

The patient's face takes on a normal color. Breathing is free, but quickened. Evap in body pa normal or low-grade. The pulse is moderately quickened (70-80 per minute), blood pressure is normal. The patient is euphoric. Nausea, vomiting, dry mouth, gases do not go away. The tongue and mucous membranes of the mouth are dry. Bloating, muscle tension Bru w hydrochloric wall weakening, flatulence, sluggish peristalsis. Palpation of the abdomen is painful, positive sim n that Blumberg-Shchetkina. The frequency of detecting free gas in the abdominal cavity is increasing. Definition e fissile free fluid in the abdominal cavity. Examination through the rectum reveals tenderness of the pelvic peritoneum. X-ray data are the same as in the first period of the clinical tech e Nia complications pnevmotoz bowel appears. Moderate leukocytosis. There may be a shift in the white blood formula to the left.



The third period is the period of peritonitis (begins after 6 hours, lasts 12 hours or more). The patient's condition is serious. Self-reliant abdominal pain is moderate. Multiple pH about that. The body temperature is lowered or high (38-40 ° C). Pulse speeded up considerably (110-120 ppm), weak filling of the pulse. Blood pressure is lowered, collapse.

Differential diagnosis: ulcer perforation in the early period complications should be differentiated from acute diseases in which there is a sharp pain in the epigastric region and the STI.

Covered with a perforated ulcer - a variant of clinical course of ulcer perforation in the free peritoneal cavity, wherein the hole in the duodenum or in the first part of the duodenum sometime after perforation is covered by films of fibrin adjacent organs (liver, biliary gland et al.), Sometimes locked from the inside with a piece of food or a fold of the mucous membrane. More often, covered perforation is observed when the ulcer is localized on the anterior wall of the duodenum.

The diagnosis is based on the presence of a slight muscle strain in the upper right quadrant of the abdomen, preceding the attack was a sharp pain in people with a history of peptic ulcer disease. The diagnosis is confirmed by X-ray issued about Vania in which can detect a small amount of gas under the diaphragm. If less than 2 days have passed since the moment of perforation, the patient is given a sip of water-soluble contrast agent to confirm the diagnosis. If the state of the patient is satisfactory, and since perforation has passed more than 2 days, to give to the non-contrast agents should be avoided.

Treatment: perforation of the ulcer into the free abdominal cavity is an absolute indication for emergency surgery. The earlier the diagnosis is made and the operation is performed, the more chances for the patient to recover.

In the prehospital period, the doctor having diagnosed ulcer perforation, shall organize by the transport of the patient to the surgical department. The introduction of narcotic drugs is categorically contraindicated. They can obscure the clinical manifestations of a dangerous complication and thereby disorient the surgeon. The main goal of surgical treatment of a perforated ulcer is to save the patient's life. Surgical intervention should be minimal and minimal.

Suturing the ulcer should be performed at a widespread peritonitis, a high degree of operational risk (severe concomitant illness and age); in young patients with a "fresh" ulcer without morphological signs of chronic ulcerative process and anamniotes ie for when the perforation stress and ulcers drugs.

It is necessary to suture the perforated hole in the transverse direction in relation to the longitudinal axis of the stomach or duodenum with separate serous-muscular sutures, introducing and glue outside the infiltration zone. Seams line cover strand of the greater omentum, which is fixed MULTIPLE Sutures.

The criteria for deciding on the possibility of carrying out operations to cure ulcers, should be: a long ulcer history, less than 6 hours old perforation, the patient's condition allows for a longer operation than suturing of you; sufficient qualified surgeon, the availability of the necessary tools, equipment and the health personnel.

Vagotomy with excision perforated ulcer and pyloroplasty shows the localization perforated ulcer on the front wall of the bulb or duodenum pyloric part of the stomach, not accompanied by a large infiltrate sharp scar deformation of the output card. Of the methods of vagotomy in an emergency operation, preference should be given to the simplest one - stem vagotomy. Excision of the ulcer is performed together with the anterior semicircle to the pylorus. Two main methods of pyloroplasty are used - the Heinecke-Mikulich method and the Finney method. Vagotomy with drainage surgery on the stomach - low-impact intervention hell to cotton reducing gastric secretion.

Piloroantrumektomiya with vagotomy can be performed in patients without obvious step is, no operational risk if there are signs of duodenostasis (dramatically enhanced and atonic KDP) or in combined form of peptic ulcer when they detect an ulcer perforation duodenal ulcers so Noah ulcer and chronic ulcer.

Conservative treatment is carried out in extreme cases when there are no conditions for the operation. Treatment includes continuous aspiration of gastric contents through the probe,

n and the value of drugs that reduce gastric acid secretion, the introduction of large doses of antibiotics wide on one spectrum (7-10 days), carrying anti-shock measures, aq correction of electrolyte balance, parenteral nutrition. Before removing the probe to the patient and give a water-soluble contrast rentgenologich e Ski determine whether there is a contrast from flowing contours of the stomach or duodenum

In the development of ulcer penetration, three stages are distinguished: intra-wall penetration of the ulcer, the stage of fibrous fusion, and complete penetration into a neighboring organ. The most common ulcer penetration takes place in a small gland in the head of the pancreas des e PS in hepato-duodenal ligament. Penetration of the ulcer into the liver, into the gallbladder, into the transverse colon and its mesentery is possible. Clinical manifesting e Nia depend on the stage of penetration and body, which penetrated ulcer. First of all, there is: the loss of rhythm epigastric pain (pain mill about vitsya constant) increase in the intensity of pain that is resistant to treatment m e events gathered, irradiation of pain.

The appearance of back pain, pain of a shingles nature is observed when the ulcer penetrates into the pancreas. For penetrating the body of the stomach ulcer is characterized by pain radiating into l f -hand side of the chest in the heart area. The development of jaundice occurs when penetration holo ulcers in Ku pancreas, a liver-duodenal ligament.

When examining the patient, the tension of the muscles of the abdominal wall (viscero-motor reflex), local pain are revealed. In a blood test, there may be leukocytosis, an increase in ESR. Radiographic signs of penetration of the ulcer is the presence of Ch in Bokoy "niche" in the stomach or duodenum, beyond the limits of the body (when completed n e netratsii).

Penetration ulcers in the hollow body leads to the formation of pathological anastomosis (fistula) between the stomach (KDP) and the body in which straight on emanated penetration ulcers.

The formation of fistulas often preceded by a period of marked pain syndrome, accompanied by a low grade tempera ture of the body, Lake of Cytosis with neutrophilic shift to the left of the white blood.

In the presence of anastomosis to the gallbladder or bile duct with the overall observed supp and diacyl epigastric pain from the area under the right shoulder, the right supraclavicular region, vomiting admixture with a significant amount of bile, belching bitter taste. Hit soda p -stretch the stomach or duodenum into the bile ducts, gall bladder may come forth and cause of the development of acute cholangitis, acute cholecystitis. During radiographic Resea and Nia can be detected in horizontal projections gallbladder fluid level above it with gas (aeroholiya) filling mass contrast gallbladder, bile prot on Cove.

As a result of the formation of a fistula between the stomach and the transverse colon gets food from the stomach to the colon and fecal ma with sy penetrate from the gut to the stomach. Most often, such a fistula occurs with postoperative peptic ulcer of the jejunum. Signs w e ludochno-colonic fistula vomiting with admixture of feces (copremesis), belching with fecal odor, defecation soon after a meal the presence of the stool unchanged food, weight loss. When X-ray contrast mass detect ingress of zhelu d ka through the fistula into the colon (see. "Relapse peptic ulcers").

Penetration of ulcers in the tissue of the retroperitoneal space occurs when ulcers are localized in places not covered by the peritoneum (cardiac stomach, posterior wall of the duodenum). The symptomatology of this type is characterized by the development of complications of retroperitoneal reflux for us to form a wandering abscess in the right lumbar region, on the lateral surface of the chest, in the right groin. Pronounced signs of severe suppurative septic process: s sokaya body temperature, intoxication.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each item in the dent, the teacher works with the whole group.

Each student gets a question out of the black box. (Options questions are attached.) Article in denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

The patient complains of pain throughout the abdomen, nausea, dry mouth, general weakness. W and sick urgently 25 hours ago. Suddenly there were severe pains in the epigastric region, nausea, and sweating in the eyes. In the future, the pains acquired an increasing character, bloating joined, gases ceased to flow. Your dia g nos.

## USING THE WEB METHOD

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Members continue to ask questions and holes e chat to them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., until all "posted a tyvaniya" coil.

Note: Caution students that we should be attentive to each answer, n about how much they do not know who will throw a hank.

## 6.2. Analytical part

### Situational tasks:

In the examined patient with suspicion of "acute abdomen", with plain radiography, free gas was revealed under the dome of the diaphragm.

I of . Your diagnosis:

- A. acute pancreatitis
- B. perforated gastric ulcer \*
- B. Leriche syndrome
- G. Mallory-Weiss syndrome
- D. acute appendicitis

II . Your treatment tactics:

- A. diagnostic laparoscopy
- B. observation of the patient
- B. planned surgical treatment
- G. the patient does not need the supervision of a surgeon
- E. urgent surgical treatment \*

## 6.3. Practical part

Implementation of the task on practical skills (to carry out a differential diagnosis and substantiate the final diagnosis, prescribe an appropriate diet and planned treatment, gastric tube and ration ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**Purpose** : to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event | Not | Completely |
|-----|-------|-----|------------|
|-----|-------|-----|------------|

|   |                                                                                                                                                                         |            |                  |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------|
|   |                                                                                                                                                                         | ful l Neal | correctly s full |
| 1 | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                | 0          | 25               |
| 2 | Conduct a differential diagnosis of the main clinical syndromes                                                                                                         | 0          | 35               |
| 3 | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis | 0          | 40               |
|   | Total                                                                                                                                                                   | 0          | 100              |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not ful l Neal | Completely correctly s full |
|------|------------------------------------------------------------------------------------------------|----------------|-----------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0              | ten                         |
| 2    | Choosing the right diet table for your diagnosis                                               | 0              | ten                         |
| 3    | Evaluation of the usefulness of the diet                                                       | 0              | 20                          |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0              | 20                          |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0              | 20                          |
| 6    | Preventive measures                                                                            | 0              | 20                          |
|      | Total                                                                                          | 0              | 100                         |

#### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia by the contents of the stomach, emptying the stomach from the contents, preparing the stomach for surgery, bleeding from the stomach and 12 duodenum, gastrostasis.

| No.  | Event                                                                                                                     | Not ful l Neal | Completely correctly s full |
|------|---------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------|
| 1    | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0              | ten                         |
| 2    | Wear rubber gloves.                                                                                                       | 0              | ten                         |
| 3    | Measure the distance from the mouth to the stomach.                                                                       | 0              | ten                         |
| 4    | Enter through the nasal passage des thin at zling probe.                                                                  | 0              | ten                         |
| five | Suck the stomach contents for n of power Janet syringe.                                                                   | 0              | ten                         |
| 6    | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0              | ten                         |
| 7    | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0              | ten                         |

|       |                                                                                                      |   |     |
|-------|------------------------------------------------------------------------------------------------------|---|-----|
| eight | Suck again until the stomach is completely cleansed .                                                | 0 | ten |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination. | 0 | ten |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                           | 0 | ten |
|       | Total                                                                                                | 0 | ten |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse.               |
| 2    | 91-95%                | Excellent "five" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                             |
| 3    | 86 - 90%              | Excellent "five" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good "4"         | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good "4"         | Correct, but incomplete coverage of the issue. Understands the essence of the issue,                                                                                                                                                                                                                                                                |

|          |        |                                     |                                                                                                                                                                                                                                                                                    |
|----------|--------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                                          |
| 6        | 71-75% | Good<br>"4"                         | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                      |
| 7        | 66-70% | Satisfied<br>literally<br>"3"       | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. The situational tasks were solved correctly, but there is no justification for the answer. |
| eight    | 61-65% | Satisfied<br>literally<br>"3"       | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                     |
| nine     | 55-60% | Satisfied<br>literally<br>"3"       | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has a partial idea of the topic. Situational tasks solved n e is true.                                                                                                                                    |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                             |
| eleven   | 46-49% | Unsatisfied<br>sly<br>"2"           | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                            |
| 12       | 41-45% | Unsatisfied<br>sly<br>"2"           | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                                              |
| 13       | 36-40% | Unsatisfied<br>sly<br>"2"           | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                                            |
| fourteen | 31-35% | Unsatisfied<br>sly<br>"2"           | Doesn't give answers to questions.                                                                                                                                                                                                                                                 |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                                                                                          | Lesson forms      | PRODO l resident s NOSTA min. 90 |
|-----|-------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------|
| 1   | Introductory word of the teacher (justification t e we)                                                                       |                   | five                             |
| 2   | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small | Poll, explanation | 25                               |

|      |                                                                                                                                                                                                            |                                                                                                                 |         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------|
|      | GRU n nN, case studies, business games, slides in and deofilmly, etc.)                                                                                                                                     |                                                                                                                 |         |
| 3    | Summing up the discussion                                                                                                                                                                                  |                                                                                                                 | five    |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                        |                                                                                                                 | ten     |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                                 | fifteen |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey<br>IPR s meny survey tests, checking Practical results and cal work, discussion<br>obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations                                     | five    |

### 10. Test questions

1. What percentage reaches the frequency of complications of peptic ulcer perforation and her?
2. How many percent does the frequency of complications of peptic ulcer disease by penetration reach?
3. What percentage reaches the frequency of complications of peptic ulcer disease maligniz a tion?
4. Reasons for the development of perforation, malignancy.
5. The main disorders arising from perforations.
6. Types of urgent surgical treatment for ulcer perforation.
7. Stages of ulcer penetration.

### 11. Recommended reading

1. Zaitsev V.G., Laganda A.E., Leopatyagin G.F., Baikov V.V. Choose how vagotomy at Leche th Research Institute of duodenal ulcer // Clinical Surgery 2003. №4 with. 47-52
2. PN Zubarev, AV Kachetkov, Combined vagotomy in the surgical treatment bol s GOVERNMENTAL with duodenal ulcer. // Bulletin of surgery 2000. №4 p.25-28
3. Karimov Sh.I. "The surgeon casalliklar" 1991
4. Ratner G.L., Koryttsev V.N., Katkov S.A., Afanasenko V.P. Bleeding ulcer of the duodenum and duodenum: tactics for unreliable hemostasis. // Surgery 2003. No. 6 p.23-24.
5. Melton LJ 3-rd., Crowson CS, Khasla S et. al. Fracture risk after surgery for peptic ulcer di s ease a population - based cohort study. // Bone. 2000. No. 25 (1) P.61-67
6. Bitsch V. Gastric secretory pattens before and after vogotomy // Lancer - 2000 Vol. 1, No. 7450 - p.1288-1291
7. Hoffman J., Fisher A., Jensen H., Unsuccesful exrerience with closure of Japoulay gastroduodeno s tomosis in the treatment of postvagotomy dumping and diarrhea // Ann. Surg . 2000. vol . 198. No. 2 p . 142-145

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>  
<http://medi.ru/doc/83.htm>  
<http://www.rmj.net/index.htm>  
<http://www.consilium-medicum.com/media/refer>  
<http://www.mediasphera.aha.ru>  
<http://buxdti.uz>

## **TOPIC № 9. DISEASE OF THE THYROID GLAND.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, ward, dressing room  
 - posters, tables, disease classification schemes, treatment schemes, radiographs, videos.

### **2. Duration of study of the topic**

The number of hours is 5, 5.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with thyroid disease, the causes of development, especially on styami clinical course, differential diagnosis, optimal methods of treatment, postoperative care, rehabilitation bol s GOVERNMENTAL.

Tasks

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies to justify and Nia diagnosis and rational treatment of choice;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examination of patients with diseases of the thyroid w e lezy;
- **n auchitsya special methods of investigation.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examination of patients with diseases of the thyroid gland, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical vmesh and stances.

### **4. Motivation**

Suggestion to students the need for timely development of appropriate operations to gro s GOVERNMENTAL complications and in their development - meeting the most informative and modern methods of diagnosis and surgical treatment of patients, familiarity with the possibility of complications, I E is the operation and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

Although Uzbekist and n as a hotbed of endemic Cesky goiter known since the last century, the study of ill and Nij thyroid cancer, treatment and prevention, and the development of goiter surgery, were carried out only in the middle of the twentieth century. In this, an important contribution was made fatherland n -GOVERNMENTAL scholars: SA Masumov, R. K. Islombekov, Y. the X. Turakulov and others. In particular, they organized



numerous expeditions in the area of the endemic focus of goiter in Uzbekistan, carried out scientific research work on their study, and also developed a number of important therapeutic and preventive measures to prevent them.

Despite this, today in our country there are more than 15 endemic foci of goiter and more than 10-20% of the population has an increase in the thyroid gland of various sizes. First of all, this is due to a lack of iodine in the environment, which plays a major role in thyroid hyperplasia and the occurrence of endemic goiter.

A goiter is a limited or diffuse enlargement of the thyroid gland, based on g and perplastic or degenerative changes. By origin, two types of goiter are distinguished: endemic and sporadic.

**Goiter** - a disease that affects the population in geographical areas (End e mia - the defeat of the population of a specific geographic area), which is poor in iodine biosphere. Insufficient intake of iodine in the organism lowers the production tireoi d GOVERNMENTAL hormones, which is inevitably accompanied by a compensatory hyperplasia of the thyroid gland, leading to goiter. This hyperplasia initially compensates for the deficiency of thyroid p Mons.

Goiter endemic is susceptible in most cases, people living in mountainous areas and goiter endemic is characterized by almost equal incidence of men and women.

**Sporadic goiter** - occurs in people living outside areas of endemic goiter (spores and diya - single, random, or specific to a certain geographic area). At the heart of its origin, the leading place is taken by a strong overexcitation of the patient's nervous system - neuropsychological stress. In particular, most patients associate the onset of the disease with the loss of loved ones (accident, catastrophe, etc.) or some other shock, after which the development of the disease was observed. Sporadic goiter observed in females 8-10 hours and slit than men.

**The existing classification of diseases** of the thyroid gland can be generalized cl e following way :

- Thyroid malformations (congenital)
- Damage to the thyroid gland ,
- Inflammatory diseases of the thyroid gland :
  - thyroiditis ( Hashimoto's goiter ),
  - with trumit s ( goiter Ridel I ).
- Endemic goiter :
  - diffuse,
  - nodal,
  - mixed .
- Sporadic goiter :
  - diffuse,
  - nodal,
  - mixed .
- Diffuse toxic goiter (Graves disease , thyrotoxicosis ) ,
- Toxic adenoma (nodular toxic goiter) ,
- Tumors of the thyroid gland :
  - benign ,
  - malignant .

**According to the degree of enlargement of the** thyroid gland, 6 degrees are distinguished:

About the degree - the gland is not visible and not palpable;

I degree - the gland is not visible, but the isthmus is palpable and visible during swallowing movements;

II degree - during swallowing, the thyroid gland is visible and well felt, but the shape of the neck is not changed;

Grade III iron is noticeable by eye on examination, changes the contour of the neck, giving it the appearance of a "thick neck";

IV degree - pronounced goiter, which violates the configuration of the neck;

Degree V - Increased iron is enormous, which often were accompanied with given compression of the esophagus, trachea Impaired-niem swallowing and breathing.

According to the functional state, the goiter can be:

- a) hyperthyroid - the function of the thyroid gland is increased;
- b) euthyroid - the function of the thyroid gland is not impaired;
- c) hypothyroid - the function of the thyroid gland is reduced.

### **Clinic and diagnostics**

The main symptom of sporadic and endemic goiter is to increase shields d hydrochloric gland. Examination and palpation can determine the degree of enlargement of the thyroid gland. Localization distinguish cervical, retrosternal partially retrosternal, pozadipischevodny goiter and goiter to p nya language.

Most patients have no thyroid dysfunction, however, in people living in places of pronounced thymus endemic, the disease sometimes proceeds with symptoms of hypothyroidism. These patients have slowed down reactions to external stimuli, reduced mental and physical performance. Patients note lethargy, chilliness. When the neck of the study in the wish to set up a bradycardia, decreased reflexes. Congenital hypothyroidism is accompanied by the development of cretinism, which is characterized by a sharp lag in physical and mental development.

**Symptoms:** most often, patients report a "feeling of uneasiness" in the neck when moving, buttoning the collar, dry cough, hoarseness, difficulty breathing. N of Latter it may be associated with tracheomalacia - thinning of the wall of the trachea due postoja n pressure goiter with impaired neural regulation of the trachea and larynx during their displacement in sided about well. Breathing disorder is the most common symptom of a retrosternal goiter. Often (especially with retrosternal goiter), patients complain of a state of heaviness in the head when the body bends. When about to Motril these patients, it is possible to identify the veins of the neck, characteristic pattern "head honey from PS" in the upper part of the chest wall. Respiratory failure causes the development ism e neny characterized as "goiter heart." Compression of the sympathetic trunk causes the appearance of Horner's syndrome (ptosis, miosis, enophthalmos), a change in sweating of half of the body on the side of compression. With a hyoid goiter, breathing is impaired due to the crowding of the epiglottis. When the crop is located behind the esophagus, there is difficulty swallowing, especially for n on the collar head. X-ray examination allows to establish the retention of barium at the level of aberrant goiter, displacement of food from the front or in the lateral direction.

Aberrant goiter - an abnormality of the extra thyroid gland, often by e jected to malignant transformation. Often, metastases of thyroid cancer to the lymph nodes and glands of the neck are mistaken for aberrant goiter .

Treatment: for small diffuse goiter, thyroidin is prescribed. With a large diffuse goiter, causing compression of the trachea and blood vessels, resection of the thyroid gland is indicated. In all forms of nodular goiter, if we consider the possibility of malignancy of nodes, you must hirurgich e skoe intervention - thyroid resection followed by frozen section, which defines the further strategy. Prevention of endemic goiter and consists in the use of iodized salt, a complex of sanitary CELEBRATION I Tille.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student takes a question from the "black box" (variants of questions are attached). Article from denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

## USING THE WEB METHOD

### Steps:

1. In advance, students are given time to prepare questions for the lesson they have completed.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.
4. The student who received the skein answers the question (while the participant who asked him comments and answers the question) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. Once all students have finished asking questions, the student holding a coil, returns to a participant, from whom he received the question, while asking a question, etc., until all "pa s matyvaniya" coil.

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational task:

An 18-year-old patient came to the polyclinic with complaints of an enlarged thyroid gland. Examination of the thyroid gland revealed a 5x5 cm node. There are no signs of thyrotoxicosis. The patient first goes to the doctor.

I of . Your diagnosis:

- A. nodular euthyroid goiter \*
- B. nodular toxic goiter
- B. diffuse toxic goiter
- D. Hoshimoto's disease

II . Your tactics:

- A. surgical treatment \*
- B. outpatient treatment.
- B. conservative treatment in the endocrinology department
- D. radioactive iodine treatment
- D. referral to an oncological hospital

## 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, zo n dirovanie stomach ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose** : to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                          | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|----------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                       | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well | 0                 | 40                             |

|  |                                                    |   |     |
|--|----------------------------------------------------|---|-----|
|  | as differential diagnosis, make a final diagnosis. |   |     |
|  | Total                                              | 0 | 100 |

## 2. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                              | Not full | Completely correct |
|------|----------------------------------------------------------------------------------------------------|----------|--------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                            | 0        | ten                |
| 2    | Choosing the right diet table for your diagnosis                                                   | 0        | ten                |
| 3    | Evaluation of the usefulness of the diet                                                           | 0        | 20                 |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy     | 0        | 20                 |
| five | In accordance with the diagnosis, COG e Stu disease and assignment step B m ptomaticheskoy therapy | 0        | 20                 |
| 6    | Preventive measures                                                                                | 0        | 20                 |
|      | Total                                                                                              | 0        | 100                |

## 3. PALPATION OF THE THYROID GLAND .

**Purpose :** To determine the degree of enlargement of the thyroid gland .

| No.  | stages                                                                       | Completed | Failed  |
|------|------------------------------------------------------------------------------|-----------|---------|
| 1    | Palpation of the thyroid gland. Bol s Noah sits with his back to the doctor. | 0         | fifteen |
| 2    | The doctor stands behind the patient.                                        | 0         | 20      |
| 3    | The doctor places his fingers on the shield on a prominent gland.            | 0         | 20      |
| 4    | Palpation of the thyroid gland .                                             | 0         | 20      |
| five | Determining the degree of increase in thyroid des e PS.                      | 0         | 25      |
|      | Total                                                                        | 0         | 100     |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

## 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                                                                    |
|-----|-----------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer.<br>Actively and creatively involved in Inter to tive games right to make informed |

|       |          |                               |                                                                                                                                                                                                                                                                                                                                                              |
|-------|----------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |          |                               | decisions and sums up, an a lyse.                                                                                                                                                                                                                                                                                                                            |
| 2     | 91-95%   | Excellent<br>"five"           | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situation and onny problems correctly, with a creative approach, with justification of the answer.<br>Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                            |
| 3     | 86 - 90% | Excellent<br>"five"           | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                                      |
| 4     | 81-85%   | Good<br>"4"                   | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. Situation n nye problems are solved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                                |
| 6     | 71-75%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                                 |
| 7     | 66-70%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                     |
| eight | 61-65%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Admits mistakes in solving sieve and tional.                                                                                                                                                                |
| nine  | 55-60%   | Satisfied<br>literally<br>"3" | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but.                                                                                                                                                                                                            |
| ten   | 50-54%   | Not satisfied<br>literally    | The correct answer to the third set vopr about owls. Situational tasks are solved                                                                                                                                                                                                                                                                            |

|          |        |                           |                                                                                                                         |
|----------|--------|---------------------------|-------------------------------------------------------------------------------------------------------------------------|
|          |        | " 2 "                     | incorrectly with the wrong approach.                                                                                    |
| eleven   | 46-49% | Unsatisfied<br>sly<br>"2" | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach. |
| 12       | 41-45% | Unsatisfied<br>sly<br>"2" | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.   |
| 13       | 36-40% | Unsatisfied<br>sly<br>"2" | Covering 1/10 of the questions with the wrong approach.                                                                 |
| fourteen | 31-35% | Unsatisfied<br>sly<br>"2" | Doesn't give answers to questions.                                                                                      |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                       | Lesson forms                                                                                                                   | Prolonged s NOSTA<br>min. 90 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                    |                                                                                                                                | five                         |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.)        | A survey explaining e of                                                                                                       | 25                           |
| 3    | Summing up the discussion                                                                                                                                                                                  |                                                                                                                                | five                         |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                        |                                                                                                                                | ten                          |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                                                | fifteen                      |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral questioning, written on the item grew up, tests, verification of the results Practical e tion work, di a Kuss discussion. | 25                           |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | Information, questions for self-preparation                                                                                    | five                         |

### 10. Test questions

1. Determination of the crop, frequency, etiopatoganez, clinical features, diagnosis, and l e chenie.
2. Principles of conservative therapy
3. Teach the diagnosis of goiter, preoperative preparation
4. Indications for surgical treatment of thyroid diseases.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991 g .
2. M.I. Cousins "Surgical diseases", 1995 g .
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984 g .
4. CM. Agzamkhodzhaev. "Hirurgik kasalliklari" 1991 g .

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **TOPIC № 10. THYROTOXIC GOITER. METHODS OF SURGICAL TREATMENT, COMPLICATIONS.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, ward, dressing room
- posters , tables, disease classification schemes, treatment schemes, radiographs, videos.

### **2. Duration of study of the topic**

The number of hours is 5 , 5 .

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with thyroid disease, the causes of development, especially on styami clinical course, differential diagnosis, optimal methods of treatment, postoperative care, rehabilitation bol s GOVERNMENTAL.

Tasks

***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies to justify and Nia diagnosis and rational treatment of choice;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examination of patients with diseases of the thyroid w e lezy;
- **n auchitsya special methods of investigation.**

***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examination of patients with diseases of the thyroid gland, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical vmesh and stances.

### **4. Motivation**

Suggestion to students the need for timely development of appropriate operations to gro s GOVERNMENTAL complications and in their development - meeting the most informative and modern methods of diagnosis and surgical treatment of patients, familiarity with the possibility of complications , I E is the operation and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical disciplines.

## 6. Content of the lesson

### 6.1. Theoretical part

#### Diffuse toxic goiter

Diffuse toxic goiter (Basedow disease, hyperthyroidism, goiter classically-tireotok) - endocrine disease which arises from increased hydrochloric thyroid hormone secretion is accompanied by severe and breakdown in the various organs and systems.

**A mild form of thyrotoxicosis** - neurasthenia is not sharply expressed (feeling tired of stiffness, irritability, tearfulness, resentment). Against the background of a slight increase in the size of a prominent gland, a labile pulse - from 80 to 100 per minute, a weak tremor of the hands. There may be a small paragraph about human. Decreased ability to work in the afternoon. Basic metabolism does not exceed + 30%.

**Thyrotoxicosis average weight** - expressed disorder of the central nervous functions in hydrochloric system (mild anxiety, irritability, and crying). Pulse rate 100-120 per minute, increase in pulse pressure, expansion of the heart with heart failure I degree according to Lang. A significant decrease in body weight on the background of relatively high pit and Niya, decreased ability to work during the day. Basal metabolism increased to + 60%.

**Severe form of hyperthyroidism** - along with nervous system disorders typical of severe tireotoksicheskoza to moderate severity, develop sudden muscle weakness, that I have severe disorders of the cardiovascular system, degenerative disorders in parenchymatous organs. Tachycardia can reach 120-140 beats per minute, often accompanied by atrial fibrillation, cardiac insufficiency II-III degree by Lang. Basal metabolism + 60% or more, with a significantly increased nutrition, body weight sharply decreases. Trudostoyat' b Nosta lost.

**Treatment:** There are three main types of treatment of diffuse toxic goiter: medical and toznaya therapy, radioactive iodine treatment and surgery.

To reduce the thyroid hormone function requires the use of prep and Ratov iodine in combination with thyreostatics (Mercazolilum), which is administered in doses of 40-60 mg / day; upon the occurrence of remissions establish a maintenance dose prevents a rate 5-10 mg / day. During preoperative preparation or at the time of thyrotoxic crisis, with adrenal insufficiency, corticosteroids are used, which block the pericardial and ferric action of thyroxine and delay its excretion.

Mercazolil is a synthetic antithyroid drug. The drug accelerates the excretion of thyroid iodides, inhibits the activity of the enzyme systems involved in the oxidation and conversion of iodide to iodine, which hampers the iodination of thyroglobulin and hinders a conversion of diiodotyrosine to thyroxine. Small doses of iodine have an inhibitory effect on the formation of TSH in the anterior pituitary gland.

Reserpine reduces neurovegetative disorders, causes a decrease of the pulse.

The above therapy is used in the treatment of diffuse-toxic goiter, preparation for surgery or treatment with radioactive iodine.

**Exposure to J <sup>131</sup>** under the influence of beta particles leads to the death of cells of the follicular epithelium of the thyroid gland and their replacement with connective tissue. Indications for radioisotope therapy J <sup>131</sup>: thyrotoxicosis flowing with mental excitations extremely heavy (severe) form of the disease, hyperthyroidism in elderly people with infarction, and heart failure, with irreversible changes in the kidneys and liver forms diffuse toxic goiter in the absence of goiter. Upon receiving large doses of J <sup>131</sup> possible development of thyrotoxic turbulent reaction fatal occurrence constant heavy myxedema, difficult to treat malignant tumors of the thyroid gland, gonads change functions increase exophthalmos.

**Indications for surgery:** diffuse toxic goiter average, and so I have severe forms, nodular toxic goiter (thyrotoxic adenoma), a large goiter, compressing the neck organs,



regardless of the severity of diffuse toxic goiter. Before the operation, it is imperative to bring the thyroid function to a euthyroid state.

**Contraindications to surgical intervention:** mild forms of diffuse toxic goiter in older malnourished patients due to the high operational risk in patients with irreversible changes in the liver, kidney, cardiovascular and mental health of a bolevaniyami.

With diffuse and multinodular toxic goiter, bilateral subtotal subfascial resection of the thyroid gland is performed according to O.V. Nikolaev, in toxic adenoma - resection of the corresponding conductive proportion of cancer.

**Postoperative complications.** Intra-operative complications: bleeding in of stuffy embolism, recurrent laryngeal nerve injury, damage or removal of the parathyroid glands and the subsequent development gipop and ratireoza. If both recurrent nerves are damaged, the patient experiences acute asphyxia, and only immediate tracheal intubation or tracheostomy can save the patient.

In patients with thyrotoxicosis in the postoperative period, the most dangerous complication is the development of a thyrotoxic crisis. The first sign of thyrotoxic crisis - rapid povysh e of the body temperature to 40 ° C, accompanied by increasing tachycardia. Arterial yes in Leniye first increases and then decreases observed Neuropsychiatric ra c stroystva. The development of the crisis plays a major role insufficiency of adrenocortical function, is due to Mr. Nye operational stress. Crisis treatment should be aimed at combating the adrenal gland of the howling failure, cardiovascular disorders, hyperthermia and oxygen untill a tatochnostyu.

**Tracheomalacia.** When long-existing goiter, especially when retrosternal, poses a ditrahealom pozadipischevodnom and its location, as a result of constant pressure on the tube and heyu occur degenerative changes in the tracheal rings and thinning - traheomal I tion. After removing the craw immediately after tracheal extubation or near Postoperati n nom period can occur in the area of its inflection softening or convergence of the walls and luminal narrowing. Acute asphyxia sets in, which can lead to the death of the patient, if an urgent tracheal about the stomy is not performed .

**Postoperative hypothyroidism** - deficiency of thyroid function, an in slovlennaya full or almost completely removed during surgery, occurs in 9-10% of op e ingly patients. Hypothyroidism is characterized by general weakness, constant fatigue, listlessness about Stu, drowsiness, general lethargy patients. The skin becomes dry, wrinkled, edematous. Hair begins to fall out, pains in the limbs appear, and sexual function weakens.

**Treatment:** Thyroidin and other thyroid medications are prescribed. With the development of E to rohirurgicheskoy techniques and immunology advances steel thyroid perform allotransplantation using tran with plantat on pedicle. Used and replanting free prostate tissue slices under the skin, into the muscle, but these operations are usually given a temporary effect, so in practice used mainly substituent L hydrochloric therapy.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student takes a question from the "black box" (variants of questions are attached). Article from denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

#### **USING THE WEB METHOD**

Steps:

1. In advance, students are given time to prepare questions for the lesson they have completed.
2. Participants sit in a circle.
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Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational task:

An 18-year-old patient came to the polyclinic with complaints of an enlarged thyroid gland. Examination of the thyroid gland revealed a 5x5 cm node. There are no signs of thyrotoxicosis. The patient first goes to the doctor.

I of . Your diagnosis:

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- B. nodular toxic goiter
- B. diffuse toxic goiter
- D. Hoshimoto's disease

II . Your tactics:

- A. surgical treatment \*
- B. outpatient treatment.
- B. conservative treatment in the endocrinology department
- D. radioactive iodine treatment
- D. referral to an oncological hospital

## 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, zo n dirovanie stomach ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose** : to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                             | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                          | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                   | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis. | 0                 | 40                             |
|     | Total                                                                                                                                                             | 0                 | 100                            |

## 2. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                              | Not full | Completely correct |
|------|----------------------------------------------------------------------------------------------------|----------|--------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                            | 0        | ten                |
| 2    | Choosing the right diet table for your diagnosis                                                   | 0        | ten                |
| 3    | Evaluation of the usefulness of the diet                                                           | 0        | 20                 |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy     | 0        | 20                 |
| five | In accordance with the diagnosis, COG e Stu disease and assignment step B m ptomaticheskoy therapy | 0        | 20                 |
| 6    | Preventive measures                                                                                | 0        | 20                 |
|      | Total                                                                                              | 0        | 100                |

## 3. PALPATION OF THE THYROID GLAND.

**Purpose :** To determine the degree of enlargement of the thyroid gland.

| No.  | stages                                                                       | Completed | Failed  |
|------|------------------------------------------------------------------------------|-----------|---------|
| 1    | Palpation of the thyroid gland. Bol s Noah sits with his back to the doctor. | 0         | fifteen |
| 2    | The doctor stands behind the patient.                                        | 0         | 20      |
| 3    | The doctor places his fingers on the shield on a prominent gland.            | 0         | 20      |
| 4    | Palpation of the thyroid gland.                                              | 0         | 20      |
| five | Determining the degree of increase in thyroid des e PS.                      | 0         | 25      |
|      | Total                                                                        | 0         | 100     |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

## 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                                                                                                   |
|-----|-----------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent "five" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves                                                                                                                                                                                                                                                   |

|       |          |                               |                                                                                                                                                                                                                                                                                                                                                              |
|-------|----------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |          |                               | situation and onny problems correctly, with a creative approach, with justification of the answer.<br>Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                                                                                                                    |
| 3     | 86 - 90% | Excellent<br>"five"           | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                                      |
| 4     | 81-85%   | Good<br>"4"                   | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. Situation n nye problems are solved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                               |
| 6     | 71-75%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                                |
| 7     | 66-70%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                           |
| eight | 61-65%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Admits mistakes in solving sieve and tional.                                                                                                                                                                |
| nine  | 55-60%   | Satisfied<br>literally<br>"3" | Response to errors by half post in PARTICULAR issues. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                                                                                                                                                   |
| ten   | 50-54%   | Not satisfied<br>literally    | The correct answer to the third set vopr about owls. Situational tasks are solved                                                                                                                                                                                                                                                                            |

|          |        |                      |                                                                                                                         |
|----------|--------|----------------------|-------------------------------------------------------------------------------------------------------------------------|
|          |        | " 2 "                | incorrectly with the wrong approach.                                                                                    |
| eleven   | 46-49% | Unsatisfisfly<br>"2" | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach. |
| 12       | 41-45% | Unsatisfisfly<br>"2" | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.   |
| 13       | 36-40% | Unsatisfisfly<br>"2" | Covering 1/10 of the questions with the wrong approach.                                                                 |
| fourteen | 31-35% | Unsatisfisfly<br>"2" | Doesn't give answers to questions.                                                                                      |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                  | Lesson forms                                                                                                                   | Prolonged s NOSTA min. 90 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                               |                                                                                                                                | five                      |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmly, etc.)                  | A survey explaining e of                                                                                                       | 25                        |
| 3    | Summing up the discussion                                                                                                                                                                                             |                                                                                                                                | five                      |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                   |                                                                                                                                | ten                       |
| five | Independent work of students from a military skills                                                                                                                                                                   |                                                                                                                                | fifteen                   |
| 6    | Determination of the degree of achievement of objectives and nyatiya on the basis of the developed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group | Oral questioning, written on the item grew up, tests, verification of the results Practical e tion work, di a Kuss discussion. | 25                        |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions)            | Information, questions for self-preparation                                                                                    | five                      |

### 10. Test questions

1. Determination of the crop, frequency, etiopatoganez, clinical features, diagnosis, and l e chenie.
2. Principles of conservative therapy
3. Teach the diagnosis of goiter, preoperative preparation
4. Indications for surgical treatment of thyroid diseases.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991 g .
2. M.I. Cousins "Surgical diseases", 1995 g .

3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984 g .
4. CM. Agzamkhodzhaev. "Hirurgik kasalliklari" 1991 g .

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **THEME 11. CHRONIC CHOLECYSTITIS, CLINIC, DIAGNOSTICS AND TREATMENT.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students gallbladder and biliary tract, causes its development, clinical features, differential dia g nosis, optimal methods of treatment, postoperative care, reabilit a tion patients.

Tasks

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with Zab on Levan gallbladder and biliary tract;
- **n auchitsya special methods of investigation.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical nav s ki in the examination of patients with diseases of the gallbladder and bile ducts, to carry out special inspection methods yes n GOVERNMENTAL patients to determine the indications and contraindications for surgical im e -interference.

### **4. Motivation**

Suggestion students need adequate timely surgery before the development of severe complications ,and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is operas and tion and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

### Anatomical and physiological features

Flow of bile from the liver parenchyma is performed bile ducts of its segments (ducts III order), which merge to form sektoral s nye ducts (ducts II order). When connecting the latter (Figure 1) backward and form a duct lobes of the liver - *the right and left hepatic ducts* (ducts 1 order). Both lobar ducts immediately after leaving the liver at its gate merge into one large *common hepatic duct* ( ductus hep a ticus comm .). From the confluence of the common hepatic duct with cystic about the current early and naetsya bile duct ( the ductus choledochus ).

There are four parts to the bile duct. Positioning the first part is installed above the upper horizontal part of the duodenum ( pars supraduod e nalis ). It runs along the right edge of the hepatoduodenal ligament and is 0.3-3.2 cm long . W of paradise part ( pars retroduodenalis ) is disposed behind the horizontal part dvenadtsatipe p stnoj intestine. Its length is 1.8 cm . To the left of that part of the bile duct extends acorn h but-duodenal artery ( a . Gastroduodenalis ). The third part of the bile duct length of 2.9 cm extends behind either of agile podzheludo h hydrochloric gland, or through its thickness ( pars retropancreatica ). The fourth part of the bile duct ( pars intramuralis ) is 1.6 cm long . It passes through the posterior wall of the duodenum in an oblique direction, usually in its vertical part, at a distance of 8-12 cm from the pylorus. Kone h Naja part of the bile duct drainage usually is a C major pancreatic duct w e lezy in ampullar expansion papillary, on top of which communicates with the lumen dvenadts and tiperstnoj intestine.

*The gallbladder* ( vesica fellea ) is pear-shaped. Circular n e retyazhkoy it is divided into two parts: the larger, the front lateral - *body* and smaller gradually tapered, the rear medial - *cervix*. The blind end of the body of the gallbladder called s INDICATES *bottom*. Gall bladder capacity ranges from 30 to 70 ml, length - 7- 10 cm , nai large width - 3- 4 cm .

Gallbladder body lies in a shallow pit bottom surface of the liver and communication I associated with a loose connective tissue liver, small twigs vascular and lymphatic vessels. At this point of surface not covered gallbladder bryush and hydrochloric. For all other surfaces it is covered by the peritoneum, which is cont e Niemi peritoneal cover liver. Speaking about the relationship of the gallbladder to the Pec new, it should be remembered that it is reinforced by the penetration of its walls into the interior of the branches of the liver cystic artery. In addition, there are additional bile ducts, Port and mentary intrahepatic zhelch nye moves with the lumen of the gallbladder.

*The cystic duct* ( ductus cysticus ) lies in the thickness of the hepato -duodenal ligament at its right edge, to the right of the hepatic duct and is closed with a thick layer of sub- e pink fiber and fat. Its length at an average of 3.9 cm , diameter - 0.4 cm . Aperture cystic proto ka is located 2.5 cm below the confluence of the right and left hepatic ducts. However, the length, form of discharge from the neck of the gallbladder, direction and character of the cystic duct are subject to large fluctuations.

*Arterial blood flow* to the liver, gallbladder and bile ducts (Figure 2) is made of the common hepatic artery ( a . Hepatica comm .), Which is a branch of the celiac artery ( a . Coeliaca ), Th Res prop m vennuyu hepatic artery ( a . H e patica propria ). Last at the gate of the liver is divided into two branches - the right and left hepatic and p terii.

Gallbladder supplied with blood through the cystic artery ( a . Cystica ), which is 90% of the leaves from right hepatic artery and with cystic and common printed e night ducts forms triangular nick Calot .

*The lymphatic system* biliary tract presented an extensive network of lymph and cally vessels. Large lymphatic plexus locat ditsya under the mucous membrane of the gall bladder. Lymph away otvo ditsya through lymph node located at the neck of the gall ny Zira ( lymphoglandule Mascagni ). All lymph from the biliary system I boiling tract enters the aortic lymph nodes, and then - in the chest limfati cal prospect of current. In addition, there is a close connection between the lymphatic vessels of the gallbladder and the lymphatic vessels of the pancreas.

Innervation Biliary carried branches to wandering authorizing and B m pathic nerves coming from the front and rear units of the solar plexus.

The bile produced by the liver enters the extrahepatic bile ducts. The average bile flow rate by the liver is 40 ml / min. Because the sphincter of Oddi, and walking in the ampoule papillary, between receptions closed food, bile enters the gallbladder, where it is the concentration. Food stimulus acting on the mucous membrane of the duodenum, triggering and a relaxation of the sphincter of Oddi and contraction of the gall bladder wall. The result is the release of bile in duodenum. As the evacuation of masses of duodenal ulcers occurs contraction of the muscles of the sphincter of Oddi and bile again begins to fill the gallbladder. In a moment the bile comes into the intestine to 1 liter of bile.

### CALCULOUS CHOLECYSTITIS

Calculous cholecystitis is a clinical manifestation of gallstone disease, characterized by the formation of gallstones in the lumen of the gallbladder.

Currently, the problem of formation of stones in the bile is not finally resolved. It's hard to explain just personal character stones, on a hand unclear what determines the number, shape and other features of forming gallstones. According to the classical theory of formation of cholelithiasis it is a consequence of latent gall stone diathesis. If you adhere to this point of view, we are ok and somewhat powerless in the treatment of gallstones, because after removal of the gallbladder patients suffering a relapse. Therefore, it is more correct to assume that stone formation is associated with the development of inflammation, etc. on the processes in the gall bladder and facilitates timely removal and rehabilitation program for patients with gallstone disease characterized.

**Etiopathogenesis of the formation of gallstones.** Among the factors contributing to the formation of gallstones, play a major role: biliary tract infection, metabolic abnormalities in the body, and the stagnation and contrast of the standing of bile in the biliary tract.

*Biliary tract infection.* Meckel von Hemsbach (1856) believed that the development of the inflammatory process in the wall of the gallbladder and bile stasis is the basis for the decomposition of secretions released mucosa of the gall bladder. The result and those that acquires bile acid reaction that results in decomposition of sodium salts of bile acids and cholesterol in the deposition of a precipitate. One temporarily insoluble compounds are formed, which together with the carbonate of lime contribute to the formation of pigment precipitate.

Thudichum (1862) associated the cause of stone formation in the biliary tract with the process of putrefaction, which occurs as a result of the ingestion of pus from the intestinal tract into the biliary tract, which causes decomposition of bile and precipitation of cholesterol. Naunyn (1892) and many other experimenters have also revealed that formation of stones in the gallbladder promotes inflammatory process, rather than the presence of a bacteria. Bacterial-inflammatory process causes fusion epithelium desquamation of the gallbladder to about 10% and is the main factor for gallstones. That is, inflammation and bile contributes to the inflammatory process, and not bacteria and other factor indicates that through circumstances in that the gallstones often do not find microorganisms.

Metabolic disorders in the body are shown disruption of cholesterol, bile pigments and calcium metabolism.

Back in 1862 Thudichum observed that the precipitation of cholesterol prevents precipitation of taurocholic acid, as well as a balance between the content of cholesterol in the bile of cholesterol and bile acids. The content of bile acids in the human body depends on protein metabolism. Decrease of from about holding bile acids occurs during fasting, and decreases when the total amount of bile secreted by the liver and then at toxic and liver disease.

Normally, in the gall bladder is increased concentration of bile 4-6 times, accompanied by an increase in the amount of cholesterol therein to 400 mg% of expected simultaneous increase in the amount of bile acids in bile to 1-10 g%. Reducing the amount of bile acids in the bile while maintaining a high concentration of cholesterol in it promotes stone formation. The fact that the



withdrawn chenine Hubs and cholesterol tion occurs in the gall pu zyre, explains the formation of gallstones in the gallbladder is.

In 1972 . Admirand , Small , studied patofiziologicheskie mechanisms of cholesterol stones, mouth novili that promotes the formation of gallstones n e renasyschennost bile cholesterol and a decrease in the content therein of bile acids and phospholipids as defined etsya as increased "lithogenicity" hepatic bile.

In favor of the fact that the formation of gallstones is optionally go cash and Chiyo metabolic disorders, says the discovery giperbilirub and nemii patients who wasps nova gallstones were pigmented lesions.

*Bile stasis* is an important factor contributing to conductive education-NIJ gallstones. This clearly dock Zano works Aschoff (1906), which noted that in all cases in the presence of stones in the gall bladder was on the outside wall of the inflammatory process in the gall bladder, etc. , and leading to the violation of its contractile function, and the stagnation of bile in it. At the same time, there is a decree in the literature Niya that gallstones are found in patients with preserved contractile function des h Foot bubble.

**Morphogenesis of calculous cholecystitis.** It is now well known that morphologically "primary acute cholecystitis" meeting etsya like casuistry, and where the clinical picture is consistent with acute mu cholecystitis, microscopic Resea and of almost always reveals the presence of exacerbations of chronic inflammatory flowing on the first protses sa. It was also established that the development of pathological changes in the bile nom bubble cn for proper age-related changes in the vessels of its walls.

To study the morphogenesis of gallbladder in the lobby calculous cystitis were examined gallbladder corpses of people who do not suffer Shih cholecystitis and gall bladder removed during the opera tion and containing concretions (VV Vinogradov, S.I.Levina, 1970) ... At the same time , attention was paid to changes in the wall of the gallbladder depending on the age of the patient.

The data of histological studies showed that in the area of the neck of the gallbladder at the bladder, which does not contain calculi, there is no muscle layer. Its mucous membrane does not have mucous glands, it does not contain the so-called Rokitansky - Ascholt sinuses , and the outer fibrous layer is more pronounced than the muscular one.

With age in patients without a ste cholelithiasis n ke gallbladder marked increase in collagen fibers of the middle layer, there are trophic changes in the muscle layer, the formation of fibrosis is expressed in the form of fibrous layers. At the same time, the older the patient, the more pronounced the distro of graphical instruments changes in the gallbladder wall. These changes undoubtedly contribute to the disruption of the motor may function zhelch Nogo bladder, bile stagnation therein, as well as creating the background to the development of inflammation in the wall of the gallbladder and the formation of concretions in it.

Histological examination of the gallbladder in patients of different WHO gain in contrast groups not suffering from gallstone disease, showed as well that with age, significant changes are detected and suck Distin gallbladder system: arterial, venous and limfaticheskie tion. And given that gallstone disease occurs in about a novnom in the elderly, it can be assumed that the resulting changes in the vascular BBC with the theme of the gallbladder are the backdrop for the stone formation.

A study of the gallbladder wall in patients with cholelithiasis dormancy and Salo that her bladder neck areas appear we antiplaque elements described Liitkens and became known as sphincter Liitkens . The appearance of these elements in muscle inflammation of the gallbladder can be considered as a compensatory-adaptive response to maintain penalized with inflammation des contractile function h Nogo bladder.

The study of biopsy material gallbladder zhelchnoka mennoy disease revealed that morphological changes of its wall, typical of calculous cholecystitis, develop long-term. Therefore, cases are usually treated as acute ho letsistit should refer to an exacerbation of chronic holets and Stith and should be regarded as a complication in the course of the disease.

As available at calculous cholecystitis expressed morphological changes in the gallbladder wall is not dependent on the type and nature of gallstones, correct to assume that gallstones are not the cause but the consequence of cholecystitis and that. This provision is of a fundamental nature. Considering the reason for the formation of stones in the gall to claim from zyre inflammation in it, not cholelithic diathesis, we should recognize that the full recovery of patients with calculous cholecystitis and Device and as to the possibility of suffering a relapse can be achieved by the timely and correct execution of the operative intervention.

Based on the foregoing, there are three stages of flow zhelchnokame N hydrochloric disease:

*The first stage is physical and chemical.* At this stage the product produced liver ruet bile supersaturated in cholesterol, with decreasing its content of bile acids and phospholipids (lithogenous bile). Clinical prospect of phenomena are absent.

*The second stage is latent asymptomatic stone carriage.* This step hara to ized by the same physical and chemical changes in the composition of bile, as in the first step, as well as the formation of stones in the gall QSP s D. Process stone formation at this stage is connected not only with the physical and chemical changes of bile, but *with* the development of whisker lovy for stagnation same L chi in the gall bladder, a change in the permeability of its mucosa, as well as with the occurrence of inflammation about the processes in the wall of the gall QSP s convent. Clinical manifestations of the disease in this stage are not available, and gallstones are found the case but during preventive examinations or patients at autopsy.

*The third stage is pronounced clinical manifestations.* At this stage there are clinical signs associated with the development of complications cal s Kuleznev cholecystitis: acute inflammation of the gall bladder, the hall-doholitiaza, duodenal stenosis large about of the papilla, acute cholangitis, acute pancreatitis. Symptoms of acute inflammation may be expressed wives and to flow poorly in the form of light attacks "biliary colic" that hara to ized calculouse chronic cholecystitis.

**The clinical picture of calculous cholecystitis.** In surgical practice, have to deal with patients with the third stage of gallstone disease, occurring in the form of chronic calculous cholecystitis or proyav -governing its Oslo Well neniya.

**Chronic cholecystitis kalkulezpy** usually proyav wish to set up the presence of discomfort or constant, aching pain in the right upper quadrant vividly that. In some cases, there are recurrent at the stupa pain in the right podreb e Riez associated with use of eat fatty or fried foods. However, these attacks are short-term, often go about on their own and do not bother the patient much.

Often, the clinical picture of chronic calculous of cholecystitis expressed symptoms characteristic of diseases of the stomach, or to and shechnika (gastritis, colitis). Patients complain of bitterness and burping air sickening that, flatulence, constipation or p of noses.

Notable among patients with chronic kalkulez nym cholecystitis occupied by patients who have a leading symptom yavl I are spasmodic pain ha raktera localized behind the breastbone and the EMI and Dieren in the left shoulder and the shoulder girdle, which is called "reflexivity of the secondary angina." Patients with cardiac form of x on le cystitis is usually treated for chronic coronary insufficiency, poskol s ku during the attack on the ECG pain shows signs of eating disorders E of cardio. These changes take place after the disappearance of pain, and great correctly assembled ana m ab disease and screening op ganas biliary system allows diagnostic and Rowan calculous cholecystitis.

Painful forms of chronic cholecystitis calculouse occur with typical attacks of pain in the right upper quadrant (biliary colic) Nere d to radiating to the right shoulder to the right shoulder as well as in the neck area. These pains are usually fuss and mess after errors STI in the diet and are accompanied by nausea and vomiting. In the VC h nom bubble develops catarrh, with purulent process no signs.

Biliary colic is the result of increasing giving Lenia in the lumen of the gallbladder or in all of the biliary system, caused by sudden blockage of the neck of the gall of the second bladder or cystic duct stone and sharp SIS IOM muscle sfinkt e ra Oddi or blockage of the

bile duct in the area of the major duodenal papilla small stones at the prospect of walking him into the duodenum.

Patient examination reveals tenderness and mild muscle of a shield in the right upper quadrant palpation Mrs. Vaught. With a soft stomach during biliary colic, it is possible to palpate an enlarged, tense and painful gallbladder. Effleurage on the right costal arc s binds increased pain in the abdomen (positive *simptom Ortner - Grekov*). Signs of peritoneal irritation there, the body temperature is usually raised and etsya.

After an injection of antispasmodic drugs, an attack of biliary colic subsides, and the patient's standing improves.

Outcomes of chronic calculous holetsy Stith. Chronic inflammation of the gallbladder, flowing at the blockade against the neck of the gall ny Zira cystic duct or in violation of mucosal absorptive function of the gallbladder, may for end in developed and it *dropsy gallbladder*.

As a result of frequent exacerbations of chronic inflammation process in the gallbladder wall is sharply thickened, cartilaginous consistency takes himself zhelch ny bubble shrinks, it reduces the cavity m smiling. All this contributes to the formation of *sclerotic gall pu Zira*.

5-7% of patients suffering from chronic calculous cholecystitis develop *gallbladder cancer*.

**Diagnosis calculous cholecystitis and oslozh neny** based on a comprehensive examination of the patient with the help of special methods of research used in the preoperative period and during the operation.

Recently, a special method uc main sequence for detection of a pathological process in the gall bladder, in extrahepatic bile ducts in the pancreas and is **ultrasonic tomogra raphy**. With the help of this issle dovaniya can detect calculi in the gall bladder and set the shape PLAYBACK Lenia gallbladder. It reveals of pathological sky process, localized in the printed e nightly gall proto- ke, a large duodenal papilla and pancreatic same Leze. Identify the pathological process in the gall bladder and bile ducts, you can use X-ray, which impl e stvlyaetsya by the customer, tion of a number of techniques:

**I of . Indirect contrasting of the biliary system.**

1. A simple plain radiography and the liver vnepechenoch-tion des h GOVERNMENTAL ducts.
2. Excretory cholecystocholangiography: a) oral; b) intravenous.

**II . Direct contrasting of the biliary system.**

7. Percutaneous cholecystocolangiography under laparoscopic control.
8. Percutaneous transhepatic cholangiography under radiological control.
9. Percutaneous transhepatic cholangiography under ult razvukovym counter to the lemma.
10. Endoscopic retrograde cholangiography.
11. Fistulocholecystocholangiography.
12. Operating cholecystocholangiography.

X-ray techniques, based on indirect (excreta p nom) contrasting bodies des chevvyodyaschey system currently Practical e lift shall not apply, because their informative value is small. With respect to X-ray techniques, which are based on direct contrasting bodies biliary system, they are used in patients with mechanical tion obstruction of the biliary tract (with obstructive jaundice). As contrasted w boiling apply drugs are 25-30% solutions of water-soluble iodine prep comrade (ka p diotrast, Diodon, biligrafin, bilignost et al.).

Percutaneous puncture of organs biliary system, followed by conducting them in the contrast solution may be carried out under laparoscopic control (*chre skozhnaya transvesical holetsistoholan-giografiya*)

Under radiologic or ultrasound (*percutaneous chrespecheno h Nye cholangiography*). Direct opacification of extrahepatic biliary of possible retrograde introduction therein contrasting races creates endoscopic and to follow dvenadtsatiperst hydrochloric intestine (*endoscopic retrograde cholangiography*).

In those cases where the preoperative period not adequately clearly define the state of the extrahepatic bile ducts for identifying choledocholithiasis and stenosis of the Shogo papillary bile duct of follow during operation - *operating cholangiography*.

During the operation, the bile duct can be examined using special fibroscopes (*choledochoscopy*). This examination reveals inflammatory changes about the processes in the wall of the bile duct (***cholangitis***), and Detect live not deleted when choledocholithotomii concretions.

### **Treatment of calculous cholecystitis and its complications.**

In identifying the need to calculous cholecystitis hundred vit question about the indications for surgical treatment. Tactics performing early surgery for calculous cholecystitis is based on the fact that even with uncomplicated forms of slaughtering Levan morphology and changes in the wall of the gall pu Zira indicate the duration of the creatures of Bani patho logical process. In addition, 30-40% of patients with calculous cholecystitis in the pathological process involve repeat extrahepatic bile ducts, large duodeno onal papilla and pancreas. Against the background of chronic Skog inflammatory process of malignant tumor can develop in the gallbladder. Therefore, the earliest operation intended to prevent the development of complications of calculous's about letsistita.

Hitherto surgeons not formed consensus about the timing in complements operations at oslozh nennyh forms calculouse cholecystitis (acute Sun Singe gall bladder). Some of them believe optionally go to perform op e -cooperative intervention in the early hours of receipt of the patient in the hospital. Others recommend dissolved operate bol s GOVERNMENTAL after subacute inflammatory phenomena and perform readjustment preoperative biliary ducts. This view is used in the condition and Nia ult razvukovogo research that allows us to observe the dynamics of the inflammatory process in the wall of the gall pu Zira under the influence of anti-inflammatory therapy should be considered more rational. Emergency operation trace is only performed in those cases when oc t rum hall cystitis detected pattern of peritonitis.

If the timing of performing the surgery, surgeons argue that for surgical treatment of their opinion united - with the surgeon and Český treatment of patients with calculous cholecystitis need to remove the gall pu zyr and eliminate all the complications of the bile duct and major duodenal with about Socko.

Gallbladder removal (*cholecystectomy*) In progress dissolved as a wide laparoto m nym access, or using minimally invasive interventions -

*Laparoscopic holetsi stektomiya or cholecystectomy from mini-approach.*

To eliminate pathological processes are in vnepecheno h GOVERNMENTAL bile ducts, the lumen opening normally produce bile duct (*choledochotomy*). W and shte total bile duct lumen opened longitudinal slit in its wall sous claim raduodenalnom department. After opening the lumen of bile duct con removed therefrom the increments (*holedoholitotomiya*) and produce eliminating stenosis papillary (*transkholedohealnaya pillosphincterotomy*). After confirming by L nom Ustra nenii pathological processes biliary tract, bile duct wall wound sutured tightly with ispol'uet mations unresponsiveness suture applying Preetz Zeon suture technique (stapled tissue wall of the bile duct, the duct positioned above the mucous sheath). In some cases choledochotomy may be of a vertex or *external drainage of bile duct slops schyu T-l and teksnogo drainage or formation biliodigestive anastomosis* (holedohoduod e HO- or Holedohoeynoanastomoza).

In cases where there is a stenosis of large Duodo tional papilla or stone is restrained in its vial, you suppl *transduodenalnym n and pillosfinkterotomiyu* followed by removal of the stone.

The introduction of endoscopic surgery into surgical practice has significantly changed the surgical tactics for calculous cholecystitis and its complications. Currently, the operation of choice when calculous cholecystitis YaV wish to set up Laparoscopic e Skye cholecystectomy. During paw macroscopic cholecystectomy may be ful l Nena

choledocholithotomy and which ends superposition Glu Hoguev suture the wound etc. of current.

To eliminate choledocholithiasis or stenosis of major duodenal papilla in the preoperative period vpol nyayutsya endoscopic transduodenalnym papillosfin to terotomiya and lithoextraction.

**Used in this lesson, new educational technologies, "Che p ny box", "Web".**

#### USING THE BLACK BOX METHOD

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then discussing the answers and are, given addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannot, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 32-year-old patient complains of pain in the right hypochondrium, nausea, vomiting, weakness. The onset of the disease is associated with the intake of fatty foods. Overall condition cFe d her gravity. Tongue with leucorrhoea. Belly few swollen, painful on palpation in the right hypochondrium,, Musset symptoms Ortner positive, palpable dense education, etc. and howling hypochondrium. Your diagnosis.

#### USING THE WEB METHOD

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared n ny question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
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Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

### 6.2. Analytical part

**Situational tasks:**

A 32-year-old patient complains of pain in the right hypochondrium, nausea, vomiting, weakness. The onset of the disease is associated with the intake of fatty foods. Overall condition cFe d her gravity. Tongue with leucorrhoea. Belly few swollen, painful on palpation in the right hypochondrium,, Musset symptoms Ortner positive, palpable dense education, etc. and howling hypochondrium. Your diagnosis.

- A. chronic calculous cholecystitis
- B. hepatitis
- B. Perforation of the ulcer
- D. Acute cholecystitis \*
- D. pancreatitis

### 6.3. Practical part

A quest for practical skills (to hold the differential d and agnosia and substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, ultrasound).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                    | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnostics, make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                              | 0                 | 100                            |

### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Purpose:** Treating the disease

| No.  | Event                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|------|----------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                            | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                                   | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                           | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy     | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and assignment step B m ptomaticheskoy therapy | 0                 | 20                             |
| 6    | Preparation for planned surgery                                                                    | 0                 | 20                             |
|      | Total                                                                                              | 0                 | 100                            |

### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying of soda p extensible, preparation of the stomach for surgical intervention.

| No.  | Event                                                                  | Not<br>ful l Neal | Completely<br>correctly s full |
|------|------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | Reassure the patient, explain the course of the upcoming manipulation. | 0                 | ten                            |
| 2    | Wear rubber gloves.                                                    | 0                 | ten                            |
| 3    | Measure the distance from the mouth to the stomach.                    | 0                 | ten                            |
| 4    | Enter through the nasal passage des thin at zling probe.               | 0                 | ten                            |
| five | Suck the stomach contents for n of power Janet syringe.                | 0                 | ten                            |

|       |                                                                                                                           |   |     |
|-------|---------------------------------------------------------------------------------------------------------------------------|---|-----|
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0 | ten |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0 | ten |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0 | ten |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0 | ten |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0 | ten |
|       | Total                                                                                                                     | 0 | ten |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                               |
|-----|-----------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                               |
| 3   | 86 - 90%              | Excellent " 5" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                  |
| 4   | 81-85%                | Good " 4"      | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate                                                                                                                                                          |

|          |        |                                     |                                                                                                                                                                                                                                                             |
|----------|--------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | ideas. The case of a garden resolved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions.                                                                                   |
| five     | 76-80% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.               |
| 6        | 71-75% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                |
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions asked. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Admits mistakes in solving sieve and tional.                                                                              |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                                                     |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                       |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                     |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                                                          |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                    | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|-----|---------------------------------------------------------|-------------------|-------------------------------------|
| 1   | Introductory word of the teacher (justification t e we) |                   | five                                |
| 2   | Discussion on practical                                 | Poll, explanation | 25                                  |



|      |                                                                                                                                                                                                            |                                                                                                                           |         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------|
|      | training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.)               |                                                                                                                           |         |
| 3    | Summing up the discussion                                                                                                                                                                                  |                                                                                                                           | five    |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                        |                                                                                                                           | ten     |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                                           | fifteen |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey<br>IPR s menmy survey<br>tests, checking Practical<br>results and cal work,<br>discussion<br>obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information<br>in a millet to<br>myself about pendent<br>Getting on Preparations                                      | five    |

### 10. Test questions

1. Determination cholelithiasis, frequency, etiopathogenesis, clinical, diagnosis and Lecheniya.
2. The principles of conservative therapy for cholelithiasis.
3. To teach the diagnosis of gallstone disease, preoperative preparation.
4. Indications for surgical treatment for diseases of the gallbladder and biliary tract .

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with peptic ulcer dvenadtsatipe p stnoy intestine. // Surgery 2002 №7 p. 19-22
7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. About ext and rhenium indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC № 12. CHOLEDOCHOLITIASIS AND ITS COMPLICATIONS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students gallbladder and biliary tract, causes its development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, rehabilitation patients.

#### Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with Zab on Levan gallbladder and biliary tract;
- **n auchitsya special methods of investigation.**

#### *The student should be able to:*

- Perform practical skills - to acquire certain practical nav s ki in the examination of patients with diseases of the gallbladder and bile ducts, to carry out special inspection methods yes n GOVERNMENTAL patients to determine the indications and contraindications for surgical im e -interference.

### 4. Motivation

Suggestion students need adequate timely surgery before the development of severe complications and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is operas and tion and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### 5. Intersubject and intrasubject communications

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### 6. Content of the lesson

#### 6.1. Theoretical part

#### **Choledocholithiasis**

The frequency of choledocholithiasis in gallstones reaches 30-35% of the total number of patients, while about 20% of them have "mute" stones of the common hepatic or common bile duct, which is due to incomplete obstruction of their lumen.

Choledocholithiasis occurs by penetration of stones zhol ary bladder through the cystic duct (usually) either in the primary of the transform of their generally gall duct (rarely). After holetsistekto mission or surgical interventions on the bile ducts residual frequency (Forgotten) choledocholithiasis can reach 25% in D tsidivnogo - 3-6%. Obstruction of the common bile calculus about current can lead to obstructive jaundice, acute cholangitis or mu pancreatitis.

#### **Clinical picture**

Clinical manifestations of choledocholithiasis include pain in the upper right parts of the abdomen, more to the right, radiating to the back, nausea, **vomiting**, symptoms of obstructive jaundice.

### **Laboratory research**

Usually, laboratory tests are not enough to make a diagnosis. Between jaundice observed dressings LUN ix concentration bilirubin (due to direct fraction) activity of trans - aminaz and alkaline phosphatase in the biochemical analysis of blood, increased content of bile pigments in urine. Maybe the absence update themselves stercobilin in feces.

### **Instrumental diagnostics**

Instrumental diagnostics can be divided into preoperative, intraoperative and postoperative.

#### *cooperative diagnostics*

- Ultrasound - Screening method, the sensitivity of this on the subject revealed total bile duct extensions up to 90%.

- Endoscopic ultrasound through the duodenum - effectiveness efficiency 85-100%.

- MPT - accuracy up to 97%.

- ERCP - the standard method for the diagnosis of choledocholithiasis in patients experienced endoscopist is effective in 90-95% of cases. This method is associated with the possible development of hyperamylasemia, cholangitis, pancreatitis, retroperitoneal perforation of the duodenum, bleeding. Therefore prophylactically before exploration administered broad-spectrum antibiotics, prepare you somatostatin.

#### *Intraoperative diagnostics*

- Hol angiography.

- Choledochoscopy through the cystic duct or choledochotomy from miles away.

#### *Postoperative diagnosis*

- Fistulocholangiography (including through the T-shaped drainage of the common bile duct).

- Choledochoscopy through drainage.

- ERCP.

Once when ERCP revealed choledocholithiasis, research must be a diagnostic and treatment becomes due to perform total endoscopic papillosphincterotomy, lithotripsy, lithoextraction. Small stones can be removed without damaging the papillary, but in most cases it is necessary endoscopic papillosphincterotomy before or remove stones they recede spontaneously. Stones less than 1 cm in diameter usually pass spontaneously within 48 hours. If stones are larger than 2 cm, lithotripsy is usually required. When it is impossible to STI endoscopic correction surgery is shown.

### **Surgical treatment of choledocholithiasis**

The optimal solution to the problem of choledocholithiasis in patients with cholelithiasis is its elimination by means of endoscopic guidance, followed by cholecystectomy. Meanwhile, choledocholithiasis is not always amenable to endoscopic correction, then they resort to direct surgical intervention on the extrahepatic bile ducts. Operation is choledochotomy, retrieving stones from about light duct and the outer ends (T-shaped drainage common bile duct) or internal (choledochoduodenostomy, choledochoduodenostomy) drainage. In certain situations, the operation can be completed primary suture total bile duct.

The alternative is "open" laparoscopic operation from the mini-access using the toolbox "Mini-Assistant", which allows to perform the full scope diagnostic and operational interventions for choledocholithiasis. Meanwhile with the basic method with choledocholithiasis still remains traditional interference.

## **Cholangitis**

Cholangitis is an acute inflammation of the bile tree, usually accompanied by choledocholithiasis. As a consequence of cholestasis are all conditions for access infection,

which is in process of development. It is widespread in nature and leads to bacteremia in 25-40% of cases. It is more frequently occurring microorganisms with *E. coli*, *Klebsiella*, *Enterobacter*, *Streptococcus*. Infection occurs hematogenously, lymphogenous paths and through the intestines.

#### **Treatment**

- Infusion therapy. Antibiotic therapy.
- ERCP, possibly with elimination of the cause of impaired bile outflow.
- Decompression of the biliary tract.

According to the literature 70-85% in patients with slight and moderate cholangitis cured conservative methods. About 15% require direct surgery or emergency endoscopic assistance.

- Endoscopic drainage reduces mortality from 30% to 10%.
- Conservative therapy should be complementary to the surgical or endoscopic allowance.

#### **Mortality**

Mortality in cholangitis ranges from 7 to 40%.

### **Cicatricial strictures**

Scarring stricture papillary and bile excretory pathways occur when mucosal damage leads to papilla concretions migrating into the lumen of the intestine, or the inflammation process. Strictures can be limited in length from several millimeters to 1.0-1.5 cm and tubular in which concentric narrowing terminal from common bile duct case Cicatricial strictures, as a rule, do not have pathognomonic symptoms. Expressed stenosis terminal part of common bile duct with bile passage breach is manifested. Symptoms jaundice or cholangitis.

According to the level of lesion, strictures are divided into high and low. You should call a stricture at the bifurcation of the common pancreatic duct. Low terminally localized stricture near common bile duct. According to the degree of narrowing of the duct, complete and incomplete strictures are distinguished.

High Biliary strictures often arose out at random faults duct during cholecystectomy. At high strictures common hepatic duct (possibly left or right hepatic ducts) operate such operation as hepaticoduodenostomy, Hepaticojejunostomy or biliary-choledochostomy.

Low strictures occur after operations on the terminal section of the common bile duct, after papillosphincterotomy and other operations on the greater duodenal papilla. Most common interventions in these strictures are choledochoduodenostomy and choledochocystostomy.

### **Internal biliary fistula**

With prolonged presence of the stone in the biliary tract or gallbladder, inflammatory infiltrates are formed. Vessel Corollary between adjacent bodies in calming inflammation promotes formation of connective tissue adhesions. Subsequently resulting necrotic changes in the wall of the gall bladder, to tears arise pressurized stone, as well as inflammatory about cession wall perforation can occur to form a fistula between the hollow bodies.

Fistulas of gallstone origin are divided into biliodigestive (cholecystogastric, cholecystoduodenal, etc.) and biliary (cholecystocholecholeal, or Mirizzi's syndrome).

The clinical picture of internal biliary fistula frequently masks features of the underlying disease pathology, and may be a random finding with cholangiography or during surgery. One of the complications of biliodigestive fistulas in cholelithiasis is intestinal obstruction caused by a large gallstone.

With ultrasound, signs of aerocolia are noted (the presence of gas in the bile ducts). An important role in the diagnosis of fistula biliodigestive play a direct cholangiography and endoscopic methods of investigation of Bani, particularly retrograde cholangiopancreatography.

Cholelithiasis complicated by formation of any of the internal zholch GOVERNMENTAL fistula, on the one hand, it requires routine operational les cheniya the other - the intervention significantly complicates operational GUSTs, especially when Mirizi syndrome.

The problem of surgical treatment - separation and the creation of a fistula mustache lovy for adequate outflow of bile. It should be emphasized that the Mirizi syndrome, not diagnosed before surgery, is one of the main reasons for the development of intraoperative complications and the transition from minimally invasive operations to standard laparotomy.

### **External biliary fistula**

External biliary fistula on the mechanism of its development impersonate divisible by primary and secondary. The primary attribute fistula formed as a result of immediate and direct damaged Nia biliary tract; for secondary - fistulas caused re result of melting bile duct wall suppurative nekrotiches- a process flow.

It is very important to subdivide the external bile fistulas into full and incomplete. With complete fistulas, all bile is secreted outside, without entering the intestines; with incomplete fistulas of the bile singles out etsya out, and the rest goes into the intestine.

### **Used in this lesson, new educational technologies, "Che p ny box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

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#### **USING THE WEB METHOD**

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6. Pre students are given time to prepare questions on the passed of as nyatiyu.
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Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

## **6.2. Analytical part**

**Situational tasks:**

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- A. chronic calculous cholecystitis
- B. hepatitis
- B. Perforation of the ulcer
- D. Acute cholecystitis \*
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A quest for practical skills (to hold the differential d and agnosia and substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, ultrasound).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                    | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnostics, make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                              | 0                 | 100                            |

### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Purpose:** Treating the disease

| No.  | Event                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|------|----------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                            | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                                   | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                           | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy     | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and assignment step B m ptomaticheskoy therapy | 0                 | 20                             |
| 6    | Preparation for planned surgery                                                                    | 0                 | 20                             |
|      | Total                                                                                              | 0                 | 100                            |

### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying of stomach extensible, preparation of the stomach for surgical intervention.

| No.   | Event                                                                                                                     | Not full | Completely full |
|-------|---------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0        | ten             |
| 2     | Wear rubber gloves.                                                                                                       | 0        | ten             |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0        | ten             |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0        | ten             |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0        | ten             |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0        | ten             |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0        | ten             |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0        | ten             |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0        | ten             |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0        | ten             |
|       | Total                                                                                                                     | 0        | ten             |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                               |
|-----|-----------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                               |
| 3   | 86 - 90%              | Excellent      | Questions raised covered full of Stu, but there                                                                                                                                                                                                                                                                                       |

|          |        |                                     |                                                                                                                                                                                                                                                                                                                                                        |
|----------|--------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        | " 5"                                | are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                                                                                |
| 4        | 81-85% | Good<br>" 4"                        | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions. |
| five     | 76-80% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                         |
| 6        | 71-75% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                          |
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions asked. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. Situational tasks dec th us is true, but there is no justification response.                                                                                                      |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Admits mistakes in solving sieve and tional.                                                                                                                                                                         |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Tells uncertainly, has partial ideas on the topic. Situational tasks solved Neva river but.                                                                                                                                                                                                         |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                                                                                                                      |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                                                                                                                      |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                                                                                                                  |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                                                                                                                |
| fourteen | 31-35% | Unsatisfied<br>sly                  | Doesn't give answers to questions.                                                                                                                                                                                                                                                                                                                     |



|  |  |      |  |
|--|--|------|--|
|  |  | " 2" |  |
|--|--|------|--|

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                 | Lesson forms                                                                                                     | PRODO l resident s NOSTA min. 90 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                                                                                                                  | five                             |
| 2    | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation                                                                                                | 25                               |
| 3    | Summing up the discussion                                                                                                                                                                                            |                                                                                                                  | five                             |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                                                                                                                  | ten                              |
| five | Independent work of students from a military skills                                                                                                                                                                  |                                                                                                                  | fifteen                          |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group                    | Oral survey<br>IPR s menmy survey tests, checking Practical results and cal work, discussion<br>obsu Well denie. | 25                               |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions)           | The information in a millet to myself about pendent<br>Getting on Preparations                                   | five                             |

### 10. Test questions

1. Determination cholelithiasis, frequency, etiopathogenesis, clinical, diagnosis and L e cheniya.
2. The principles of conservative therapy for cholelithiasis.
3. To teach the diagnosis of gallstone disease, preoperative preparation.
4. Indications for surgical treatment for diseases of the gallbladder and biliary tract .

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with peptic ulcer dvenadtsatipe p stnoy intestine. // Surgery 2002 №7 p. 19-22

7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. About ext and rhenium indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **TOPIC № 13. ACUTE CHOLECYSTITIS AND COMPLICATIONS.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, ward, dressing room
- posters , tables, charts classification as tion of the disease, the treatment regimen, radiographs, video films.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

To teach students the methods of examination, diagnosis, differential diagnosis, the choice of treatment methods on the example of supervised patients, to disassemble the etiology, pathogenesis, clinic, course and general principles of treatment of acute cholecystitis and its complications.

### **Tasks**

#### ***The student should know:***

4. Definition, frequency, etiopathogenesis, clinical picture, diagnosis and treatment of acute cholecystitis and its complications.
5. The principles of conservative therapy for acute cholecystitis.
6. To teach the diagnosis of acute cholecystitis, preoperative preparation.
4. Indications for surgical treatment in acute cholecystitis and its complications.

#### ***The student should be able to:***

- Perform practical skills - to acquire certain Pract and cal skills in examining patients with acute cholecystitis, carry out special methods of examination data of patients, objectified e pour indications and contraindications for surgical interventions.

### **4. Motivation**

Suggestion students need for timely adequate operas and tion to the development of serious complications and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is the operation and the operational period of Prof. and local galaxy. Development of students' clinical thinking. Development of present-day e alternating view of the problem the issue from the perspective of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this subject is based on the students' knowledge bases en and tomii, normal and pathological physiology of blood circulation. Obtained knowledge during the classes will be used in prohozhd e Research Institute of Gastroenterology, internal medicine and other clinical subjects.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

Acute inflammation of the gallbladder is one of the most common complications of calculous cholecystitis. Main causes devel ment of acute inflammation in the wall of the gallbladder lumen presence microflora in bladder and bile outflow violation. The microflora

enters the gallbladder by an ascending route from the duodenum, less often by a descending route from the liver, where microbes enter with the blood flow, lymphogenous and hematogenous.

The leading factor in the development of acute cholecystitis is a violation of the outflow of bile from the gallbladder, which occurs when the gallbladder neck or cystic duct is occluded by a stone.

Clinical forms of acute cholecystitis: catarrhal, phlegmonous and gangrenous (with or without perforation of the gallbladder).

Acute cholecystitis in elderly and especially senile people with a decrease in the general reactivity of the body and the presence of concomitant diseases has an erased course. Gangrenous cholecystitis most often develops in such people. Old people often lack the intense pain, you dimly razhen protective muscle tension anterior abdominal wall, there is a high leukocytosis. That is why elderly patients may encounter quite serious difficulties in diagnosing acute cholecystitis, assessing the condition and choosing a treatment. In typical cases, the diagnosis of acute cholecystitis not before stavlyaet serious problems. However, it should be noted that a similar clinical presentation may proceed with acute appendicitis subhepatic location process, acute pancreatitis, perforated gastric ulcer and duodenal ulcer, pochech Nye colic and other diseases of the abdominal cavity. Hydrocholecystitis develops at the completion wor pas acute cholecystitis (catarrhal) if microbial flora bile has little virulence and stored occlusion neck of the gallbladder or cystic duct. The gall bladder is sucked bile constituents, bacteria Pogi bayut, the contents of the gallbladder becomes colorless, fusion Zist character. On physical examination of patients, the bottom of an enlarged, stretched, painless gallbladder can be palpated. At calming acute inflammatory changes in the wall zhelch Foot bubble may develop gallbladder empyema. Patients complain of dull pulling pains in the right hypochondrium, somewhat aggravated after eating, episodic increases in temperature to 37.8-38 ° C, palpation can determine an enlarged, slightly painful gallbladder.

Choledocholithiasis is one of the most frequent complications of cholelithiasis and calculous cholecystitis (in 20% of patients). In elderly and senile people, choledocholithiasis is observed more often 2-3 times. Stones in the common bile duct in the vast majority of patients from the gallbladder. Migration of stones from the gallbladder is possible with a short wide cystic duct, bed sore in the neck of the gallbladder or Hartmann's pocket with the formation of a wide fistula between the gallbladder and the common bile duct. The migration of stones into the common bile duct also contributes to the disruption of the motor activity of the gallbladder and, first of all, the Lutkens sphincter.

Jaundice is the main clinical sign of choledocholithiasis. Sometimes jaundice is remitting in the presence of the so-called "valve" stone of the terminal part of the common bile duct or large duodenal papilla. When a stone occludes the terminal part of the common bile duct, biliary hypertension occurs, which is clinically expressed by dull pain in the right hypochondrium and obstructive jaundice. With further increase in pressure in extrahepatic bile duct lumen extends past the stone as it emerges proximal gepatoholedoha, jaundice reduced and disappeared can pull the.

Cholangitis - acute or chronic inflammation within and outside the hepatic biliary tract. It occurs with choledocholithiasis due to cholestasis and an infection in the bile. By the nature of morphological changes in the walls of the bile duct is isolated kata -sectoral and purulent cholangitis. The clinical manifestations of cholangitis are characterized by a sudden increase in body temperature to febrile, tremendous chills, heaviness and dull pain in the right hypochondrium, nausea and vomiting. When purulent cholangitis have intense pain, jaundice appears early, which is associated with damage to pechenoch Noah parenchyma, as well as with cholestasis. Scarring stricture papillary and thermo -regional division of the common bile duct damage occur when mucosal duodenal papilla stones inflammatory process. Strictures can be limited in length from a few millimeters to 1-1.5 cm and tubular, in which the concentric narrowing of the terminal section of the common bile duct occurs for 2-2.5 cm or more. This conditional division of strictures comfortable in the choice of the optimal method

of correction of complications during operator radio. Cicatricial strictures, as a rule, do not have pathognomonic clinical symptoms.

Treatment: All patients with acute cholecystitis have to hospital under constant supervision of the surgeon. In the presence of symptoms of diffuse peritonitis, an emergency operation is indicated. In the remaining patients displayed drug Tera Pius. Patients restrict food intake, allowing only alkaline water (since the acidic gastric contents, proteins and fats stimulate the secretion of intestinal hormones reinforcing motor hydrochloric activity gallbladder and secretory activity under gastric cancer). To reduce the pain used non-narcotic analgesics. Narcotic analgesics (promedol, morphine, fentanyl), due to their pronounced analgesic effect, can significantly reduce pain and objective signs of the inflammatory process (muscle protection, peritoneal symptoms), which can create the impression that the inflammatory process has subsided and thus "lubricate" the clinical picture of the disease, despite the ongoing destructive changes in the gallbladder. Narcotic analgesics, causing spasm of the sphincter of Oddi, bile contribute to the development of hypertension and disturbance of outflow of pancreatic juice, which is very undesirable in acute cholecystitis. Pain can be reduced by applying anticholinergics and spasmolytics (atropine, platifillin, Nospanum et al.). An ice pack is placed locally on the right hypochondrium. The use of heaters is absolutely unacceptable, as this significantly increases the blood filling of the gall bladder, which leads to further progression of the inflammatory process with the development of destructive changes. To suppress the activity of the microbial flora design broad spectrum antibiotics except tetracycline drugs having hepatotoxicity. For detoxification, infusion therapy is prescribed at least 2--2.5 liters of solutions per day. During treatment, the patient is under constant observation. Take into account the subjective and objective symptoms of the disease. It is advisable to conduct individual observation picture, in which it is necessary. We mention that every 4--6 hours heart rate, blood pressure value, body temperature, the number of leukocytes in the blood. This substantially facilitates the monitoring of patients, allows to evaluate the efficiency of the treatment, to judge the course of the inflammatory process. In acute cholecystitis complex drug therapy should also include drugs used to treat acute pancreatitis. In most patients, it is possible to stop an attack of acute cholecystitis. At the end of the attack, the patient must be examined to identify stones in the gallbladder. When the doctor detects stones in the gallbladder or bile ducts of the patient is necessary to operate routinely in 2-3 weeks after an acute attack subsided. If during the treatment of acute cholecystitis in those 48-72 hours the patient's condition does not improve, stored or amplified abdominal pain persists or increases protection voltage of In recent years, there have been reports of the successful use of emergency laparoscopy in the treatment of acute cholecystitis. This tactic allows the early stages to stop the progression of the inflammatory process with the development of destructive changes in the gallbladder wall, quickly achieve positive clinical effect, avoid forced surgery at an altitude of acute cholecystitis, you play time for preoperative preparation of patients with it diseases.

The situation becomes much more complicated with the development of obstructive jaundice against the background of acute cholecystitis. This complication threatens pain, cholangitis, hepatic parenchymal cell damage, further aggravation of intoxication with the development of renal failure. Mechanical jaundice is not rare in elderly individuals, compensatory capacity of the organism for which very limited. In such a situation, urgent endoscopic papillotomy is a rather promising direction. Vposled Corollary perform gall bladder surgery in planned by row. Cholecystectomy - major surgery, you fills in acute cholecystitis. With a total tyazhe scrap the patient's condition, diffuse peritonitis and serious ities diseases impractical endeavor to undertake surgery in full in accordance with the nature of the changes in the extrahepatic bile ducts. No necessity to remove only inflammatory-modified PU cholic zyr, eliminate (if it is detected during operation) zhelch hydrochloric hypertension. To combat cholangitis, drainage is left in the common bile duct. Cholecystostomy removing stones and infected with the contents of the gall bladder is shown in rare cases as a forced measure the general condition of the patient and the weight -

intensity inflammatory infiltrate around the gallbladder, especially in elderly and senile age. This operation allows only palliative and eliminate the inflammatory acute - inflammatory changes in gall bladder wall. In the late postoperative periods, usually again in the gallbladder occurs exacerbation of the inflammatory process and the sick accounted for return to operate.

**Used in this lesson, new pedagogical technology: "Black Box", "Web".**

#### USING THE BLACK BOX METHOD

The method provides for joint activities and active such as take place in the classroom each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options Problems of owls included.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the host is, you discussed, given addition of etiopathogenesis, clinical technique NIJ. At the end of the method the teacher says correctly answer, Explain about variant, the degree of activity of students.

This technique contributes to the student's speech, the formation of a new critical thinking, as In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competition.

Annotation options:

1. Diagnose: The patient has pain in the right hypochondrium after eating fatty foods.
2. Diagnose: A 65-year-old patient developed nausea, vomiting, pain in the right hypochondrium after eating bitter fried food.

#### USING THE WEB METHOD

Steps:

1. Pre students are given time to prepare questions about their own occupation.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared any question (which itself needs to know the complete answer), to hold on the hank yarn and transferring any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. Participants continue to ask and answer questions until everyone is on the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Caution students that we should be attentive to each GOVERNMENTAL to each answer, because they do not know who to throw a hank.

### 6.2. Analytical part

**Situational tasks:**

3. 1. A patient has pain in the right hypochondrium after taking fatty foods.  
I of . Your diagnosis:  
A. acute cholecystitis \*  
B. colitis  
B. gastritis  
G. myalgia  
D. arthrosis  
II . clinical picture of acute cholecystitis  
A. pain in the right hypochondrium after eating fatty foods \*  
B. slowly increasing pain  
B. Redness of the skin  
G. No pain  
D. there is no correct answer

### 6.3. Practical part

A quest for practical skills (questioning the patient about the used conductive inspection and examination of the body parts to carry out a differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment).

## 1. INTERVIEW OF THE PATIENT, GENERAL INSPECTION AND INSPECTION OF PARTS OF THE BODY.

### Goal:

- obtaining the information necessary for diagnostics;
- assessment of the likelihood of the disease;
- identification of other sources of information (relatives, other doctors, etc.);
- establishing a trusting relationship with the patient;
- assessment of the individual patient and his attitude to the disease (internal ka p Tina's disease);
- assess the state of consciousness and mental status of the patient, his claim of decomposition, a general view, the state of external coverings and the individual sections of t e la.

**Indications:** the survey is mandatory for all patients who are in consciously and at all times; examination is carried out for all patients.

**Equipment:** well-lit wards, doctors' offices, fluorescent LIGHT e Nia.

**Test conditions:** absence of extraneous persons of confidence b nstallation.

### Performed stages (steps):

| No.   | Event                                      | Not s full | Completely correctly s full |
|-------|--------------------------------------------|------------|-----------------------------|
| 1     | Passport data inquiry                      | 0          | five                        |
| 2     | Collection of complaints                   | 0          | fifteen                     |
| 3     | Taking a medical history                   | 0          | 20                          |
| 4     | Taking a life history                      | 0          | fifteen                     |
| five  | Epidemiological and llergich e sky history | 0          | five                        |
| 6     | Objective examination of the patient       | 0          | five                        |
| 7     | Make a survey plan                         | 0          | five                        |
| eight | Correct diagnosis                          | 0          | five                        |
| nine  | Differential diagnosis                     | 0          | 20                          |
| ten   | Draw up a treatment plan                   | 0          | five                        |
|       | Total                                      | 0          | 100                         |

## 2. CONDUCT DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**The goal :** to train to conduct the differential diagnosis of an eye and justify Mr. definitively diagnosed.

| No. | Event                                                                                                                                                                    | Not s full | Completely correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0          | 25                          |
| 2   | Differential diagnosis of major Klinichev e Sgiach syndromes                                                                                                             | 0          | 35                          |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0          | 40                          |
|     | Total                                                                                                                                                                    | 0          | 100                         |

### 3. APPOINT APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                                  | Not s full | Completely correctly s full |
|------|--------------------------------------------------------------------------------------------------------|------------|-----------------------------|
| 1    | The study of the characteristics of leche b GOVERNMENTAL tables on Pevzner                             | 0          | ten                         |
| 2    | Choosing the right diet table for your diagnosis                                                       | 0          | ten                         |
| 3    | Evaluation of the usefulness of the diet                                                               | 0          | 20                          |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy         | 0          | 20                          |
| five | In accordance with the diagnosis, COG e Stu disease stage and desig and chenie symptomatic ter and FDI | 0          | 20                          |
| 6    | Preventive measures                                                                                    | 0          | 20                          |
|      | Total                                                                                                  | 0          | 100                         |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                                     |
|-----|-----------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively participate in interactive games, the right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively participate in interactive games, correctly takes p e sheniya.                                                                  |
| 3   | 86 - 90%              | Excellent " 5" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. With a mostoyatelno analyzes. Inaccuracies in solving situational problems, but with the right approach. Actively participates in interactive games, makes the right decisions.                                                                       |
| 4   | 81-85%                | Good " 4"      | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, speaks with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is                                                                                             |

|          |        |                                     |                                                                                                                                                                                                                                                                          |
|----------|--------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | not sufficient justification for I but. He actively participates in interactive games, makes decisions correctly.                                                                                                                                                        |
| five     | 76-80% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                            |
| 6        | 71-75% | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                             |
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. He tells neuv e Renno has accurate representations only on specific issues topics. D to let mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                   |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. He tells neuv e Renno has partial presentation on the topic. Situational tasks solved n e is true.                                                                                                                    |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                      |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                      |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Coverage of 1/5 of the questions posed with errors. It gives incomplete and partially n e correct answers to questions.                                                                                                                                                  |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | 1/10 coverage of the issues in the district ie the right approach.                                                                                                                                                                                                       |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                                                                       |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                     | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|-----|----------------------------------------------------------|-------------------|-------------------------------------|
| 1   | Introductory word of the teacher (Settle and of threads) |                   | five                                |
| 2   | Discussion topics associated practical I ment, baseline  | Poll, explanation | 25                                  |



|      |                                                                                                                                                                                                    |                                                                                                                        |         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------|
|      | assessment of student learning using new pedagogical technologies (small groups, case studies, business games, slides in and deofilmy, etc.)                                                       |                                                                                                                        |         |
| 3    | Summing up the discussion                                                                                                                                                                          |                                                                                                                        | five    |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                |                                                                                                                        | ten     |
| five | Independent work of students from a military skills                                                                                                                                                |                                                                                                                        | fifteen |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group  | Oral questioning, written questioning, testing, inspection Practical results and cal work, discussion obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Giving an assignment for the next lesson (set of questions) | The information in a millet to myself about pendent Getting on Preparations                                            | five    |

### 10. Test questions

- 1.define cholecystitis
2. The main reason for the development of acute cholecystitis.
3. Basic diagnostic methods of OX.
4. Classification of AC and chronic cholecystitis.
5. Indications for conservative treatment of OX.
6. Indications for surgical treatment of OH.
7. General principle of surgical treatment for OX.

### 11. Recommended reading

- Sh.I. Karimov - "Surgical diseases" Tashkent 2005
- MI Kuzin "Surgical diseases". Medicine 1986
- Sh.I. Karimov "Kasalliklar surgeon". Medicine 1994
- Littmann I. "Operative Surgery" 1982.
- Agzamkhozhaev S.M. "Surgeon casalliklar" 1991
- B.A. Korolev, D.L. Pikovsky "Emergency biliary tract surgery" 1990 year
- B.V. Petrovsky "Guide to surgery" 7 t. Medicine 1970.
- Tutorial on the topic.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC № 14. SURGICAL LIVER DISEASES. LIVER ABSCESS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, sling h naya
- posters , tables, disease classification schemes, treatment schemes, radiographs, videos.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with surgical liver diseases , the causes of development, clinical features, differential diagnosis, best practices lecheniya, postoperative care, rehabilitation patients.

#### Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with hirurgich e Skim liver disease;
- **n auchitsya special methods of investigation.**

#### *The student should be able to:*

- Perform practical skills - to acquire certain practical skills in examining patients with surgical diseases of the liver, to carry out special m e Toda survey data of patients to determine the indications and contraindications for surgical interventions.

### 4. Motivation

Suggestion students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis and surgical treatment of patients with possible introduction of a complication in the operation and is operating period of, prevention. Development Klinichev e Skog students thinking. Development of a modern view of the problem from the perspective of world medicine and general practitioner.

### 5. Intersubject and intrasubject communications

Teaching this subject is based on the students' knowledge of anatomy basics Normal s Noah and Pathological Physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

### 6. Content of the lesson

#### 6.1. Theoretical part

Portal hypertension syndrome, based on the pressure increase in the Voronoi m hydrochloric vein (normal mm.vod.st. 200) caused by the disturbance relationships between inflow cr of wi in the portal bed and its outflow. Violation of adequate blood flow may be s rank extrahepatic, intrahepatic, suprarenal and mixed unit. Extrahepatic fo r ma portal hypertension syndrome caused by congenital abnormalities pa of Vitia portal

vein (atresia, luminal obliteration) or thrombosis as a result of purulent process in the abdominal cavity, an umbilical sepsis, tumor compression. The most common (80-90%) vnutrip echenochnaya syndrome form of portal hypertension is associated with liver cirrhosis. When suprarenal form caused trombofl th bit hepatic veins (Chiari disease) or occlusion of the vena cava at confluence of hepatic veins (Budd-Chiari syndrome), the formation of the lower n malformations about loi vein broken adequate outflow of blood from the liver. Increased pressure in the portal vein may be caused by increased blood flow in the portal bed of Art through e rio-venous fistula, the so-called idiopathic portal v hydrochloric hypertension.

Portal hypertension leads to the formation of natural portocaval anastomoses, shunting blood into the systemic circulation bypassing the liver. Among them on and more dangerous are the gastroesophageal anastomosis, which may be complicated by rupture and krovotech e Niemi.

The main priznakmi portal hypertension is splenomegaly, varicose veins of the esophagus and stomach, bleeding from them, as well as from gemorroidal s GOVERNMENTAL veins, ascites, dyspeptic symptoms (pain in the epigastric raids STI, the lack of a claim Petit, nausea, constipation), hepatic signs ( "spider veins", "hepatic palms", etc.), hypersplenism (thrombus o cytopenia, leukopenia, less often anemia), disorders of the blood coagulation system in the direction of d and pocoagulation

Treatment: symptomatic. In rare cases, when Budd-Chiari syndrome is caused by membranous infection of the hepatic veins or the inferior vena cava, surgery is possible - dissection of the membranes. Diagnosis: first in portal hypertension etc. and change the X-ray examination of the esophagus and stomach to detect varicose ra with extension veins in the distal esophagus as multiple oval and rounded filling defects. However, the effectiveness of this method The investigations dovaniya does not exceed 50%. More and n formative fibroezofagoskopiya. Of great importance in the diagnosis of the syndrome portal Gypea p TENSO - determining the level of obstacles to the outflow of blood from the portal vein, tools have n tal research methods (tseliakografiya - arterial and venous phases, cavagraphy, splenoportography, percutaneous transhepatic portography). When vnutripecheno h hydrochloric syndrome form, valuable information can be obtained by laboratory methods and with repetition reflecting functional liver condition. Treatment: complex therapeutic measures in respect of the disease, caused by portal hypertension, and in otno shenii of B n Droma portal hypertension. When predpechenoch hydrochloric shape syndrome patients are subject Hira p cal treatment. The most commonly applicable operation imposition porto Anastacia about Moza splenorenal, mesentericportal-caval or direct portocaval Anastacia of Moza.

In the treatment of patients with liver cirrhosis, complications of portal hypertension, a surgeon and cal treatment is possible only in the absence of the active process in the liver and symptoms printed e night failure Selection method of operation is determined taking into account the age, the general condition of the patient, presence of concomitant diseases, degree comp n sation disturbed functions liver portal pressure altitude, severity Gypea p splenizma. It is noted that the best results when applied portoka rotary shaft anastomoses are observed in patients with the level b and the lyre-bean blood below 0.02 g / l (2 mg%) Albumin blood levels above 0.35 g / l (3.5 g%), and in the absence of ascites nevrologich e Sgiach disorders. In patients with bilirubin levels in the blood of more than 0.03 g / l (3 mg%), the concentration of albumin in the blood below 0.03 g / l (3 g%), the presence of ascites, eating disorders and neuro logical disorders of operation bad. Very high item on sleoperatsionnaya mortality

The spread was prepared minimally invasive endovascular therapies (emboliz a tion splenic artery, esophageal varices and gastric overlay vnutripecheno h Nogo portosystemic shunt).

Treatment of bleeding varices of the esophagus begin with conservative in GOVERNMENTAL Event produce esophageal tamponade probe Blackmore used gemostatich f ical therapy, blood transfusion, pituitrin (to reduce the portal pressure). Probe Blackman about pa consists of rubber triple lumen tube with two circular

cylinders and Tsilina d-symmetric shape. Two probes are used for inflating the channel cylinders, the third (open vayuschiysya in the distal portion of the probe) for the aspiration of gastric contents (for effective control of Stuhemostasis). Probe Blackmore administered through the nose into the stomach is inflated distal (zheluzhok) balloon pumping 60-70 mL of air. Then the probe podtyagi vayut to soprotivleniya sensations in Lenia, which occurs when the balloon localization in the cardia. After that, 100-150 ml of air is injected into the esophageal balloon. In this state, the wall elastic Nogo cylinder exert a uniform pressure along the entire circumference of the esophagus, compressing the bleeding veins distal food water and cardia of the first part of the stomach. After a few hours, the pressure in the balloons is released, monitoring the hemostasis effect using the probe. Duration of transducer in the esophagus has no direct e Witzlaus 2 days because of the danger of bedsores. Application phlebosclerosing drugs (Var and kotsid, trombovar et al.) In the treatment of bleeding esophageal varices axes y occurs through the esophagoscope. Special needle through the endoscope into the lumen or vein paravoy h but the drug is administered, cause conductive venous intima damage, obliteration of its sticking to about light. In order to create favorable conditions for slab and pany walls of varicose veins on day one administered Blackmore probe.

When the failure of medical treatment of bleeding esophageal varices as a forced measure apply various types of surgical vmesh and ments aimed at stopping bleeding and separation portoka rotary shaft-Anastacia about mozov gastroesophageal zone. In connection with the serious condition of the patient, the most often and with use is the operation of transgastric ligation of the dilated veins of the esophagus and cardia or stitching of the subcardial section with staplers. Badges and Tel'nov rarely perform resection of the stomach and proximal abdominal esophagus, the imposition of direct vascular lortok a rampart anastomosis. Prediction: unfavorable, lethality after these types of operations Ven and as high as 75%.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Possible questions are attached.) Students should provide a detailed justification for their answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of student speech, form the foundations of the critical e Skog thinking because In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

#### **Annotation option:**

A 45- year-old patient complains of pain in the right hypochondrium, nausea, vomiting with blood, 6 years ago suffered from hepatitis virus, repeatedly received treatment for chronic hepatitis. The general condition is serious, the skin is flabby, dry. Tongue with leucorrhoea. The abdomen was removed and chen due to ascites, there were no peritoneal phenomena. Your preliminary diagnosis.

#### **USING THE WEB METHOD**

##### **Steps:**

1. In advance, students are given time to prepare questions for the lesson they have completed.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.

4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational tasks:

A 45-year-old patient complains of pain in the right hypochondrium, nausea, vomiting with blood, 6 years ago suffered from hepatitis virus, repeatedly received treatment for chronic hepatitis. The general condition is serious, the skin is flabby, dry. Tongue with leucorrhoea. The abdomen was removed and then due to ascites, there were no peritoneal phenomena. Your preliminary diagnosis and prognosis.

- A. peptic ulcer and 12 duodenal ulcer complicated reflux of the passage
- B. bleeding from the large intestine
- B. Cirrhosis of the liver, portal hypertension complicated by ascites and bleeding from varicose and varicose veins of the esophagus

D. Epistaxis

E. No convincing answer

II. The optimal method of stopping the bleeding at the height of Kravtchuk Research Institute:

- A. Gastric resection
- B. Sclerotherapy + Blackmore probe + pressure reduction in the portal system + hemostatics
- B. Removal of varicose veins with the esophagus
- D. Outpatient treatment

## 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, zone of involvement of the stomach).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose:** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                             | Not fulfilled | Completely correct |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so-called nym disease                                                                          | 0             | 25                 |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                   | 0             | 35                 |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis. | 0             | 40                 |
|     | Total                                                                                                                                                             | 0             | 100                |

### 4. Technique for installing the Blackmore probe

**Purpose:** to stop bleeding from the esophagus and cardiac stomach

**Indication:** profuse bleeding from the veins of the esophagus or with Mallory-Weiss syndrome

**Equipment :** syringe, petroleum jelly, Janet's syringe, Blackmore probe, promedol, pipolfen.

**Steps being taken**

| No.    | Event                                                                                                                                  | Not full | Completely full |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1      | Check the integrity of the cartridges and the need for the amount of liquid or air by introducing air through the probe with a syringe |          | ten             |
| 2      | Probe lubricated with Vaseline or glycerin                                                                                             |          | five            |
| 3      | Nasopharynx lubricated with 0.5% solution of lidocaine tetracaine or insufflation                                                      |          | five            |
| 4      | The probe is introduced through a nasal passage and into the stomach                                                                   |          | fifteen         |
| five   | The gastric balloon syringe air is introduced to 100 ml and the probe is pulled in and top up to the stop                              |          | ten             |
| 6      | The esophageal balloon Janet syringe air is introduced to 70 ml (for each patient individually on w)                                   |          | ten             |
| 7      | The degree of filling of the cylinders is controlled by the degree of inflation of the rubber cartridges in Air at hosnyh channels     |          | ten             |
| eight  | The contents of the stomach are aspirated, the latter is washed to clean water                                                         |          | ten             |
| nine   | By periodically checking the contents of the stomach, it is possible to judge the effectiveness of the tamponade                       |          | ten             |
| ten    | Periodically, the patient is administered promedol, pipol s hairdryer                                                                  |          | five            |
| eleven | Finally, the probe is removed after 24-72 hours                                                                                        |          | ten             |
|        | Total                                                                                                                                  |          | 100             |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

## 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                      |
|-----|-----------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer. Actively and creatively involved in |

|       |          |                               |                                                                                                                                                                                                                                                                                                                                                              |
|-------|----------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |          |                               | Inter to tive games right to make informed decisions and sums up, an a lyse.                                                                                                                                                                                                                                                                                 |
| 2     | 91-95%   | Excellent<br>"five"           | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situation and onny problems correctly, with a creative approach, with justification of the answer.<br>Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                            |
| 3     | 86 - 90% | Excellent<br>"five"           | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                                      |
| 4     | 81-85%   | Good<br>"4"                   | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. Situation n nye problems are solved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                               |
| 6     | 71-75%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                                |
| 7     | 66-70%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                     |
| eight | 61-65%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                                                                                               |
| nine  | 55-60%   | Satisfied<br>literally<br>"3" | Response to errors by half post in PARTICULAR issues. He says hesitantly, has tea with the decimal representation of the subject. Situational tasks solved n e is true.                                                                                                                                                                                      |

|          |        |                             |                                                                                                                         |
|----------|--------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------|
| ten      | 50-54% | Not satisfied literally "2" | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.  |
| eleven   | 46-49% | Unsatisfied sly "2"         | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach. |
| 12       | 41-45% | Unsatisfied sly "2"         | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.   |
| 13       | 36-40% | Unsatisfied sly "2"         | Covering 1/10 of the questions with the wrong approach.                                                                 |
| fourteen | 31-35% | Unsatisfied sly "2"         | Doesn't give answers to questions.                                                                                      |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                       | Lesson forms                                                                                              | PRODO l resident s NOSTA min. 90 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                    |                                                                                                           | five                             |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.)        | Poll, explanation                                                                                         | 25                               |
| 3    | Summing up the discussion                                                                                                                                                                                  |                                                                                                           | five                             |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                        |                                                                                                           | ten                              |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                           | fifteen                          |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey IPR s menmy survey tests, checking the results of practical work, discussion obsu Well denie. | 25                               |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations                               | five                             |

### 10. Test questions

1. The reasons for the development of bleeding and veins of the esophagus.
3. The main disorders arising from cirrhosis of the liver.



4. The main task of providing assistance with severe arterial hypotension due to bleeding

5. Indications for urgent surgical treatment for bleeding from varicose veins of the esophagus.

### **11. Recommended reading**

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **SUBJECT № 15. parasite Tarn Zabol E B A NIE PE Cheney CLINIC, diagnostics, L E Cheney E.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, sling h naya  
- posters, tables, disease classification schemes, treatment schemes, radiographs, videos.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with surgical liver diseases, the causes of development, clinical features, differential diagnosis, best practices lecheniya, postoperative care, rehabilitation patients.

#### **Tasks**

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with hirurgich e Skim liver disease;
- **n auchitsya special methods of investigation.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in examining patients with surgical diseases of the liver, to carry out special me Toda survey data of patients to determine the indications and contraindications for surgical interventions.

#### 4. Motivation

Suggestion students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis and surgical treatment of patients with possible introduction of a complication in the operation and is operating period of, prevention. Development Klinichev e Skog students thinking. Development of a modern view of the problem from the perspective of world medicine and general practitioner.

#### 5. Intersubject and intrasubject communications

Teaching this subject is based on the students' knowledge of anatomy basics Normal s Noah and Pathological Physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

#### 6. Content of the lesson

##### 6.1. Theoretical part

Echinococcosis - a widespread parasitic disease chelov e ka, which is endemic to the republics of Central Asia, including Uzbekistan, especially for areas with common zhivotnovods t tion.

The history of the study of echinococcosis began in ancient times. So, this disease has already been mentioned by Hippocrates (463-357 BC), Galen (130-200 years). Hippocrates observed that the liver affected with echinococcosis, pre d resents a body filled with water, which at rupture can lead to the death of people of the century.

Despite such a long existence of this disease, but in the nineteenth century was the mouth of a Credited proven and parasitic nature of the disease, when in 1890, MG Stadnitsky, and in 1899 Alexander Lebedev and Nikolai Andreev infested with rabbits by introducing echinococcus bubble content Bru w hydrochloric cavity.

The disease is most prevalent in South America, then in Austria and Leah and New Zealand, North Africa, Southern Europe, Mongolia and K and tae. In the former USSR the highest incidence observed in the Crimea and Azerbaijan, Georgia, the Volga region, Yakutia, the Central Asian Republics and in the Casa 's camp, as well as in Western Siberia.

##### Etiology and pathogenesis of echinococcosis

The causative agent of echinococcosis is the larval stage of the tapeworm belonging to the species *Echinococcus granulosus*. The life cycle of echin o cocca occurs with a change of two hosts. Definitive (final) hosts as E, in an organism which is parasitic sexually mature stage *Echinococcus* is t Xia: pet dog, wolves, jackals, dingo, coyote, lynx and other carnivores. Intermediate hosts, in which the body develops a lich and night (bubble) stage of echinococcus are herbivorous animals: sheep, horn and th animals, camel, horse, pig, deer, monkey, as well as people of the century.

The sexually mature form of echinococcus is a small cestode (2.7-5.4 mm long), with about 3-4 segments, a scolex (head) and a neck. The scolex is armed with a double crown of 36-40 hooks and has 4 muscle suction cups. When cash and PIR 3 segments in the first segment of the parasite is immature, the second segment - androgynous, the last, the only mature, full segment ma t Coy, stuffed with eggs in the amount of 400-800 units.

Each egg contains a six-hooked embryo (oncosphere). Despite the small size of the tapeworm, it grows in the dog's intestine rather Medley n but also starts to produce infective eggs through 60-100 days after infection. Life expectancy in the dog's intestine 5-6 months, sometimes more grams of yes.

The larval stage of echinococcus is a fluid-filled bladder that can reach sizes from a millet grain to a child 's head and more. The wall consists of an outer bubble (or chitin cuticular of howling) and the inner shell (or embryonic germinal) shell. N of smallness echinococcus bladder is filled with fluid, wherein the available Space and vayut scolexes, child and grandchild bubbles. The chitinous shell has a layered structure. It is produced by the breathable layer. With the growth of the bubble, the thickness of the chitinous

membrane increases. Embryo e vy layer lining the bladder cavity has a cellular structure which defines a plurality of outlet capsules in which the developing larva and Ehin of coccus, so-called germinal scolexes. Number scoleces one n y zyre - from several tens to several hundreds. Mature scolexes, as a rule, float freely in liquid, forming the so-called g and datide sand.

From mature scolexes parasitizing in humans, daughter bubbles develop, and in daughter ones - grandchildren. Bubble, which developed all the way to Bani, bears the name of the parent. It is covered with a thick fibrous capsule formed as a result of reactive phenomena from the surrounding tissues of the host.

Infection with echinococcosis occurs as a result of ingestion of echinococcus eggs. The mature segments of the echinococcus, stuffed with eggs, are shed out with the dog's feces. After the dog defecation individual tsp e nicknames remain in the ampoule of the rectum or perianal folds, from where they spread I are on her body. During movements mature segments through their front ends are squeezed, eggs distinguished, which are fixed to objects on the road tracks and Nia segment. In addition, the motion segments in the perianal area of a dog is experiencing severe itching, and in an effort to eliminate it, rubbing against objects obliz s Vaeth anus. All this contributes to the dispersal of eggs in the external environment. Infested with a tank can long remain a source of infection of humans and animals. The main way of penetration of the oncosphere into the human body is the gastrointestinal tract. Once in the digestive tract of the host, hexacanth echinococcus exempt from its sheath and penetrate into the thickness of the mucous Obolo h stomach or intestines ki, where penetrate either venous or in limfat and cal vessels. Most often, they are carried through the superior mesenteric vein into the portal vein and deposited in the liver. The poet about mu liver is more often than other organs affected by echinococcosis (from 44 to 85%). Part germ barrier and hepatic passes through the lower n of luyu cava, right atrium, right ventricle and through the pulmonary circulation into the lungs where oncosphere can linger in an nth of pulmonary capillaries. Experimental methods established that the oven is, no, lungs and spleen are arterio-venous anastomoses, which can pass freely education up to 100-150 microns in diameter. It should be noted that part of oncospheres penetrates through the arterio-venous anastomoses n e Cheney and light, and passing in the left heart and the aorta, may get into great circle krovoob rashchenija. Single oncospheres can be brought into any organ and any tissue, where they gradually turn into echinus about coccal vesicles. They grow very slowly, over many years, so to determine their ages largest n e possible. The embryo that has penetrated the organ is quickly surrounded by mononuclear cells. After 26 hours, m for nonukleary superseded lymphocytes, forming as it were, the follicle with eosinophils in the periphery. After 60 hours, the parasite becomes visible as a small protoplasmic round body located in the center of reactive inflammation. After 4 days in the middle of the parasite and the one observed vacuoles - the first manifestation of the emerging internal item on Lost. After 7 days, - it is formed with the bubble liquid and Obolo h Coy. Further growth of the bubble is usually slow. At the end of month I tsa its diameter of only 1 mm in 3 months - 1.5-2 mm, and h e res 5 months - 55 mm. The outer shell of the parasite at this time has nezhnosloistoe page on ix. Around the bladder has perikistoznaya lymphatic slot through which occurs on b varied substances between cysts and its carrier. As it grew larval form of Echinococcus their billeting n nym and increasing pressure on the surrounding tissues and organs is a function of -functional disorders, and pathological changes in the body Intermedia at the exact host. Gradually increases and intoxication due toksalbum and new, are in hydatid fluid and diffusing through the lymphatic n e rikistoznoe space. Secondary echinococcosis occurs without changing the owner. Camshaft of roubleshooting and implantation subsidiaries blistering or elements embryonic bladder shell occurs at break primary cysts. Depending on paths extends e Nia and methods of implantation elements bladder are 4 variants Ah and nokokkoza.

The first is a relapse of echinococcus after implantation of bladder elements during surgery or puncture.

The second - the breakout echinococcus bubble into the free peritoneal cavity or the pleural cavity of the liver, lung or spleen, followed obsem e neniem.

Third - metastatic, when the elements hydatid cysts camshaft on circulated in the form emboli. It is most often observed when the echinococcal rupture occurs at the bladder of the heart, bones.

Fourth - secondary hydatid bubbles formed on the mucous membranes of a span of.

### **Clinic**

The clinical picture of human echinococcosis is diverse. It depends on the reaction of the body to implement and developing hexacanth, the character changes in the affected organ, the rapidity of growth of bubbles and their size, and that to the same caused by complications in the bladder, and in the patient's body. The clinical course echinococcosis with a convention section can e casting step. Most convenient is the classification A.V.Melnikova whereby ra of guish step 3 echinococcosis.

**The first stage** is the asymptomatic stage - from the moment the o n cosphere enters the body until the first signs of the disease appear. This period can last for several years. The condition of patients at this stage changes little or not at all. The disease goes unnoticed, secretly and finds t camping accident.

**The second stage** is the stage of manifestation of symptoms characteristic of uncomplicated cysts. The clinical picture in this case is variegated depending on the localization of the parasite and the rate of development of the cyst. When it causes a rapid growth with e roznye disorders affected organ functions, whereas the slow development it can reach even considerable dimensions, without causing replaced m GOVERNMENTAL its disorders. Trauma or intercurrent disease changes the course and slow growth may be followed by rapid growth; while Klinichev e skie signs are growing rapidly, and the patient's condition deteriorates. Sometimes, on the contrary, the disease from the start booming, the cyst is growing rapidly, the clinical picture is rich in symptoms, but then, reaching objectified e lonnyh sizes, it seems to be stopped in its growth. This feature of the clinical course is explained by the fact that the oncosphere, with its rapid growth and toxic effect, first causes a violent reaction of the body. Is then taken as the interacting between the embryo and the organism hydatid carrier equilibrated m Xia, compensatory-adaptive processes in the body and begin to dominate the clinical picture becomes more tech e set.

**Third stage** - the stage marked pathological changes and complicated e Nij. In this period, besides heavy disorders in the patient, and abrupt changes in the affected organ, and complications observed in most parasite p hydrochloric cyst (perforation, suppuration or necrosis, calcification). These complications are most likely caused by the action of the microorganism in the pairs and Zita. They can also be the result of injury or disease of the parasite, the cat on rye lead to his death. However, the death of tapeworm does not mean that the patient is in the s zdorovel. On the contrary, this stage is dangerous, since it conceals the possibility of severe complications that threaten the patient's life. The third stage of the disease should also include all cases when it is not more complicated echinococcus, thanks to its development or localization features, causes significant Pathologist and cal changes in the affected organ. So, localized in the thigh, it can cause a bone fracture, squeezing the optic nerve - cause blindness, being near the spinal cord - cause paralysis of the lower extremities. The clinical picture of echinococcosis in the third stage Zab about Levan is extremely diverse, it always requires thoughtful analysis and the right tactical decisions in treatment. Forecast in this stage are often used s Vaeth heavy.

### **Echinococcosis of the liver**

The first stage can drag on indefinitely. The cyst during this period is very small and is located in the thickness of the liver parenchyma, therefore, with an objective examination, no signs of the disease can be detected. The liver is enlarged e on, its capsule is not stretched or even tense. Patients usually do not show n and no complaints. In this step, cyst sometimes accidentally detected by abdominal palpation or during surgery of claim of water other disease. The second stage is characterized by the appearance of disease symptoms in

neoplastic well noncystic cysts. During this period, a relatively rapid growth of the cyst is usually observed. Most often, patients complain of dull pain in the right hypochondrium. Typical pain occurs due to stretching of growing cystic Glisson capsules and its pressure on liver and vascular formation adjacent organs. Occasional pain are inflammatory manifestation in the fibrous capsule and in the liver parenchyma, mainly around the cysts. On palpation far as echinococcosis liver consistency is not the same: elastic in cases directly prehepatic cysts, dense - with bedding in the liver parenchyma or even solid at calcified cysts. Palpation of an enlarged liver usually painless. For large cysts the weight and tension increases liver weight and it moves as if hinged on its upper part of the surface in front, and in such cases, typically in the hypochondrium is manifested by the large or lesser degree appreciable bulging spherical shape with smooth surface. Acting education is just the cyst, which is confirmed so by the presence of fluctuations in the plots. The so-called symptom of hydatid tremors is often observed, which consists in the fact that when tapping with a palm on the surface of a spherical protrusion, one can feel a kind of jolt.

Distinguish 4 localization of hydatid cysts of the liver: the front, downward, lateral, rising and central. The first localization of cysts accessible to palpation and determined in hypochondria, or the pit of B domains. If the second - cysts palpated in the abdomen directly below the liver and not redvigaetsya with it during breathing. When a third - hydatid cysts printed or placed under the dome of the diaphragm and completely inaccessible to percussion and Niya. They are determined by x-ray or by a liver scan. When the fourth type of cyst is located in the depths of the abdomen and also available on palpation. When the cyst is localized in the posterior parts of the liver, compression of the portal vein or the inferior vena cava is sometimes observed. The result is compression of the portal vein stasis in its branches with the subsequent development of ascites and expansion of the venous distention, sometimes in the form of jellyfish head. When compression of the bottom of the lower extremities. These phenomena are observed and are at large cysts. The third stage is characterized by complications of echinococcosis. The most common of them are: 1) suppuration; 2) perforation; 3) calcification of hydatid cysts printed or not.

**1) Suppuration of echinococcal cysts of the liver** is one of the most frequent complications of the disease. The main way of penetration of pyogenic bacteria into the cyst is the portal vein. Suppuration always leads to the death of the parasite. Cells and necrotic festering cysts often accompanied by fever, increase of Bami, profuse sweats, weakness, insomnia and lack of appetite. Etc. and signs of festering hydatid liver cysts - pain and heaviness in the upper right to claim on the abdomen. Localized and the bottom side of the chest on the same side. The more superficial the cyst is, the more intense pain is expressed on palpation. When pressure is, research institutes or effleurage in the lower ribs, back and sides, patients feel pain on the right, while the symmetrical locations to the left of feeling is, not. Pain during cyst suppuration is a very characteristic, almost constant sign. The characteristic position of patients in bed: they usually lie on their right side with their legs bent and pulled to the stomach. An objective Research and Research Institute of the patients is of great importance palpation and percussion of the abdomen. When on superficial palpation as approaching cyst felt tension of muscles of the abdominal wall. Such protective muscle tension is observed in many patients, however, it should be borne in mind that the abscess of hydatid cysts is more relaxed than abscesses of other aetiology. When X-ray revealed an enlarged liver and high location, etc. and the dome of the diaphragm, the total absence of her ribs. This symptom is especially characteristic of cysts located in the posterior superior liver. If the suppuration of the cyst is caused by an anaerobic infection, then against the background of the liver it is sometimes possible to observe a gas bubble with a horizontal level of liquid in it.

**2) Perforation hydatid cysts of the liver** is one of serious complications, often leads to the deterioration condition of the patient, and sometimes EMPT and INDICATES and death. Both complicated and uncomplicated cysts can perforate, but more often multiple and festering cysts are perforated and perforated. Their breakthrough occurs spontaneously for no apparent reason. Trauma, cough tremors and other mechanical factors contribute to their

mechanical rupture. Perforation of hydatid cysts of the liver can proceed in many organs and tissues, as well as in a variety of ways, which depend on its localization. Subdiaphragmatic cysts are usually opened in the pleural cavity, a cyst, located in lower anterior regions of the liver, often perforate into the peritoneal cavity. In the clinical picture of this complication, three forms are distinguished. The first is a latent form, when perforation proceeds unnoticed and painlessly into the digestive tract (stomach, intestines). The second form of Perforation - when patients reliably mark the moment of break through. Depending on what direction or at what body Perforated from a cyst, and accordingly the clinical picture is different. The third form - when the perforation of the cyst occurs so rapidly that often Calls for concern for life. The prognosis depends on what organ or tissue Perforated cyst, the magnitude of it, on the speed of evacuation, the number of Perforated holes and their size, as well as the localization of the cysts, the presence of infection and the patient's age in the cystic fluid. Slow flow of soda per extensible cysts in the abdomen causes sub-acute and sometimes chronic peritonitis with mild symptoms and sometimes asymptomatic. The amount of fluid in the body cavity is different - it is too much, there are only traces.

When a festering cyst is perforated, a limited or diffuse purulent peritonitis develops. It has no specific features that distinguish it from other peritonitis those of ordinary.

3) **Obyzvestlennyy hepatic echinococcosis** may diffuse when the calcium salt is deposited uniformly coated cysts and focal when excystment it in the form of separate islands. Lime deposition occurs in a fiber of hydrochloric advantageously dead cyst capsule. Clinically obzvestlenie proves asymptomatic; it is sometimes found incidentally on X-ray of the B follow. Obyzvestlennaya cyst their thick walls can not only see shadow and shadow, but also cause bedsores in adjacent hollow organs (stomach, kidney), as well as blood vessels and bile ducts.

#### **Laboratory diagnostic methods**

Includes bacteriological and microscopic examination of sputum, punctates; cytological and histological examination of biopsy material.

Laboratory Methods with echinococcosis are not special and specific and yield only supporting information for final diagnosis and planning capabilities and operational nature of measures and stances. Even with multiple cysts of the blood picture is a long time and stays without any changes. One such indirect signs, noting a proxy by most authors, is an eosinophilia, detected in 18 - 28% of patients with Echinococcus about Zoom.

A common prior 80s one of the first immunological tests - Kazoni reaction (proposed by the author in 1912 year for the diagnosis echinococcosis by intradermal administration of the centrifuged liquid hydatid), now lost its relevance. This is, firstly, due to the rather low specificity of detecting recurrent and residual forms of echinococcus in the goat and, secondly, with a large number of adverse allergic reactions. The emergence of specific immunological studies was of great importance in rejecting the Casoni reaction. For this purpose are used latex agglutination reaction (RLA), indirect hemagglutination (IHA), double diffusion gel (RIDDG) immunophenotypes and p-element analysis (RIFF). These tests have virtually no side effects and are useful for identifying the primary echinococcus on Kokkoz, and for its recurrent forms. Despite this, the authors point out various diagnostic tests of between 56% and 100%.

Promising direction of the polymerase chain reaction (PCR - diagnostic and therapy) for echinococcosis still insufficiently developed and successful results obtained and Sana'a in mainly by researchers for diagnosis of alveolar shape Echinococcus. Carried out in recent years, research on the use of synthetic echinococcal antigens showed high (up to 98-99%) specificity of the assay. Similar screening and Teli specificity lead and Garib FY et al. (1994), using the method of immunodiagnosics, which allows to register in the blood of patients with echinococcus lymphocytes antigen (SLA), which react with Echinococcus about Vym antigens. However, as set out in the work of most of them are experimental in nature and is not yet widely used in clinical practice.

Thus, summing up data of World Literature can verify that the serological and immunological reactions, giving frequency of false positive and false

negative findings from 15 to 30% have Range and zones adequate specificity in the range of 50-60%. In addition, a large number of false positives for a few years after the removal of hydatid cysts is very limited use of these techniques as a monitor n m. Invasive methods for primary diagnosis echinococcosis, such as clutches and Re-, angiography et al., For obvious reasons, also can not meet the requirements with a temporary medicine.

### **Special diagnostic methods**

Multiaxial fluoroscopy and graphy, bronchography, bronchoscopy, tomography, ultrasound, co m computed tomography, angiography.

The X-ray picture of pulmonary echinococcosis is quite specific. Difficulties in differential diagnosis arise only in complicated forms of the disease and multiple lesions. Opis radiological and of painting with lung echinococcosis Rosenfeld first made in 1897. To the present, this method is fundamental in the diagnosis of echinococcosis le g FIR.

A typical radiological sign for uncomplicated echinococcus on the lungs is the presence of one or more rounded or oval shadows with clear, even contours with a homogeneous structure. Rentgenol characteristic of logically uncomplicated echinococcosis sign is also a symptom of E with Coudert-Nemenova (1922), the so-called breathing hydatid cysts, expressed in d Linen its shape during inhalation.

Symptom Vaughan - characterized by the presence of illumination areas in costophrenic sinuses, visible both medially near the boundary with the media of the wall, and laterally, and observed with giant hydatid cysts filling all or most of the pleural n of Lost.

For differential diagnosis of the cyst from the lower lobe of the lung Ehin of coccus liver, diaphragmatic hernia, relaxation of the diaphragm, and is applied with artificially pneumoperitoneum. If the shade is located near the left dome of the diaphragm, it is recommended gastric bloating g and Zoom.

Complicated breakthrough in the bronchus of lung hydatid disease is characterized by p i house radiological symptoms. Thus, the appearance of a cyst in the upper pole ESTATE t ka enlightenment, which began as a result of the breakthrough is called "symptom of a half-mile e syatsa" or "air caps." Also, a typical symptom is the presence of a gas bubble with a horizontal liquid level, while the upper contour of the bubble has a clear border, which is formed by a fibrous capsule. In direct on Ryveem cysts bronchus, when there is incomplete emptying of the bladder over uro in its liquid form is defined by shading irregularly formed hit and new shell is partially immersed in the liquid, which has been called "symptom shell sleeping", "floating membrane." Sometimes the breakout hydatid cyst in the bronchus in the s can be a full discharge of the liquid - then the picture is visible ring-shaped shadow formed fi b hatred capsule.

V.N.Shtern in 1954 indicated at the breakthrough hydatid cyst in pleural v hydrochloric cavity to form a pneumothorax, the upper fluid circuit cash and Chie floating chitin shells and symptom called "floating on a span of."

Bronchoscopic study provides additional information about the proce to behold, the breakout cysts in the bronchus found fragments of chitin shell in the forward of the bronchial light.

On the surface, location, t. E. Ki diligence hydatid with you to the chest, ultrasound scan helps to differentiate this pathology from other processes. In addition, ultrasound is the primary method of diagnosing hydatid cysts n e Cheney.

When there are doubts as to the correct diagnosis, especially in multiple bilateral lesions of the lung, using computed tomography neocene e neem.

The density of echinococcal cysts is higher compared to nonparasitic cysts and amounts to 10-25 units. Hounsfield (H). The density index increases with increasing cysts in size. Another difference Echinococcus about O cysts is good visualization even small subsidiaries blistering, which the density is much lower and amounts to 2-10 ed.N. A specific feature of hydatid cysts is also a thickening of the shell, which visa and lysed as delimited structure often observed with partial or total calcification ste n cysts ki.

CT - study in all cases to establish the correct diagnosis and prognosis of uncomplicated hydatid cysts that defines 100% efficiency of the method. The need arises in other methods for suspected complicated echinococcosis, the most common of which is the breakthrough content cysts in bile ducts with a picture of the same mechanical l Toohy. In these cases, of course, highly informative method is ERPHG, while in s whose Status Closed can not only visualize the cause zhelcheottoka compression, but also to perform such therapeutic manipulation as EPST nazobiliarnoe and draining of vanie. However, the performance of the ERPHG must be justified in each case.

### **Differential diagnosis**

Differential diagnosis, often have to be carried out falls ill and s, giving a similar clinical and radiographic echinococcosis ka river mud.

Peripheral tumors characterized by the presence in the lung tissue of round or irregular shape teneobrazovaniya, not continuously vyzyvaayuschee wedge and iCal manifestations. Clinically peripheral form as tumors, like echinococcosis, can be complicated by hemoptysis, giving chest pain, but the main difference is the presence of tumor intoxication tumor, patient weight loss, fatigue, an e mia.

The tumor is characterized by more rapid growth is not uniform, and is in some of toryh parts of it, and when growth echinococcosis diffuse, uncomplicated cyst is often the correct form, with clear contours and positive symptom Nemen of Islands. Additional methods such as ultrasound or CT scan - provide structural formation with malignancy and Mrs. Dr. bone-containing cyst with lung echinococcosis. Traheobronhofibrosk of Pius - allows to investigate bronchial washings prov with five biopsy and to remove the fragmented portions chitinous sheath that fall into the bronchi. General clinical studies give a picture of anemia in cancer, leukocytosis with a shift to the left, increased ESR, and with echinococcosis, eosinophilia and lia .

Sarcoma or tumor originating from mesenchymal structures lung - scarce in radiographic manifestations shadow outlines are clear, although m of gut be lubricated, the picture depends on the tumor (central or peripheral), by concomitant changes in the lung tissue (metastases, atelectasis, inflammation), the nature of growth. Therefore, radiological surveyed and of must be complex and, when appropriate rentgenotomogr and fiyu, bronchography, angiopulmonography.

Benign tumors of the lung (hamartoma, teratoma) - characterizing t Xia slow growth, without any clinical manifestation. In cases of breakthrough of teratodermoid formation in the bronchus, sputum contains hair, teeth, and sebaceous masses. Hamartomas are localized more often in the anterior segments le g FIR with growth also give hemoptysis clinic, chest pain. Radiologist and cally and rentgentomograficheski isolated following options: 1), homogeneous, smooth and uneven shade average Intensive in NOSTA,

2) non-homogeneous, with calcification, raised, smooth and shadow average n intensity; 3) shadows of medium intensity with layered calcification or compaction in the center; 4) non-homogeneous shadow high intensity massive inc at sta.

All these forms are characterized by the absence of perifocal changes in the lung parenchyma.

Tuberkulomah - Clinical tuberculosis, characterized by the presence and it limited by parenchymal inflammatory focus shaft to the presence of tse n tre caseous disintegration, usually located in the upper sections of the lung, have a round shape, an accurate contour, sometimes with inclusions in the form of calcium and natov.

For diagnosis combined Echinococcus lungs and liver are used clinical laboratory, immunological (reaction indirect gemaglyutin a tion and latex agglutination) methods and radiographic studies, ultrasound, liver scan, angiography. Such an integrated approach allows not only to establish a diagnosis, but also to choose a rational treatment tactics.

When diagnosing Echinococcus combined liver and lung hold and are next tactics. At the initial examination and suspected hydatid disease of the liver and the lung produce polypositional fluoroscopy and X-ray e monograph of the chest and abdomen. Then, the ultrasound printed e neither allowing reliably establish the presence and structure of



claim of expression (tissue fluid), the localization of pathological nidus relative share segment and the liver surface.

With difficult cysts and suspected hepato-thoracic echinococcosis, it is necessary to switch to more modern methods of investigation (CT). Preoperative diagnosis of combined lung disease and ne Cheney is complex, and the establishment of the correct diagnosis allows you to choose the best real-time access and define the scope of the forthcoming op e radio.

Hydatid cysts regardless of their location within undefined e lennogo time asymptomatic and only with addition of the inflammatory and Tel'nykh process cyst surrounding tissue and appear clinical sim p toms.

With echinococcal cysts of the lungs, an examination of the liver is necessary to diagnose its damage. Such symptoms of echinococcosis of the liver such as hepatitis e gallium, liver offset edge protrusion on any of the circuits org and to appear late, and therefore the lead in identifying hydatid cysts of the liver plays a comprehensive study using rentgenologich e Skog, radionuclide, ultrasound and endoscopic methods of diagnostics, x on thee, and in these cases are not excluded diagnostic errors.

### **Treatment**

To date, the treatment of echinococcosis of the liver and lung hirurgich e skoe - cyst removal. There are the following types of surgical removal of echinococcal cysts (according to Petrovsky B.V., 1985): closed echinococcectomy (without opening the cyst cavity) and open (after puncture or opening of the cyst). W and covered:

1. With organ resection;
2. With the removal of the organ;
3. Perfect ehinokokkekt about mia.

Ways to eliminate the residual cavity:

1. Dissolution (kapitonazh, having stuck and of, etc.).
2. External drainage.
3. Op ie tannye methods.

The most important task in echinococcectomy is adherence to the principle of aparasitism: covering the surgical field with gauze napkins, puncture, aspiration of fluid and thorough treatment of the residual cavity with antiseptics, the use of physical methods - ultrasound, electrocoagulation , etc. Pay attention to the need for comprehensive preparation of the patient for surgery and comprehensive preoperative preparation. It should be stressed that the volume of surgery depends on the size and location of amazed e Nia.

In the presence of residual cavity bile or bronchial fistulas as in h Moznosti sutured these fistulas.

Almost always should strive to eliminate residual n of lethargy by her kapitonazha. When complex localization hepatic cysts ( VII - VIII Seg n thou) at its suppuration, necrosis, residual cavity then is drained outwardly l stand tube. Other methods (tamponade gland packing, sealing the residual n of Lost, marsupializatsiya, overlay tsistoenteroanastomoza) not justified because of the high incidence of septic complications. With a combined echinum about coccus of the liver and lungs, the tactics are as follows: in the presence of a complicated cyst, it is removed first, then others. For uncomplicated cysts, echinococcectomy is first performed from the lungs, then from the liver. With subphrenic localization of liver cysts and in the lower lobe of the right lung, echin o coccectomy is performed by thoracotomy access. Torakofrenolaparotomiya used very rarely because of the great traumatic and worse the results s mat.

Currently, the surgical treatment of echinococcosis applied I are minimally invasive endoscopic technology. Indications for these methods LIMIT and cheney localization cysts (preferably a location with a surface e of, III - YI liver segments) small sizes (7-10 cm), absence of a complication in the.

In the conservative treatment of echinococcosis, certain successes have also been achieved. The main used drug is albendazole and its produ of water. Analysis studies to determine the following indications for x and mioterapii at echinococcosis: small size (up to 30mm) intraparenhim and tozno arranged cysts; relapse of the disease; residual echinococcosis; multiple disseminated forms of echinococcosis. Another shows and eat the

use of albendazole can be recurrence of chemoprophylaxis and bolevaniya after radical surgical treatment of multiple, Oslo Well nennyh and combined forms of the disease. Criteria of efficiency of treatment set by so called nym fluoroscopic studies of the chest, the abdominal ultrasound n about Lost and CT.

### **Prevention of echinococcosis**

All preventive measures can be divided into public and personal. Public prevention is aimed at breaking the biological cycle of the parasite. The links of this cycle are: 1) the tape stage of the parasite living in the dog's neck and neck; 2) eggs scattered by a dog into the environment (soil, pastures, vegetable gardens, water, household items); 3) organs etc. of intermediate hosts, especially slaughtered animals infected platen h hydrochloric shape echinococcosis.

K.I.Skriabin divides preventive measures into 3 groups. The first group is the impact on the sexually mature parasite. This group of activities aimed at combating the dispersal of echinococcus eggs by a dog and protecting the intermediate host from the possibility of infection. Dispersion tapeworm eggs can take place by means of sheep wool to which they attach so camping, and then shearing or milking fall into the hands of workers ovtsevodch e Sgiach farms or milk. Therefore, in the absence of mechanization in livestock farms most commonly affected echinococcosis doilshitsy, workers engaged in sheep shearing, and furthermore, the shepherds, workers slaughterhouses, tanneries and ki, butchers, and others.

The second group is the effect on the vesicular stage. The main measure alongside a second Corollary to the larvae stage of the bubble should be the correct formulation of the wind and the Narn-sanitary inspection in slaughterhouses in order to ensure that no one SHOCK nny body would not get to eat dogs, and subjected to destruction. At meat cle blowing prohibit cutting of damaged organs and their use, for ehinoko to kovaya infestation almost always multiple, so germs can nest in the areas of enforcement, seeming seemingly unaffected. Generally cle blow to eliminate the possibility of penetration of the dogs in the yard slaughterhouses and Lock the e tit slaughter at home. Dead animals should be buried deeply and not be fed to dogs.

The third group of activities is the impact on the eggs of echinococcus. Considering that the eggs of echinococcus in a humid environment retain their vital activity for up to 10-16 days, it is necessary to drain small water bodies. Pe -regular watering streets, sweeping them into the clock least pedestrians can be removed and zit danger of infection by inhaled air.

Personal prevention reduced to the maximum of the enclosure itself to n tact with dogs. Raw vegetables must be washed thoroughly and poured over with boiling water.

### **Nonparasitic liver cysts**

The disease is common (about 1-2%, according to ay Topsoe). Allocate congenital (true) and acquired (false) liver cysts; they can be solitary or multiple. Congenital nye inside cysts lined by cuboidal or cylindrical epithelium; acquired - a layer of fibrous connective tissue. The term "solitary" cysts is not entirely successful, as they can be and plenty GOVERNMENTAL significantly different from polycystic liver (the last slaughtering Levan always observed the defeat of both lobes of the liver).

True cysts include the so-called solitary cysts, polycystic liver disease, dermoids, retention cysts, and cystadenomas. Polycystic liver is innate, genetically determined zabole equalizer. In more than half of patients, polycystic liver disease is combined with cystic changes in the kidneys, pancreas, and lungs.

Pseudocysts previously formed after the trauma and is a consequence of liver subcapsular or organization intramural n mat.

*Clinical presentation and diagnosis.* The presence of non-parasitic cysts in the liver does not cause clinical manifestations. Upon reaching the large scale cysts ditch can cause mild pain in the right upper quadrant and defined into play at palpation. Clinical symptoms of liver damage appear mainly with the development of complications. The most frequent complications Niyama include cyst rupture, abscess, hemorrhage in its clearance, malignancy, torsion of the cyst, is located on the "leg". Rarely obstructive jaundice during compression of

the main bile cyst pro currents. In later stages of the substitution polycystic liver parenchymal organ mostly cysts growing symptoms pechenoch insufficiency, and in the presence of concomitant polycystic kidney - and renal failure. In this case, the adverse disease prognosis pleasant.

Diagnosis is based on a complex instrumental studies Nij. Apply the same methods as in the other focal lesions ne Cheney. Ultrasonography solitary cyst formation anehogennoe looks like a round or oval with straight beads E contours (Fig. 12.3). For polycystic liver typical anechoic plural rounded Obra mations localized in both lobes of the liver (Fig. 12.4). When computed tomography solitary hepatic cyst formation is detected in the form of beads with E outlines a low X-ray density.

In some cases quite difficult differential ferentsirovat non-parasitic liver cysts from hydatid. In these cases, Rep extremely valuable are serology cal sample on echinococcosis.

*Treatment.* Basic methods of treating small solitary cysts - puncture or drainage under the control ult razvukovogo research or compu Terni tomography followed by the Introduction deniem the lumen sclerosing races creates (96% ethanol, 87% races creates glycerol). This is necessary to induce internal aseptic necrosis of the epithelial lining of the cavity and subsequent obliteration kis you. For large and giant cysts that cause compression of internal organs, resection of the liver together with the cyst or enucleation of the cyst, the formation of an internal anastomosis (cystojejunostomy) is performed. In recent years, these operations are performed very often, because even with giant cysts (over 20 cm in diameter) the possible effects of Noah application skleroziruyuschei therapy under the control of ultrasound. Mortality in this intervention is zero, and the frequency Postoperati onnyh complications is less than 0.5%.

When polycystic liver and real threat of Pec night failure in changing operation fenestration cysts - cyst excision of part of the walls, followed by degradation s linings or electrocautery Rasfokus Rowan laser beam. The goal of surgery is to decrease compression hepatic age himy cysts and preventing of its further atrophy. This type of operation can be performed in a "closed" way under ultrasound guidance (puncture of cysts followed by sclerotherapy) or laparoscopically (fenestration). When using minimally invasive techniques postoperative complications and mortality approaching etsya to zero.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Possible questions are attached.) Students should provide a detailed justification for their answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of student speech, form the foundations of the critical e Skog thinking because In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 45- year-old patient complains of pain in the right hypochondrium , nausea, vomiting with blood , 6 years ago suffered from hepatitis virus , repeatedly received treatment for chronic hepatitis . The general condition is serious , the skin is flabby, dry. Tongue with leucorrhoea. The abdomen was removed and chen due to ascites, there were no peritoneal phenomena. Your preliminary diagnosis.

#### **USING THE WEB METHOD**

Steps:

1. In advance, students are given time to prepare questions for the lesson they have completed.
2. Participants sit in a circle.

3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational tasks:

A 45- year-old patient complains of pain in the right hypochondrium, nausea, vomiting with blood, 6 years ago suffered from hepatitis virus, repeatedly received treatment for chronic hepatitis. The general condition is serious, the skin is flabby, dry. Tongue with leucorrhoea. The abdomen was removed and then due to ascites, there were no peritoneal phenomena. Your preliminary q and agnosis.

- A peptic ulcer and 12 duodenal ulcer complicated roof of the passage
  - B. bleeding from the large intestine
  - B. Cirrhosis of the liver, portal hypertension complicated by ascites and bleeding from varicose and varicose veins of the esophagus
  - D. Epistaxis
  - E. No convincing answer
- II . The optimal method of stopping the bleeding at the height krovotech th Research Institute:
- A. Gastric resection
  - B. Sclerotherapy + Blackmore probe + pressure reduction in the portal system + hemostatics
  - B. Removal of varicose veins with the esophagus
  - D. Outpatient treatment

## 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, z o n dirovanie stomach ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                             | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                          | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                   | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis. | 0                 | 40                             |
|     | Total                                                                                                                                                             | 0                 | 100                            |

#### 4. Technique for installing the Blackmore probe

**Purpose :** o setting bleeding from the esophagus and cardiac stomach

**Indication:** profuse bleeding from the veins of the esophagus or with Mallory-Weiss syndrome

**Equipment :** syringe, petroleum jelly, Janet's syringe, Blackmore probe, promedol, pipolfen.

**Steps being taken**

| No.    | Event                                                                                                                                  | Not full | Completely correctly s full |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|
| 1      | Check the integrity of the cartridges and the need for the amount of liquid or air by introducing air through the probe with a syringe |          | ten                         |
| 2      | Probe blur s vayut Vaseline or glycerin                                                                                                |          | five                        |
| 3      | Nasopharynx blur s vayut 0.5% solution of lidocaine tetracaine or insufflation                                                         |          | five                        |
| 4      | The probe is introduced through a nasal passage pi ni Euodias , and then the stomach                                                   |          | fifteen                     |
| five   | The gastric balloon syringe air is introduced to 100 ml and the probe is pulled n and top up to the stop                               |          | ten                         |
| 6      | The esophageal balloon Janet syringe air is introduced to 70 ml (for each patient individually on w)                                   |          | ten                         |
| 7      | The degree of filling of the cylinders is controlled by the degree of inflation of the rubber cartridges in Air at honosnyh channels   |          | ten                         |
| eight  | The contents of the stomach are aspirated, the latter is washed to clean water                                                         |          | ten                         |
| nine   | By periodically checking the contents of the stomach, it is possible to judge the effectiveness of the tampa o nada                    |          | ten                         |
| ten    | Periodically, the patient is administered promedol, pipol s hairdryer                                                                  |          | five                        |
| eleven | Finally, the probe is removed after 24-72 hours                                                                                        |          | ten                         |
|        | Total                                                                                                                                  |          | 100                         |

#### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

#### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                                                                                                                                                                                                                      |
|-----|-----------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. The case of a garden solves correctly, with a creative approach, with full justification of the answer. Actively and creatively involved in |

|       |          |                               |                                                                                                                                                                                                                                                                                                                                                              |
|-------|----------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |          |                               | Inter to tive games right to make informed decisions and sums up, an a lyse.                                                                                                                                                                                                                                                                                 |
| 2     | 91-95%   | Excellent<br>"five"           | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situation and onny problems correctly, with a creative approach, with justification of the answer.<br>Actively and creatively involved in Inter to tive games properly takes p e sheniya.                                                                            |
| 3     | 86 - 90% | Excellent<br>"five"           | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach.<br>He actively participates in interactive games and makes the right decisions.                                                                      |
| 4     | 81-85%   | Good<br>"4"                   | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. Situation n nye problems are solved correctly, but the answer is not adequately study.<br>Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                               |
| 6     | 71-75%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                                |
| 7     | 66-70%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                           |
| eight | 61-65%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                                                                                               |
| nine  | 55-60%   | Satisfied<br>literally        | Response to errors by half post in PARTICULAR issues. He says                                                                                                                                                                                                                                                                                                |

|          |        |                             |                                                                                                                         |
|----------|--------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------|
|          |        | "3"                         | hesitantly, has tea with the decimal representation of the subject. Situational tasks solved n e is true.               |
| ten      | 50-54% | Not satisfied literally "2" | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.  |
| eleven   | 46-49% | Unsatisfied sly "2"         | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach. |
| 12       | 41-45% | Unsatisfied sly "2"         | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.   |
| 13       | 36-40% | Unsatisfied sly "2"         | Covering 1/10 of the questions with the wrong approach.                                                                 |
| fourteen | 31-35% | Unsatisfied sly "2"         | Doesn't give answers to questions.                                                                                      |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                | Lesson forms                                                                                              | PRODO l resident s NOSTA min. 90 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                             |                                                                                                           | five                             |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.) | Poll, explanation                                                                                         | 25                               |
| 3    | Summing up the discussion                                                                                                                                                                           |                                                                                                           | five                             |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                 |                                                                                                           | ten                              |
| five | Independent work of students from a military skills                                                                                                                                                 |                                                                                                           | fifteen                          |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group   | Oral survey IPR s menny survey tests, checking the results of practical work, discussion obsu Well denie. | 25                               |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present                        | The information in a millet to myself about pendent Getting on Preparations                               | five                             |

|  |                               |  |  |
|--|-------------------------------|--|--|
|  | occupation (set of questions) |  |  |
|--|-------------------------------|--|--|

### 10. Test questions

1. The reasons for the development of bleeding and veins of the esophagus.
3. The main disorders arising from cirrhosis of the liver.
4. The main task of providing assistance with severe arterial hypotension due to bleeding
5. Indications for urgent surgical treatment for bleeding from varicose veins of the esophagus.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC № 16. DISEASE OF THE PANCREAS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters, tables, disease classification schemes, treatment schemes, radiographs, and deofilms.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with pancreatic diseases zhedezy, the reasons for their development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, reabilit a tion patients.

Tasks

#### *The student should know:*

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies to justify and Nia diagnosis and rational treatment of choice;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, know their OS of singularity;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with the disease I mi pancreatic zhedezy;
- **n auchitsya special methods of investigation.**

#### *The student should be able to:*

- Perform practical skills - to acquire certain practical skills in examination of patients with diseases of the pancreas zhedezy, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical vmesh and stances.

### 4. Motivation



Suggestion to students the need for timely development of appropriate operations to gross GOVERNMENTAL complications and in their development - meeting the most informative and modern methods of diagnostics, surgical treatment, familiarity with the possible of a complication in the operation and its operating period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical Disciplines.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

Acute pancreatitis - acute disease of the pancreas is lezy, which is based on degenerative pro inflammatory processes caused by prostate tissue autolysis its own fer cops.

Distinguish: 1) acute edema of the pancreas, 2) hemorrhagic necrosis of the pancreas, 3) purulent pancreatitis. Such division yavl I etsya to a certain extent arbitrary.

Clinical picture and diagnosis: pain is the leading and constant symptom of acute pancreatitis and that. Pain arises is zapno. However, sometimes there are harbingers of a sense of thee tin in the ep and the gastric region, mild dyspepsia. By their ha rakteru pain is very intense, blunt, n of standing, less cramping. The intensity of the pain is so great (the feeling of a "hammered stake") that the patients sometimes lose consciousness. Locale and for tion of pain varies and depends on the pathological process involving a particular part podzheludo h hydrochloric gland. Pain can lo -localized in the right and left hypochondria, in the left costal-iliac angle, often called on FNF surrounding nature and radiating to the back, shoulder girdle, behind the breastbone that can simulates Vat myocardial infarction. Nausea and vomiting are reflex x and rakter. Vomiting is often repeated, unrestrained, not bringing patients relieve th cheniya. Body position are often forced Mr Noe. Patients are often camping in half-bent position. Body temperature is normal, sub normal. High body temperature and fever are common in developing inflammatory complications. The color of the skin and mucous membranes is pale, with a cyanotic tint, which is explained by severe intoxication. Often nab ljuda ikterichnost and jaundice caused by impaired bile outflow or severe toxic lesions printed e audio. When destructive forms of cancer and pancreatitis enzymes kinin system components post at Payuta in retroperitoneal millstands Chatka and further under the skin, leading to the development of hemorrhagic tissue imbibition until ecchymosis. In localizing a tion DECT ruktivnogo process mainly in the pancreatic tail jelly Shl l such changes on are localized on the left side wall of the abdomen (symptom - Ternera Gray), the localization domain of a dexterous in the umbilicus (Cullen symptom). When the massive arrival of enzymes in the blood en and logical changes may be the locale of the Call in remote areas of the body, on the face. Tongue coated with bloom, dry. The abdomen is swollen on examination. In the early hours of the disease there is an asymmetry of the abdomen due to vzdu ment only epigastralnoi and periomphalic areas (lane then initial paresis zhelu d ka and transverse colon). Later developmental dynamic intestinal neproh of di Mosti bloating increases and becomes uniform. Early palpation of the abdomen mja g cue that distinguishes acute pancreatitis tit most acute abdominal disorders. Wm e ste so some patients may be noted palpation slight muscle tension in the epigastric region and bole of nennost downstream pancreas (Kerte symptom). Characteristic is etsya symptom disappearance pulsation of the abdominal aorta in epigast ralnoi region (symptom of the Resurrection), and pain in the left vom costovertebral angle (symptom Mayo-Robson). Sympto we peritoneal irritation become positive when Destro to tive forms in connection with the development of peritonitis. Peristal tick gut is weakened in the first hours of the disease. When tyazhe mated forms peristaltic noises can w ill e to show at all.

At the onset of the disease, there may be bradycardia, which is quickly replaced by tachycardia. For severe forms of the disease, a frequent threadlike pulse is characteristic. Blood pressure "at bol s shinstva patients dropped on electrocardiogram

recorded. Are expressed disturbances of metabolic processes in myocardium (depressed interval S-T, the deformation of the T wave, additional dome shaped U) Respiratory disorders - Dyspnea, cyanosis, are under heavy . shapes pancreatitis In parenchymal and retroperitoneal organs dystrophic of Menetrier, disrupted their functional state. Underlying these changes lie hyperenzymemia, microcirculatory disturbances and intestinal ischemia. Especially greatly disturbed renal function (in 10 - 20% of patients). reduced diuresis up to anuria and acute renal insufficiency.

Hyperglycemia and glycosuria indicate involvement in the pathological process of the endocrine system of the pancreas gland. Pathognomonic for destructive forms of acute pancreatitis, hypocalcemia. It usually appears between the 4th and 10th days of illness. At the height of the development of fat necrosis. Decrease in blood calcium of less than 4 mEq / l - is a bad prognostic sign. In severe destructive forms of pancreatitis phenomena occurring with the expression of the second dynamic ileus usually include hypovolemia, volume reduction is circulatory in the whole blood, plasma, hypokalemia, and changes in acid-base status as alkalosis and acidosis. Red blood cells usually do not change significantly so far. However, with prolonged duration of severe forms of the disease due to hemorrhage and toxic intestinal metaplasia bone marrow anemia. With Storrus white blood cells, there is usually a pronounced leukocytosis shifted to the left blood.

In urine, besides increasing the content of enzymes podzheludoch hydrochloric glands appear bile erythrocytes cylinders. In severe cases, the development of toxic and infectious kidney damage leading to acute renal failure, which is manifested oliguria or anuria, accumulation of toxic substances in the blood.

Diagnosis: X-ray examination reveals indirect signs of acute pancreatitis. On plain film appearance but the expansion of the stomach, the presence of a liquid. Loop ("horseshoe shape") duodenum expanded in the state and cut. Paretic as the initial loop of jejunum (a symptom of "a hundred Rozheve loop"), the transverse colon. The left pleural hydrochloric cavity often determines effusion.

In computer tomography and ultrasound scanning magnification detected softening of the pancreas inhomogeneous NOSTA its structure. Laparoscopy enables to see the characteristic abdominal hemorrhagic effusion, and when it follows dovanii which are high enzyme content Poddudochnoy gland, and contrast "stearin" spots fat necrosis sometimes enlarged stretched cholic duct.

Acute pancreatitis should be differentiated primarily with perforated ulcer of the stomach and duodenal ulcers, gallstones, acute mechanical intestinal obstruction, thrombosis or embolism mesenteric vessels, acute appendicitis.

Treatment: complex therapy of acute pancreatitis should include: the fight against pain, early removal of toxicemia, adequate correction of hydroelectrolyte disorders and acid-base balance. To relieve or reduce pain, it is necessary to use analgesics and antispasmodics and ki (no-shpa, platifillin, papaverine). Horoshy effect gives epidural block (catheter and filling epidural space of the spinal cord with the introduction of anesthetic).

To combat enzymatic toxicemia, use:

5) inhibition of exocrine function of the gland by aspiration of gastric contents and forward and gastric lavage with cold soda solution (hydrochloric acid gastric soda is extensible is stimulatory pancreatic secretion), atropine (cautiously in patients with chronic alcoholism - may develop hypothermia), hypothermia pancreatic desferrioxamine, administration of cytostatics in 4-5 days (., 5-fluorouracil, fluorouracil and others inhibit exocrine pancreatic gland function by almost 90%);

6) normalization of evacuation of enzymes elaborated by introducing spasmolytics and coagulants;

7) elimination of enzymes trapped in the bloodstream or abdominal cavity; drainage and removal of bile duct with lymphosorption, stimulation of diuresis; drainage of the abdominal cavity;

8) inactivation of enzymes by protease inhibitors (contraindications, etc.). However, the inhibitors have a positive effect only in the early stages of the disease when administered large (1-1.5 million. Units) doses. In the phase of fat necrosis the use of drugs is meaningless.

With a view to the regulation of water and electrolyte balance, normalization of cardiac activity and reduce toxicity shows the use of 5 and 10% glucose solution, polyionic solutions, plasma polyglyukina, gemodeza. By indications prescribed pre Paratov potassium, cardiac glucose and rows. The amount administered should be required to restore normal volume. DNAs tri-vascular extracellular and sectors must be sufficiently large (3 to 5 liters / day). To improve the rheological properties of blood and prophylaxis of disseminated intravascular coagulation applied're about polilyukin and heparin (5000 IU) every 4h.

For the purpose of prevention and treatment of possible secondary PLAYBACK - inflammatory changes design and chayut broad spectrum antibiotics.

Surgical treatment for acute pancreatitis is shown:

5) with a combination of acute pancreatitis with destructive forms of acute chole and stitis;

6) when the failure of conservative leche SRI for 36-48 hours;

7) with pancreatogenic peritonitis, if it is impossible to perform laparoscopic drainage of the abdominal cavity;

8) complications of acute pancreatitis: abs cession omental, phlegmon zabryushi N hydrochloric fiber.

The diagnosis and treatment of destructive forms of acute pancreatitis great importance laparoscopy, in which can be made more precise thread diagnosis, identify hypertension biliary n y Tey (strained gallbladder) and make percutaneous cholecystostomy controlled clutches and ROSCOP, but the main-drain the abdominal cavity to aspirate content (reduction fer -element toxemia), washing the peritoneal cavity with solutions of an antibiotic treatment and ing and inhibitors of proteases.

In surgical treatment of acute pancreatitis are used the following types of operations: 1) the nucleus nirovanie omental, 2) resect the tail and body podzhel zling gland, 3) pankre and tektomiyu.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options questions are attached.) Article in denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then, the answers are discussed, dao t Xia addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

The patient complains of pain throughout the abdomen, nausea, dry mouth, general weakness. Zab about Lel Island 2 days ago. Suddenly there were severe pains in the epigastric region, nausea, darkening in the eyes. Subsequently, pain gained increasing x and rakter, joined bloating, gas ceased depart. Objectively, Kerte and Mayo-Robson's symptom is positive. Your q and agnose.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any item in Dent.

4. The student who received the skein answers the question (while the participant who asked him comments and answers the question) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., until all "pa s matyvaniya" coil.

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational tasks:

The patient complains of pain throughout the abdomen, nausea, dry mouth, general weakness. Zab about Lel Island 2 days ago. Suddenly there were severe pains in the epigastric region, nausea, darkening in the eyes. In the future, the pain acquired a growing character, swelling was added alive about that, gases ceased to escape. Obektivno symptom Kerte and Mayo Robson positive I of . Your diagnosis:

A. acute pancreatitis \*

B. perforated gastric ulcer

B. Leriche syndrome

G. Mallory-Weiss syndrome

D. acute appendicitis

II . Your treatment tactics:

A. diagnostic laparoscopy

B. observation of the patient and massive conservative therapy

B. planned surgical treatment

G. the patient does not need the supervision of a surgeon

E. urgent surgical treatment

## 6.3. Practical part

Implementation of the task on practical skills (to carry out a differential diagnosis and substantiate the final diagnosis, prescribe an appropriate diet and planned treatment, gastric tube and ration ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                                    | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                          | 0                 | 35                             |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                                    | 0                 | 100                            |

### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No. | Event                               | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|-------------------------------------|-------------------|--------------------------------|
| 1   | The study of the characteristics of | 0                 | ten                            |

|      |                                                                                                |   |     |
|------|------------------------------------------------------------------------------------------------|---|-----|
|      | medicinal art of fishing by Pevzner                                                            |   |     |
| 2    | Choosing the right diet table for your diagnosis                                               | 0 | ten |
| 3    | Evaluation of the usefulness of the diet                                                       | 0 | 20  |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0 | 20  |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0 | 20  |
| 6    | Preventive measures                                                                            | 0 | 20  |
|      | Total                                                                                          | 0 | 100 |

### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying of soda p -stretch, constant aspiration of gastric contents with the purpose to establish peace gland gastritis of stasis.

| No.   | Event                                                                                                                     | Not<br>ful l Neal | Completely<br>correctly s full |
|-------|---------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0                 | ten                            |
| 2     | Wear rubber gloves.                                                                                                       | 0                 | ten                            |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0                 | ten                            |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0                 | ten                            |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0                 | ten                            |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0                 | ten                            |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0                 | ten                            |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0                 | ten                            |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0                 | ten                            |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0                 | ten                            |
|       | Total                                                                                                                     | 0                 | ten                            |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment       | Student knowledge level                                               |
|-----|-----------------------|------------------|-----------------------------------------------------------------------|
| 1   | 96-100%               | Excellent "five" | Complete correct answer to questions. Summarizes and makes decisions, |

|       |          |                               |                                                                                                                                                                                                                                                                                                                                                         |
|-------|----------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |          |                               | thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, analyzes.                                                                                            |
| 2     | 91-95%   | Excellent<br>"five"           | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes part in them.                                                                                  |
| 3     | 86 - 90% | Excellent<br>"five"           | Questions raised covered full of Story, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                  |
| 4     | 81-85%   | Good<br>"4"                   | Questions raised covered full of Story, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately studied. Actively participates in interactive games, etc. and correctly make decisions. |
| five  | 76-80%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented the Nia. Actively participates in interactive games. On case studies gives incomplete solutions.                                                                                                           |
| 6     | 71-75%   | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented the Nia. On case studies gives Nepo l decisions.                                                                                                                                                           |
| 7     | 66-70%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                      |
| eight | 61-65%   | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes                                                                                                                                                                                                  |

|          |        |                               |                                                                                                                                                 |
|----------|--------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                               | mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                                         |
| nine     | 55-60% | Satisfied literally "3"       | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has a partial idea of the topic. Situational tasks solved n e is true. |
| ten      | 50-54% | Not satisfied literally " 2 " | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                          |
| eleven   | 46-49% | Unsatisfied sly "2"           | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                         |
| 12       | 41-45% | Unsatisfied sly "2"           | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                           |
| 13       | 36-40% | Unsatisfied sly "2"           | Covering 1/10 of the questions with the wrong approach.                                                                                         |
| fourteen | 31-35% | Unsatisfied sly "2"           | Doesn't give answers to questions.                                                                                                              |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                 | Lesson forms                                                                                               | PRODO l resident s NOSTA min. 90 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                              |                                                                                                            | five                             |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmly, etc.) | Poll, explanation                                                                                          | 25                               |
| 3    | Summing up the discussion                                                                                                                                                                            |                                                                                                            | five                             |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                  |                                                                                                            | ten                              |
| five | Independent work of students from a military skills                                                                                                                                                  |                                                                                                            | fifteen                          |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group    | Oral survey IPR s menny survey tests, checking Practical results and cal work, discussion obsu Well denie. | 25                               |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge                                                                                                                     | The information in a millet to myself about pendent                                                        | five                             |

|  |                                                                                                                           |                         |  |
|--|---------------------------------------------------------------------------------------------------------------------------|-------------------------|--|
|  | according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | Getting on Preparations |  |
|--|---------------------------------------------------------------------------------------------------------------------------|-------------------------|--|

### 10. Test questions

1. Determination of acute pancreatitis, frequency, etiopathogenesis, clinical, diagnosis and leche e set.
2. Principles of conservative therapy for acute pancreatitis
3. Teach the diagnosis of acute pancreatitis, preoperative Getting on Preparations
4. Indications for surgical treatment of pancreatic disease.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991 g .
2. M.I. Cousins "Surgical diseases", 1995 g .
3. A.G. Astapenko. "A Practical Guide to the surgical used on Leznov" 1984 g .
4. CM. Agzamkhodzhaev. "Hirurgik kasalliklari" 1991 g .
5. Voitenko. Operations on the abdominal organs. 2000 g .

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## THEME 17. CHRONIC PANCREATITIS. CYSTS OF THE PANCREAS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, radiographs, and deofilms.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with pancreatic diseases zhedezy, the reasons for their development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, reabilit a tion patients.

Tasks

**The student should know:**

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental diagnostic studies to justify and Nia diagnosis and rational treatment of choice;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, know their OS of singularity;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with the disease I mi pancreatic zhedezy;
- n auchitsya special methods of investigation.

**The student should be able to:**



- Perform practical skills - to acquire certain practical skills in examination of patients with diseases of the pancreas, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical mesh and stents.

#### **4. Motivation**

Suggestion to students the need for timely development of appropriate operations to gross GOVERNMENTAL complications and in their development - meeting the most informative and modern methods diagnostics, surgical treatment, familiarity with the possible of a complication in the operation and its operating period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

#### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will be used during the passage of Gastroenterology, internal medicine and other clinical disciplines.

#### **6. Content of the lesson**

##### **6.1. Theoretical part**

##### ***Chronic pancreatitis***

Chronic pancreatitis is a fairly common disease which manifests permanent or periodically arise conductive pains and symptoms of exocrine and endocrine insufficiency. It is characterized by irreversible pathological changes in the parenchyma of the pancreas - its wrinkling, in places the disappearance of acini, proliferative fibrosis, as well as stricture of the flow, the formation of calculi in it or in the tissue of the gland. It can occur with minimal GOVERNMENTAL clinical manifestations, or other diseases in the guise of a newly abdomen (chronic cholecystitis, biliary dyskinesia, gastric ulcer and duodenal ulcer, hernia of food aqueous aperture). Consequently, to establish the true hour of this disease is not possible.

*Classification.* Currently proposed set of classification of chronic pancreatitis and its complications. This only testifies to the fact that not a single universal scheme of the clinical and morphological subdivision of various variants of the course of this disease has been created so far.

By the nature of morphological changes in pancreatic tissue, isolated indurative chronic pancreatitis, pseudotumor (Fig. 14.6), and calcium-pseudotumor fitsiruyuschy pancreatitis. In patients with calcific form of disease notes or vursungolitiyaz (calculi in the lumen of the expanded Wirsung duct), or calcification of the pancreatic parenchyma.

By the course of the disease, two basic forms are distinguished: chronic relapsing pancreatitis, wherein there are periodic flare-ups in the form of acute pancreatitis accompanied by periods of remission, and latent chronic pancreatitis - flowing without overt signs of acute inflammation of the pancreas.

*Etiology and pathogenesis.* The etiology of chronic pancreatitis in the industrialized countries the leading role played by excessive drinking. Much less cause of suffering is alcoholism and its complications (choledocholithiasis, strictures papillary). The pathogenesis of the disease is poorly understood, although it is now firmly established that it is a key element of epithelial tissue replacement pancreatic acini by connective tissue. According to the research works of the last decade, alcohol plays a role also belongs to the cytokines (inflammatory mediators).

*Pathological picture.* In chronic pancreatitis, various etiologies observed phenomena sclerosis and fibrosis that may lead to decrease or increase the size of the pancreas. Often takes place calculary (calcifying) pancreatitis, in which the calcium salts are deposited in the tissues of the pancreas or into the lumen of outlet ducts (vursungolitiyaz). When obliteration due to the small outlet duct sclerosing inflammatory or process sometimes formed small cysts.

*Clinical presentation and diagnosis.* The leading symptoms of chronic pancreatitis are dull epigastric pain, right or left upper quadrant (depending on the localization of the main focus of inflammation), girdle pains, worse after errors in the diet, dyspepsia

(nausea, vomiting, poor if honors of gastric contents) , alternating constipation and diarrhea (in severe exocrine pancreatic insufficiency jelly PS). Less often obstructive jaundice is observed, which occurs when the terminal section of the common bile duct is compressed by an enlarged, scar-altered head of the pancreas. Quite often marked etsy weight loss associated with exocrine insufficient Stu pancreas, violation of digestion of food, as well as the decrease in the volume of food consumed (fear of pain amplification after a meal). When expressed morphological organ changes and time- insulin-dependent diabetes dia nom course of the disease develops bet most frequently detected by calcific pancreatitis (75%).

Objective study of the disease in acute phase reveals ha acteristic for acute pancreatitis symptoms. In the phase of remission, pain is noted along the pancreas. In thin subjects, a dense, painful pancreas can be palpated. Palpation of the prostate should be performed in three positions: supine with a padded roll back, standing with the slope of the trunk im- ed at 45 ° and lying on the right side. Changing the position of the body during palpation creates an opportunity for displacement of the transverse colon, filled or swollen with gases, and the organs covering the gland, provides optimal conditions for its palpation. When the advantages of Mr. lesions of the pancreatic head and compression of the terminal part of common bile duct in some patients reveal Courvoisier symptom characterized by a triad of symptoms: obstructive Yellow Khoi, an increase in the gallbladder, the absence of pain in his palpation. Almost half of the patients (especially during exacerbations of the disease) is defined fissile positive symptom Mayo-Robson.

Diagnosis of chronic pancreatitis is conducted on the basis of complaints of the patient, history, physical, laboratory, and the Tools for Basic research methods. At an exacerbation of the disease and the violation of outflow of pancreatic juice (often with virsungolitiaz) note withdrawn chenie level of amylase, lipase and trypsin in the blood and urine amylase. When primary chronic pancreatitis and chronic recurrent form of the disease in remission enzyme concentration podzheludoch hydrochloric gland in blood and urine usually not changed, however the data situa tions, these samples do not have diagnostic value. The concentration of proteolytic and lipolytic enzymes in the duodenal contents is usually reduced. A number of patients enzymes in duodenal juice of absence. Scatological examination usually reveals creatorrhea and steatorrhea. Violation of the endocrine glands function svidetelst exists moderate hyperglycemia, reduced insulin concentration and glitch-estrus in the blood. In about 25% of patients, according to the glycemic curve with a carbohydrate load, impaired glucose tolerance is noted. With calculous pancreatitis, the frequency of insufficiency of the endocrine function of the pancreas increases to 60-80%; at Review raphy abdominal calcification shadow can be detected in the course podzhel zling gland.

Indirect signs of chronic pancreatitis observed in the duodenum study under conditions of artificial hypotension (relaxation duodenography): open vertical branch ( "Horseshoe"), duodenal impression on her IU dially contour, flattening folds of the mucous membrane in the zone.

Ultrasound examination and computed tomography help you reveal an increase of a division of the pancreas, extension of the main pancreatic duct (Retention pancreatitis, OCU slovlenny violation of the outflow of pancreatic juice). It is from the mark, that both methods of research does not allow to distinguish chronic pancreatitis from pancreatic neoplastic lesions. For a refinement Nia diagnosis using sighting puncture gland under the control of ultrasound and or CT, followed by morphological study of biopsy ma the material.

In retrograde cholangiopancreatography sometimes reveal extension renie main duct due to stenosing papillita virsungolitiazom or, much more often determined narrowing and deformation of the duct.

*Treatment.* The main method of treatment for uncomplicated chronic pancreatitis is medication. Assign diet except oily, salt, spicy foods (pepper, garlic, vinegar and m. P.), To ensure vayuschuyu functional rest iron oral alkaline solutions, including mineral waters. Drug therapy is directed county primarily on the elimination of pain and spasm of the sphincter of Oddi with Pomo schyu non-narcotic analgesic, antispasmodic and holinolitiche-ing means ganglioblokatorov. In marked decrease in body weight is used parenteral nutrition (amino acid solutions, concentric Rowan glucose solutions, fat emulsions). Patients with severe

exocrine pancreatic insufficiency prescribed prepa Rata containing its enzymes (pancreatin panzinorm et al.). An important role also belongs to the complex treatment of background diseases of internal organs - gallstones, peptic ulcer disease is ludka and duodenum. During exacerbation of chronic pan kreatita treatment is carried out according to the same principles as in acute pan creative.

**Indications** for surgical intervention on the pancreas are virungolithiasis, stricture of the pancreatic duct and hypertension in the distal (in relation to the stricture) parts of it, severe painful forms of chronic pancreatitis that are not amenable to complex drug treatment. The final diagnosis is established on the operating table, and then choose the surgical method the intervention Properties. During the operation, the surgeon determines the preferential localization of the pathological process, patency of the biliary tract and duct Poggi ludochnoy gland. To conduct this palpation, intraoperative ult razvukovoe study pancreatic and biliary tract, biliary hypertension - intraoperative cholangiography at extension rhenium main pancreatic duct (by ultrasound) - virsungov-graphy after pre-puncture pancreatic duct under ultrasound.

Transduodenalnym papillosphincterotomy with dissection mouth about the current and its crosslinking mucosa with the mucosa of the common bile duct rear wall (virsungoplastika) is carried out at not greater in length strictures terminal part of the duct under the gastric glands. When extended strictures proximal part of the duct of the pancreas with a significant extension of its Enlightenment Russian that distal to the obstruction to outflow of pancreatic juice vypol nyayut longitudinal pancreatojejunostomy: dissected in the longitudinal direction lenii pancreatic duct from the head to the tail section, and then form the anastomosis side to side with isolated by Ru loop of the jejunum. The purpose of these operating aids is to eliminate hypertension in the ducts.

In severe forms of chronic pancreatitis pain, not poddayusche Gosia long-term medication, when non-expanded chapters Mr. pancreatic duct produce distal resection podzhel zling gland or pancreatoduodenectomy depending on zo us the localization of the most significant morphological changes in the TCA or cancer. Patients with a high degree of operational risk for LIquI dations pains in recent years successfully used in D thoracoscopic resection of large and small splanchnic nerves.

### ***Pancreatic cysts and fistulas***

**Pancreatic cysts** are accumulations of fluid limited by a capsule in the form of cavities located both in the gland itself and in the tissues surrounding it. The disease occurs in different age groups with equal frequency in men and women. The term "cyst podzheludoch Noah gland" is a collective. There are the following types of cysts.

I of . Congenital (dysonotogenetic) cysts formed as a result of malformations of the tissue of the pancreas and its ductal system (dermoid, teratoid cysts, fibrocystic degeneration).

II. Acquired cysts:

1) retention cysts, emerging at outlet stricture proto Cove gland resistant occlusion of the lumen concrements, scars;

2) degenerative, resulting from necrosis of the tissue of the gland in destructive pancreatitis, trauma to the pancreas;

3) proliferative - abdominal tumor forms to which otno syatsya cystadenoma benign and malignant tsistadenokartsi-noma.

Depending on the cause and mechanisms of formation of cysts, especially steyp structure of their walls distinguish true and false cysts.

True cysts include congenital pancreatic cysts, acquired retention cysts, cystadenomas, and cystadenocarcinomas. A distinctive feature is the presence of a true cyst epithelium cial lining its inner surface. True cysts account for less than 10% of all pancreatic cysts. Unlike the false cysts EC muddy usually of small size and are often random mi findings during ultrasound or during surgery, undertaken over the other disease.

*Pathological picture.* The walls of the pseudocyst are a compacted peritoneum, fibrous tissue and, unlike a true cyst, are covered with granulation tissue from the inside. The cavity

of the pseudocyst is usually filled with fluid and sometimes necrotic tissue. The nature of the liquid varies. This is usually a serous or hemorrhagic exudate.

False cyst can be localized in any department of the prostate and to reaching causeway large. The volume of contents in pseudocysts often with stavlyaet 1-2 liters or more. False cysts locate large scale trench may be different. Situated towards the omental bursa, it pushes the liver upward and the stomach downward. If the cyst Raspaud lozhena towards gastrointestinal ligament, then pushed back the stomach etsya up, and transverse colon - from top to bottom; if between leaf E mesentery transverse colon, displacing the latter anteriorly and finally into the bottom floor of the abdominal cavity, the latter is displaced anteriorly, and finally, in the propagation of cysts in the lower floor bryush hydrochloric cavity transverse colon is displaced upwardly, and the thin ki shechnik - backward and downward.

True cysts are usually small size (from a few millimeters to 2.3 cm in diameter), have thin walls coated iznut ri epithelium. The content of the cyst is transparent. For cystadenomas and cystadenocarcinomas, the characteristic features are the unevenness of the internal contours due to intracavitary growths of tumor tissue. Contains my their viscous, thick, in the biochemical study reveal positive -negative response to mucin.

*Clinical presentation and diagnosis.* Cysts clinical small size cally do not usually appear. Symptoms appear in the cases where the cyst is infected, reach large sizes or vyzy Vaeth compression or displacement of adjacent organs.

The most common symptoms of large false cysts are dull aching pains in the upper abdomen, dyspepsia, general disorders (weakness, weight loss), periodic increase in body temperature, and the presence of a tumor-like formation in the abdomen.

Pain may be permanent or paroxysmal (with kompres these various intestine). Sometimes the mark encircling and bursting pain, due to which patients take a forced Polo voltage. Pain is especially severe when the cyst exerts pressure on the celiac plexus. However, even with the giant kitty max pain they are often expressed slightly and patients complain of only a feeling of pressure in the epigastric region. The most common dyspeptic symptoms are nausea, vomiting, and unstable stools. When the location of a large cyst in the head of the pancreas Nered to observed jaundice.

An objective study often reveal usually Bezbakh leznennoe tumor formation in the upper abdomen (meanly zhechnaya, umbilical region, right or left upper quadrant) with clear outer boundaries, round or oval shape, smooth surface Stu.

There is a gradual, slow progressive course zabole Bani, at least as acute when the cyst in a short time attains a large size, causing severe functional impairment of other organs, and is accompanied by complications, the most common of which are under the false cysts (pancreatic) are bleeding into the cyst cavity, suppuration, rupture of the cyst with the development of peritonitis, internal cystoduodenal or cystogastric fistulas, as well as compression of adjacent organs.

The diagnosis of a pancreatic cyst is based on clinical data and the results of special research methods. Large cysts can be found on palpation. Apart from minor povy sheniya concentration of pancreatic enzymes in the blood and urine, sometimes noted a decrease in their contents of the duodenum. When X-ray reveals the ousting of the stomach, of peppermint colon anteriorly and upwards or downwards. The computer then mografiya and ultrasonography are the most informative GOVERNMENTAL. In patients with true congenital and pseudo-cysts with ultrasound and a hypoechoic formation with smooth, clear contours, round or oval, located in the projection of the pancreas, is found. Cystadenoma and cystadenocarcinoma are characterized by an unevenness of the inner contour due to the growth of tumor tissue into the cyst cavity and a higher echogenicity of its contents. Intracystic septa are quite often observed (Fig. 14.7). For differential Diagna sticks benign cystic formation of malignant pancreatic used cystography, fine-needle biopsy of the cyst wall and biochemical study its contents. When cystadenoma and cystadenocarcinoma cyst contents gives a positive rea tion on mucin.

*Differential diagnostics.* In the differential diagnosis, first of all, it is necessary to distinguish benign cystadenoma from cystadenocarcinoma and pseudocyst. Usually, for this

purpose, in addition to ultra sound and computer-tomografiche Skog studies are used in the whole wall puncture with cysts of the following morphological explores vaniem biopsy.

For differential diagnosis of pancreatic cysts with anevriz my aortic tumors retroperitoneal lymph nodes, tumors and Kis liver Tammy, hydronephrosis, tumors E kidney cysts mesentery thin or colon critical values of are ultrasound studies set, a computer and a magneto-Lakes - resonance imaging, and angiogra FFL visceral branches of the abdominal aorta.

*Treatment.* The traditional method of treating cysts is surgery. With small true cysts with thin walls (usually less than 1 mm ) and the absence of severe clinical symptoms, surgical treatment is not indicated. When large true cysts accompanied by symptom E chronic pancreatitis or complications produce cysts enucleation or distal pancreatectomy (when plural GOVERNMENTAL gland cysts body and tail). When false cysts usually operate various embodiments tsistodigestivnyh anastomoses (tsistoeyunostomiyu, tsistogastrostomiyu or tsistoduodenostomiyu), depending on the localization cysts tion The aim of the opera tive intervention is emptying the contents of the cyst in about light jejunum or stomach. Subsequently occur cyst cavity obliteration and virtually complete recovery in the absence of sea fologicheskikh and clinical signs of chronic pancreatitis.

With the development of minimally invasive technologies in surgical practice singing wound opportunity "closed" method for the treatment of patients with false kitty Tami pancreas. For this purpose, a puncture and out Noah drainage of cysts under the control of ultrasound or computed tomography. In the liquid obtained by puncture determined lyayut amylase concentration. High concentration of enzyme AUC binds to communicate with cyst cavity excretory ducts pancreatic same lezy. In the absence of such a connection, stage-by-stage sclerotherapy of the cyst walls with a solution of absolute alcohol is performed. This achieves ASEP cally cyst wall epithelial necrosis and subsequent obliteration of its lumen. When communicating the lumen of the cyst with the excretory ducts, and even more so with the main pancreatic flow, this tactic is not applicable, since the risk of sclerosant getting into the ductal system of the gland is very high. In these cases, percutaneous tsistogastroanastomoz applied using special synthetic prosthesis with internal diameters rum about 1, 5 mm under the control of ultrasound and gastrosko FDI. When localization gland cysts in the head by a similar IU todiki possible formation tsistoduodenoanastomoza. Small dia meter to throw the endoprosthesis prevents gastric contents into the lumen of the cyst, and at the same time does not prevent the outflow of the contents of the cysts in the lumen of the stomach or duodenum. It is especially advantageous to use a "closed" method in patients with "unformed" subtleties GOVERNMENTAL cysts developing in the early period (2-4 weeks) destructive pancreatitis, where it is technically impossible to carry out a particular type of "open" tsistodigestivnogo anastomosis.

With a festering cyst, external drainage is usually performed under the control of ultrasound or CT. When the cystadenoma is localized in the body and tail of the gland, enucleation or distal resection of the gland is indicated. The surgeons Český tsistadenokartsinom treatment using the same procedures as in pancreatic cancer. Long-term results of surgical treatment of this type of tumor are much better than in pancreatic cancer.

**Pancreatic fistulas** - pathological communication of ducts with the external environment or internal hollow organs. There are external fistulas, when the mouth of the fistula opens on the skin, and internal, in which the fistula communicates with a hollow organ (stomach, small or large intestine). They can be complete or incomplete. When the proximal duct is obstructed (complete fistula), all pancreatic fluid is released. When incomplete fistulas bulk of pancreatic juice flows off Este governmental through the duodenum and only part of it is separated by whistle.

*Etiology.* External fistulas most often occur after an open trauma to the abdomen, after operations on the pancreas. Internal SVR soup are usually the result of destructive changes in the gland, re walking on the adjacent body wall (acute pancreatitis, penetration and about Boden pancreatic cyst).

*Pathological picture.* Pancreatic fistula is unevenly constricted passage communicating with the flow podzhel zling gland, the walls of which are formed by fibrous tissue. The

pancreatic tissue at the site of the formation of a fistula find just the personal kind of morphological changes, which led to his image vaniye (necrosis, inflammation, cyst).

*Clinical presentation and diagnosis.* For external fistula podzheludoch hydrochloric gland characteristic selection pancreatic juice through them out Noe hole. The amount of discharge depends on the type of fistula. At full fistula per day allocated to 1-1.5 liters of pancreatic juice, with a non-rated - often only a few milliliters. Depending on the expressed Nosta destructive and inflammatory changes in the pancreas and in the walls of the fistula is allocated either pure pancreatic juice, or juice mixed with blood or pus. Catching in large numbers pan kreatichesky juice with the skin very quickly causes skin maceration around the external opening of the fistula. Significant loss of juice leads to a rapid deterioration of the patient, the expressed protein disorders, Ms rovogo and carbohydrate metabolism, a significant loss of water, electrolytes and disorders of acid-base status.

With internal fistulas, the release of pancreatic juice occurs in the lumen of the stomach or intestines. In this regard, severe metabolic disorders inherent in external fistulas do not develop.

Diagnosis of external fistulas is not very difficult. The final diagnosis is confirmed by the detection of a high concentration of pancreatic enzymes in the fistula discharge. For more accurate diag Noz used fistulography. If with it the contrast fills the ducts of the pancreas, then the diagnosis is not in doubt.

*Treatment.* Incomplete fistulas usually close under the influence of conservative treatment. It includes measures aimed at liquidation tion of exhaustion and dehydration. To reduce a secretory activity of the pancreas and administered cytostatics antimetaboles (5-fluorouracil, cyclophosphamide, etc.) Or synthetic analogues of somatostatin, and special diet rich in proteins and poor carbohydrate E defining the allocation of pancreatic juice. When inefficient NOSTA similar method patients transferred to parenteral nutrition with solid drug therapy aimed at inhibition of exocrine pancreatic function and acidogenic stomach tion. Local treatment consists in careful care of the skin around the fistula, preventing its maceration and introducing a drainage into the lumen of the fistula, through which its contents are aspirated and the fistula is washed with antiseptic solutions.

For complete fistulas, surgical treatment is indicated. Meto main house fistula treatment of the body and tail of the pancreas is the organ of the distal resection. With the localization of the internal opening of the fistula in about domain pancreatic head surgery presents significant difficulties. In this situation, usually the walls of the fistula are sewn into a loop of the small intestine, isolated by Roux.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options questions are attached.) Article in denta must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then, the answers are discussed, dao t Xia addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

The patient complains of pain throughout the abdomen, nausea, dry mouth, general weakness. Zab about Lel Island 2 days ago. Suddenly there were severe pains in the epigastric region, nausea, darkening in the eyes. Subsequently, pain gained increasing x and rakter, joined bloating, gas ceased depart. Objectively, Kerte and Mayo-Robson's symptom is positive. Your q and agnose.

#### **USING THE WEB METHOD**

### Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any item in Dent.
4. The student who received the skein answers the question (while the participant who asked him comments and answers the question) and passes the question relay on. Participants continue to ask and answer questions until everyone is on the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., until all "pa s matyvaniya" coil.

Note: Warn students to be careful about each answer as they don't know who the skein will be thrown to.

## 6.2. Analytical part

### Situational tasks:

The patient complains of pain throughout the abdomen, nausea, dry mouth, general weakness. Zab about Lel Island 2 days ago. Suddenly there were severe pains in the epigastric region, nausea, darkening in the eyes. In the future, the pain acquired a growing character, swelling was added alive about that, gases ceased to escape. Obektivno symptom Kerte and Mayo Robson positive I of . Your diagnosis:

- A. acute pancreatitis \*
  - B. perforated gastric ulcer
  - B. Leriche syndrome
  - G. Mallory-Weiss syndrome
  - D. acute appendicitis
- II . Your treatment tactics:
- A. diagnostic laparoscopy
  - B. observation of the patient and massive conservative therapy
  - B. planned surgical treatment
  - G. the patient does not need the supervision of a surgeon
  - E. urgent surgical treatment

## 6.3. Practical part

Implementation of the task on practical skills (to carry out a differential diagnosis and substantiate the final diagnosis, prescribe an appropriate diet and planned treatment, gastric tube and ration ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                                    | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                          | 0                 | 35                             |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                                    | 0                 | 100                            |

#### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                          | Not full | Completely full |
|------|------------------------------------------------------------------------------------------------|----------|-----------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                        | 0        | ten             |
| 2    | Choosing the right diet table for your diagnosis                                               | 0        | ten             |
| 3    | Evaluation of the usefulness of the diet                                                       | 0        | 20              |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy | 0        | 20              |
| five | In accordance with the diagnosis, COG e Stu disease and symptomatic treatment assignment step  | 0        | 20              |
| 6    | Preventive measures                                                                            | 0        | 20              |
|      | Total                                                                                          | 0        | 100             |

#### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying of soda p -stretch, constant aspiration of gastric contents with the purpose to establish peace gland gastritis of stasis.

| No.   | Event                                                                                                                     | Not full | Completely full |
|-------|---------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0        | ten             |
| 2     | Wear rubber gloves.                                                                                                       | 0        | ten             |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0        | ten             |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0        | ten             |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0        | ten             |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0        | ten             |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0        | ten             |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0        | ten             |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0        | ten             |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0        | ten             |
|       | Total                                                                                                                     | 0        | ten             |

#### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;



- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment                    | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>"five"           | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, analyzes.                  |
| 2    | 91-95%                | Excellent<br>"five"           | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively participate in interactive games, correctly takes part in them.                                                                         |
| 3    | 86 - 90%              | Excellent<br>"five"           | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>"4"                   | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                       |
| 6    | 71-75%                | Good<br>"4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                        |
| 7    | 66-70%                | Satisfied<br>literally<br>"3" | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks with confidence, has accurate ideas only on                                                                                                                                                                                                |

|          |        |                               |                                                                                                                                                                                                                |
|----------|--------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                               | individual questions of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                  |
| eight    | 61-65% | Satisfied literally "3"       | The correct answer to half of fasting in PARTICULAR issues. Tells uncertainly, has accurate ideas only on certain issues about the topic itself. Makes mistakes in dealing with the situation Mr GOVERNMENTAL. |
| nine     | 55-60% | Satisfied literally "3"       | Response to errors by half post in PARTICULAR issues. Tells uncertainly, has a partial idea of the topic. Situational tasks solved n e is true.                                                                |
| ten      | 50-54% | Not satisfied literally " 2 " | The correct answer to the third set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                         |
| eleven   | 46-49% | Unsatisfied sly "2"           | The correct answer to the fourth set vopr about owls. Situational tasks are solved incorrectly with the wrong approach.                                                                                        |
| 12       | 41-45% | Unsatisfied sly "2"           | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                          |
| 13       | 36-40% | Unsatisfied sly "2"           | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                        |
| fourteen | 31-35% | Unsatisfied sly "2"           | Doesn't give answers to questions.                                                                                                                                                                             |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                | Lesson forms      | PRODO l resident s NOSTA min. 90 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                             |                   | five                             |
| 2    | Discussion on practical training, otse n ka initial knowledge of students with the use of new educational technologies (small GRU n nN, case studies, business games, slides in and deofilmy, etc.) | Poll, explanation | 25                               |
| 3    | Summing up the discussion                                                                                                                                                                           |                   | five                             |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                 |                   | ten                              |
| five | Independent work of students from a military skills                                                                                                                                                 |                   | fifteen                          |
| 6    | Clarification of the extent to                                                                                                                                                                      | Oral survey       | 25                               |

|   |                                                                                                                                                                                                            |                                                                                                |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------|
|   | which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group                                         | IPR s menny survey tests, checking Practical results and cal work, discussion obsu Well denie. |      |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations                    | five |

### 10. Test questions

1. Determination is chronic th pancreatitis, frequency, etiopathogenesis, clinical, diagnosis and leche e set.
2. Principles of conservative therapy for chronic pancreatitis
3. Teach the diagnosis of chronic pancreatitis, preoperative Getting on Preparations
4. Indications for surgical treatment of pancreatic disease.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991 g .
2. M.I. Cousins "Surgical diseases", 1995 g .
3. A.G. Astapenko. "A Practical Guide to the surgical used on Leznov" 1984 g .
4. CM. Agzamkhodzhaev. "Hirurgik kasalliklari" 1991 g .
5. Voitenko. Operations on the abdominal organs. 2000 g .

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC № 18. DISEASE OF THE COLOR.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students gallbladder and biliary tract, causes its development, clinical features, differential di and Gnostica, optimal methods of treatment, postoperative care, reabilit a tion patients.

Tasks

**The student should know:**

- methods for diagnosis and differential diagnosis and Oslo w neny;

- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with Zab on Levan colon;
- **n auchitsya special methods of investigation.**

**The student should be able to:**

- Perform practical skills - to acquire certain practical nav s ki in the examination of patients with diseases of the colon, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical im e -interference.

#### **4. Motivation**

Suggestion students need adequate timely surgery before the development of severe complications and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is operas and tion and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

#### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

#### **6. Content of the lesson**

##### **6.1. Theoretical part**

##### **Anatomical and physiological data**

Colon includes the cecum, the ascending transverse nor with walking, and sigmoid. The length of the colon is 1-2 m , the diameter is 4-6 cm . Longitudinal muscle intestine concentrated in three n well -parallel to each other tapes (free, mesenteric and omental), the width of each of which is about 1 cm . Circular muscle have unequal thickness, whereby the intestine is vypyachena and Nia alternating with narrowings (haustration intestine). Fat pendants are located along the free and omental muscle bands.

The ascending intestine is located mesoperitoneally (sometimes covered by the peritoneum on all sides - intraperitoneally). A straight ascending colon and CMV hypochondrium forming hepatic flexure, passes into the transverse length of 50 to 60 cm , coated on all sides peritoneum. The anterior surface of the intestine is fused with a greater omentum. Transverse colon in the left upper quadrant arr and zuet splenic flexure, descending colon moving in, which is usually located mezoperitonealno. Downward intestine becomes sigmoid hydrochloric intestine.

The outflow of venous blood - the system of the same name of the arteries in the portal in the e us.

Lymphatic drainage - through the lymphatic vessels and nodes lying along the arteries and veins.

Innervation - celiac branches, upper and lower mesenteric Woven e Nij.

Large intestine functions.

4. Metabolic - participation in the synthesis of vitamins of groups B and K with the help of microflora; regulation of water-salt metabolism;
5. Excretory - excretion through the wall of insoluble components (calcium, heavy metals).
6. Formation of intestinal microflora involved in the digestion of fat and the formation of fiber required for the regulation figure v Nosta colon.

All diseases of the colon can be divided into 3 groups:

3. Hereditary and congenital diseases
4. Acquired diseases
3. By the characteristics of pathological changes:
  - C. Inflammatory genesis
  - D. Non-inflammatory genesis.

## **ANOMALIES AND DEVELOPMENTAL FAULTS**

Abnormalities position colon (dystonia) arise from disorders of embryogenesis therefore possible location of the entire colon in the left or right half of the abdominal cavity may arrangement cecal oven under e New. Uwe lichenie length of the colon can capture all of its departments (doliokoliya) or restricted and vatsya some of its sections (dolichosigma) In this case violated the motor-evacuation function of the intestine and come constipation, bloating and pain. In a stomach. Stenoses and atresias can be single or multiple. They manifest as symptoms of intestinal obstruction soon after childbirth and require surgery and intervention. Doubling of a site or the entire colon is very rare.

### **Data from laboratory and instrumental methods**

The decisive method for the diagnosis of ulcerative colitis is sigmoidoscopy or better colonoscopy. The most important and almost constant feature of peptic ulcer of the second colitis is easily vulnerable mucosa, contact bleeding appearance when promoting proctoscope tube or endoscope. Mucosal hyperemia, swelling of folds, submucous hemorrhages, erosion, ulcers, pseudopolyps are often determined. Diag about styryl advantageously hemorrhagic erosive or ulcerative hemorrhagic syndromes. The changes detected during endoscopy cannot be considered specific only for ulcerative colitis, they are also noted in other forms of intestinal pathology. However, proper recognition ulcer n Nogo colitis assist features such as contact bleeding, slow regeneration of erosions and ulcers, even when active t e rapii. In milder forms with few severe macroscopic changes expedient s look fat biopsy mucosa. Colonoscopy is performed less frequently in severe and moderate forms due to the risk of perforation. It should be carried out in case of suspicion of malignancy, in the phase of a dying exacerbation or remission.

In a classic series of studies include barium enema, which allows to evaluate the extent of lesions and helps in the differential diagnosis of ulcerative colitis, Crohn's disease, diverticulosis, and tumors of the colon, ischemic for a cast.

## **DIVERTICULES AND DIVERTICULOSIS OF THE COLUMN**

Diverticula are blindly ending saccular protrusions of a limited area of a hollow organ, in particular, the colon. Divert and culosis means multiple diverticula. They come in BPO F dennymi and acquired.

Colon acquired diverticula develop mainly in the rail and teley economically developed countries, where the incidence of up to 30% of the total population. A major role in such a wide spread of the disease plays a depletion of crude fiber diet and dietary fibers, which leads to the development of constipation - an important first Sheha risk factor for diverticular disease. The second circumstance is the increase in life expectancy in developed countries. Colon diverticulosis is common in the elderly and old. Most often diverticula are located in B g movidnoy and descending colon, much less in the right parts of the colon.

The most widespread theory of the origin of diverticular disease - fur and conical or pulsionnaya. It is possible to name a number of risk factors that determine the main elements of the pathogenesis of diverticulosis - a decrease in the diet of ballast substances, constipation, obesity, old age, and inflammatory processes in the colon. All these factors lead to an increase in intracavitary pressure in the colon due to intestinal dyskinesias. In the pathogenesis of diverticular disease, a significant role belongs to the weakness of the intestinal wall. Muscle tone colon gradually decreases with age, circular and longitudinal muscle layers become sheath tone s Chez supporting connective tissue less organized, with signs of wear, elastin therein fragmented.

### **Clinic and diagnostics**

According to WHO recommendations, there are three forms of diverticular disease of the colon: asymptomatic diverticula (incidental findings during irrigoscopy or colonoscopy); uncomplicated diverticular disease, when there are clinical manifestations, and diverticular disease with alterations.

Characteristic symptoms of uncomplicated diverticulosis no patients Observed and are features characteristic of the syndrome lesions of the colon - abdominal pain without clear

localization, violations of the chair, often constipation or unstable stool (constipation change and diarrhea), signs of Kish h Noah dyspepsia (rumbling, swelling).

The most common complication of diverticulosis is inflammation of the diverticula - diverticulitis. Contribute to the violation of evacuation of the contents of the of the diverticula, intestinal dysbiosis. Diverticulitis often becomes chronic relapsing course with a change of phases p e mission and exacerbation, sometimes as abdominal pain crises. Etc. and the signs of established diverticulitis are fever, increased pain in the abdomen, diarrhea, appearance of mucus in the stool and blood, persistent bloating, rather the expression n naya pain on palpation of the abdomen in the projection PLAYBACK but PARTICULAR diverticula usually in the left flank, sometimes the signs of a lesion of the peritoneum. When diverticular disease manifests diverticulitis, which happens often, patients are hospitalized in the surgical dep e Lenia suspected of having some form of "acute" abdomen. Intestinal bleeding is a serious complication of diverticular disease. The likelihood of fuss to the novena increases with age. It manifests itself most often among complete well-being in the form of excretion of scarlet blood or clots in the feces; m of Jette stop as suddenly as it began. The development of intestinal stricture due to recurrence of diverticulitis, compression by inflammatory and n filtrate with peridiverticulitis, adhesions leads to intestinal obstruction. Perforation of the diverticulum is complicated by the development of diffuse perforation and tonitis. Among other complications of diverticular disease, interintestinal abscesses, fistulas, pylephlebitis, and diverticulum torsion are described.

Diverticulitis is characterized by "inflammatory" changes in the hemogram - leukocytosis, accelerated ESR. Coprological changes nespetsifi h us, naturally, particularly when diverticulitis, dysbacteriosis detected. The crucial diagnostic methods diva p tikuleza colon are colonoscopy and barium enema. When irrigoskopii d and vertikuly detected as a protrusion of the intestinal wall with rounded used on a more or less pronounced cervix, which are clearly identified on the outer or DNAs m rennemu contour intestine, they are particularly well visible to the double n opacification. In patients with uncomplicated diverticulitis, the diverticula are well emptied. DELAY Well ka contrast - a sign of diverticulitis. Colonoscopy is more informative for the Detection and Bani diverticulitis. Ordinary diverticula themselves are not visible; their mouths are round or oval in shape with unchanged mucous around them. The presence of inflammation is judged if the mouths are deformed, the mucous membrane around them is edematous, hyperemic. Colon about scopy when bleeding allows you to set its level.

### **Treatment**

The main challenge in identifying uncomplicated colon diverticulosis is stool regulation. This allows to some extent prevent the formation of new diverticula and prevent complications, for example, diverticulitis. For this purpose, a diet rich in plant fiber is prescribed. If this turns out to be Insufficient h nym recommended intake of wheat bran. An important feature is their od b Nosta absorb liquid in an amount greater than 4 times their own ma to su. Thus, the volume of feces increases, which leads to a normalization of the transit time through the intestine, a decrease in intracavitary pressure. Appointment of bran, etc., and leads in patients with diverticulosis to reduce pain, bloating, stool normalization. Wheat bran, they now release as are the food industry under different names, such as "fi b Romedi" before drinking pour over boiling water. They can be used in the form of mash for oral administration, as well as to add fruit drinks, jelly, with y nN, cereal. The first 2-3 days appoint bran 1 teaspoon 2 times a day, then ka w Thaya 2-3 days the dose is increased to 1 teaspoon per day until a normal item in la; then the amount of bran is slowly reduced until a dose is reached that guarantees a normal rhythm of bowel emptying (1 time per day or 2 days). Bran can etc and change the long-term. In the first days of treatment bran may appear or worsen abdominal pain, their cropped reception baralgina or noshpy pain subside, and then the mo and schayutsya.

With the development of diverticulitis necessary appointment antibacterials (broad spectrum antibiotics, are poorly absorbed sul s famidov, derivatives of 8-hydroxyquinoline) for 7-10 days, antispasmodic drugs (Baralginum, spazmolgon, tr and gun); after the acute events have subsided, prescribe a course of treatment with bacterial drugs - colibacterin,

b and fidobacterin, bificol (3-5 doses 2 times a day before meals). In patients with frequent recurrences of diverticulitis can achieve good effect, desig and tea drugs such as sulfasalazine - sulfasalazine, salazopiridazina, salazodimetoksina. It is good to combine them with polyezyme preparations.

In other complications of diverticular disease conservative therapy inefficiency or show various types of surgical im e ference.

### **POLYPES AND POLYPOSIS OF THE COLUMN AND RECTAL Intestine**

Polyps are benign growths iskho dyaschim of the epithelium, but they are prone to malignancy. Among all about to ontological patients with polyps are diagnosed in 10-12%, and among those who are at a routine inspection carried out I was sigmoidoscopy - at 2-4%. Men get sick 2-3 times more often than women.

Polyps can be single or multiple. Usually their size is 0.5-2 cm , but occasionally they reach 3-5 cm and more. Polyps have a leg hanging down into the intestinal lumen, less often they are located on a wide base. Allocate juvenile, giperplast and cal, glandular (adenomatous) polyps villous glandular, villous op y Hawley, diffuse polyposis colon (truths ny and secondary).

Juvenile polyps are seen primarily in children. The mucous membrane of the rectum is more often affected. Macroscopic cally polyps have the form "bunch" having a leg their smooth surface, a more intense coloration compare e NIJ with surrounding intact mucosa. Microscopy cally detected x and acteristic glandulocystica stroma formation with a predominance of glandular element and mi. As a rule, juvenile polyps do not become malignant.

Hyperplastic polyps are small ( 2-4 mm ) formations, more often have a conical shape. In hyperplastic polyps, the normal structure of the mucous membrane and the stagnant lining of the intestine is preserved with the correct structure and orientation of the glands with a significant increase in their number, due to which the impression is created of a thickening of the mucous membrane in the form of a polyp. M a lignization is very rare.

Adenomatous polyps (glandular) are most common. Adenomato of ny polyp tumor has the form of round shape on the leg or without it, with a smooth surface. Hyperplasia is a slab portion and Zist shell constructed from diverse st different shape glands often kistoznorasshirennih, lined GOVERNMENTAL columnar epithelium. These polyps are often malignant, and the larger the polyp, the more often malignancy is detected. When a polyp size 2cm frequency maligniz a tion reaches 50%.

The villous polyp (adenopapilloma) is covered with fine, delicate villi. The frequency of malignancy reaches 30-35%.

Solitary polyps sometimes asymptomatic or are camping the cause of patients' complaints on the allocation of blood and mucus from the rectum, abdominal pain, constipation, diarrhea, abdominal discomfort. These symptoms are not a ton camping pathognomonic for polyps, so they should be to identify the use of digital examination of the rectum, sigmoidoscopy, colonoscopy, barium examination. Biopsy is necessary to determine polyps polyps histological structures, presence or absence of malign and tion.

Glandular villous polyps are lobed structure, the surface of the ba p hatistaya coated with a plurality of villi.

Villous tumor is a lobed novoobra mations with velvet and stop surface, pinkish-red color, protruding into the lumen, LAYOUT about zhennoe a broad Ba Vania (nodular form). One of the varieties of villous tumors is a creeping, carpet form, in which there is no tumor node. The r and com case the propagation process is on a mucosal surface, occupying a fairly large area sometimes throughout the colon manifesting circumference and thief sinchatymi melkodolchatymi or growths. The sizes of villous tumors are from 1.5 to 5 cm . The tendency to malignancy of villous tumors is very high (up to 90%). Cf. e di all colon tumors, they make up about 5%. Most often in p sinchatye tumors localized in the rectum and sigmoid colon. Manifest villous colon tumor isolated and it mucus during a bowel movement, wherein the amount of mucus can be zna considerably and reach 1- 1.5 liters , resulting in a water-electro litnym ra c stroystvam. Due to the easy vulnerability villi OPU holy bleeding

occurs in almost all patients. Other symptoms of the disease include abdominal pain, and then diarrhea, intestinal discomfort.

Diffuse polyposis of the colon is true (familial) and secondary (as a result of other colon lesions, such as colitis). Frequency of malignancy in diffuse polyposis reaches 70-100%, consequently, it is an obligate precancer.

Diffuse true polyposis is inherited, it is transmitted through several family members, hence one of its names - the family. It was typically detected in children and people of middle age. The frequency of malignancy is approaching 100%. Combining diffuse polyposis with colorectal polyps - quality tumors of soft consistency, but it and the bone is called Sindh rum Gardner. The combination of polyposis of the gastrointestinal tract with age spots on the mucous membrane of the cheeks, around the mouth and on the skin of the palms is called Peitz-Giger syndrome. In childhood, it is asymptomatic.

Diffuse colon polyposis is characterized by abdominal pain without clear localization, diarrhea, excretion of blood and mucus with feces, weight loss, anemia.

Diagnosis: along with clinical symptoms and anamnesis data are important recto- and colonoscopy irrigography and biopsy.

The choice of treatment of polyps and diffuse polyposis of the colon should be individualized. Solitary polyps are removed by electrocoagulation through recto- or colonoscopy. Electrocoagulation is admissible and villous tumors with a well-defined foot at Otsu m Corollary malignancy.

When villous tumor malignancy requires radical hydrochloric operation, the volume of which is determined by the location of the tumor (right or left hemicolectomy, resection of the sigmoid colon). When cellular atypia of polyp without tops and invasive radical surgery of the muscular mucous membrane plate is a wedge on prominence excision of polyp in the gut wall zone.

In diffuse familial polyposis of the colon perform subtotal colectomy with imposing ileorectal or ileosigmoid anastomosis. With the localization of multiple polyps produced in a limited area since resection and sounded from the first intestine.

### **Used in this lesson, new educational technologies, "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options and issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then discussing the answers and are, given addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Explain about variant, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, etc. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competition.

Annotation option:

In acute toxic dilatation of the colon with ulcerative colitis is not typical.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed of as yesterday.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. Students continue and give questions and answer them, until everything will be in the web.



5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

## 6.2. Analytical part

### Situational tasks:

A 32-year-old patient complains of pain throughout the abdomen, nausea, vomiting, weakness. At the beginning of the disease, frequent loose stools with blood and mucus then pyo of the first character. The abdomen is swollen, painful on palpation in all parts of the abdomen. Your tactics Survey and dia g ERA.

- A. colonoscopy, NUC \*
- B. ultrasound, hepatitis
- B. X-ray, Ulcer perforation
- G. Ultrasound, Acute cholecystitis
- D. laparoscopy, pancreatitis

## 6.3. Practical part

A quest for practical skills (to hold the differential di and prognosis and to substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, ultrasound, X-ray, endoscopy).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                    | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnostics, make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                              | 0                 | 100                            |

### 4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.

**Purpose:** Treating the disease

| No.  | Event                                                                                             | Not<br>ful l Neal | Completely<br>correctly s full |
|------|---------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                           | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                                  | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                          | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy    | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and stage assignment sim p -automatic therapy | 0                 | 20                             |

|   |                                 |   |     |
|---|---------------------------------|---|-----|
| 6 | Preparation for planned surgery | 0 | 20  |
|   | Total                           | 0 | 100 |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment        | Student knowledge level                                                                                                                                                                                                                                                                                                                                 |
|------|-----------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, analyzes.                      |
| 2    | 91-95%                | Excellent<br>" 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes part in them.                                                                                  |
| 3    | 86 - 90%              | Excellent<br>" 5" | Questions raised covered full of Study, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and on many problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>" 4"      | Questions raised covered full of Study, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately studied. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's main confidence has accurately represented the main idea. Actively participates in interactive games. On case studies gives not complete solutions.                                                                                                    |
| 6    | 71-75%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue,                                                                                                                                                                                                                                                                    |

|          |        |                                     |                                                                                                                                                                                                                                                             |
|----------|--------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | the story 's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                    |
| 7        | 66-70% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions asked. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Admits mistakes in solving sieve and tional.                                                                              |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                                                     |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                       |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                     |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                                                          |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                 | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                   | five                                |
| 2    | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation | 25                                  |
| 3    | Summing up the discussion                                                                                                                                                                                            |                   | five                                |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                   | ten                                 |
| five | Independent work of students                                                                                                                                                                                         |                   | fifteen                             |

|   |                                                                                                                                                                                                            |                                                                                                                           |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------|
|   | from a military skills                                                                                                                                                                                     |                                                                                                                           |      |
| 6 | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey<br>IPR s menmy survey<br>tests, checking Practical<br>results and cal work,<br>discussion<br>obsu Well denie. | 25   |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information<br>in a millet to<br>myself about pendent<br>Getting on Preparations                                      | five |

### 10. Test questions

1. Diseases of the colon, incidence, etiology and pathogenesis, clinical manifestations, diagnosis and lech e Nia.
2. Colon diseases, principles of conservative therapy.
3. To teach the diagnosis of colon disease, preoperative preparation.
4. Indications for surgical treatment of at abolevaniyah thick ki w ki.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with duodenal ulcer and duodenal ulcer. // Surgery 2002 №7 p. 19-22
7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. About ext and rhenium indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## THEME No. 19 . DISEASE OF HIRSHPRUNG, CROWN, NON-SPECIFIC ULTRA-CANCER

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters , tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students gallbladder and biliary tract, causes its development, clinical features, differential diagnosis and Gnostica, optimal methods of treatment, postoperative care, rehabilitation patients.

#### Tasks

##### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with Zab on Levan colon;
- **n auchitsya special methods of investigation.**

##### ***The student should be able to:***

- Perform practical skills - to acquire certain practical nav s ki in the examination of patients with diseases of the colon, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical im e -interference.

#### **4. Motivation**

Suggestion students need adequate timely surgery before the development of severe complications and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is operas and tion and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

#### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Execu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

#### **6. Content of the lesson**

##### **6.1. Theoretical part**

#### **HIRSPRUNG'S DISEASE**

Hirschsprung's disease is a hereditary pathology, accompanied by a sharp expansion of the colon and a violation of its evacuation function. 5000 Rodi in the disease shihsy children observed in 1 case. More common in boys.

The disease is associated with impaired autonomic nervous system of the L stand ulcer - hypoplasia (gipoganglioz) or absence (aganglioz) ganglionitis p GOVERNMENTAL cells between muscle (auerbahova) and submucosal (meyssnerova) nerve Woven e Nij. Aganglionarnaya zone more often (80-90%) localize into the direct intestine, as well as to a greater or lesser extent on the area of the sigmoid colon or other portion of the colon. Aganglionarny section constant intestine but spastic reduced, not n e ristaltiruet. As a result of the difficulties are the passage of intestinal contents through this area located above departments intestine with normal Inner vatsiyu, hypertrophied and extended. This leads to a sharp thickening of the intestinal wall.

Violation passage of intestinal contents underlies Clinical manifestations in tions Hirschsprung's disease, the major symptom in E which are constipation, bloating, abdominal pain. In the majority of cases are diagnosed in the neonatal period of the STI based on signs of intestinal obstruction: absence of meconium in the first 48 hours of life, increase the abdomen, vomiting, neonatal enterocolitis. In some cases, used on existing illness diagnosed later because of severe constipation, the steady increase in the abdomen, vomiting and delay of physical development. For the prevention of and the pore patients resorting to laxatives and enemas.

As a result of the long delay stool of patients there is a weakness, vomiting about one vomiting, and decreased appetite. Sometimes constipation is replaced by diarrhea (paradoxical diarrhea), lasting several days and resulting in the patient to harassment and sometimes to kollapse and Noma state.

Finding, along with the anamnestic data (stand Kie childhood constipation) and complaints of patients is essential examination in which the detected increase in DC o result stomach flatulence. The inflated gas loops of guts palpato p but determined dense stool. When rektal nom study determined an increase sphincter tone, empty vial. When sigmoidoscopy reveals a spasm of the rectum, the advancement of the rectoscope is difficult, after which it seems to fail and falls into the enlarged part of the intestine. This part of the intestine is always filled with feces. Ergography reveals the constriction zone, location and extent of extended GOVERNMENTAL colon zones whose diameter is typically 10 - 15 cm. In studying the passage of barium suspension for railway e ludochno tract observed long-term (over several days) of its stagnation in advanced colon sections. Transanal bi of the rectum psiya often allows veri fied diagnosis. It is used in adult patients. When histo logical study biopsy - aganglioz, increased anti-cholinesterase activity parasympathetic gan g Lie. Biopsy is especially valuable in determining the level of resection stricken on the first intestine.

With a slow development process of the patients for a long time can make up for it, achieving a bowel movement with the help of wat and -negative enemas, and only if decompensation fuss jacent already in middle of z to grow, there are indications for surgeons Ceske treatment. Complications: intestinal obstruction, perforated bowel tion, cr on votechenie, enterocolitis.

Treatment: surgical, consists in removing the aganglionic zone and decompensated expanded sections of the large intestine, followed by restoration of intestinal patency. Conservative treatment considered only as prepara and Tel ny stage of the operation, it consists in the Means to emptying and shechnika. Development of intestinal obstruction, to toruyu can not be resolved through to Mr. conservatively activities is an indication for the imposition of a colostomy on the proximal colon.

## **INFLAMMATORY DISEASES**

### **NONSPECIFIC ULCERATIVE COLITIS**

Ulcerative colitis - a chronic inflammatory disease of the L stand intestine that affects are generally straight mucosa and other parts of a colon having a continuous relapsing or chronic. I of venous colitis, unlike Crohn's disease, can be cured by means of surgery (removal of the colon), but such an operation disabling patient. A poet about mu, conservative therapy is the main focus of her treatment.

The prevalence of ulcerative colitis in different European countries ranges from 50 to 200 cases per 100,000 population.

#### **Etiology**

The etiological factor of ulcerative colitis has not been precisely established. Periodically, there are attempts to link the disease with any infectious agent, in recent years, such as the measles virus, or stick paratuberculosis, but direct proof and ments does not.

Seems much more reasonable view of the presence of a genetically determined defect of the immune system that prospect and leads to the development of severe inflammation in the colon. It can be considered proven participation Nasli d -governmental mechanisms in the process of origin of ulcerative colitis. Evidence was obtained in the course of population studies, in the study of family pedigrees, using the twin method, in the study of antigens of the main histological complex of compatibility, using cytogenetic studies. At the same time, the role of external environmental factors is also obvious. There is every reason to attribute ulcerative colitis to mult and factorial (polygenic) diseases. Susceptibility to ulcerative colitis is determined by the presence of a recessive gene with incomplete penentrance. The question remains open on the localization of the chromosomes in the gene (or genes) responsible for the emergence of ulcer n Nogo colitis.

#### **Pathogenesis**

The pathogenesis of ulcerative colitis can be represented as *circulus vitiosus*, the main element of which is immune, including autoimmune, disorders, intestinal dysbiosis, changes in mental status, which are used in Duchi initiated unknown etiological factor, lead to severe inflammatory nekrot and ziruyuschemu process in colon.

**Morphological changes in the colon**. Macroscopically: the rectum is always affected, then the process can spread to the entire colon and terminal ileum; mucous grain and flock, full-blooded, with multiple hemorrhages, erosions, ulcers, pseudopolyps are often determined. Microscopically: inflammatory lesions are localized in the mucosa and submucosa, they n to filter plasma cells and lymphocytes, detected crypt abscesses and ulcerations mikroerozii. Expansion of blood vessels, swelling of the endothelium are noted, cords of granulation tissue rich in vessels are visible.

### **Clinic features**

Until now, there is no single classification of ulcerative colitis. Usually s fissile acute form, chronic relapsing phases with exacerbation and remission, chronic continuous form; severity - le g Kie, moderate and severe forms. In addition, the diagnosis indicates the length of lesions of the colon and complicated e Nia.

For all forms of uncomplicated ulcerative colitis is characterized by two groups of a symptom of the MoU: local (intestinal) and general.

Of the local symptoms, the most frequent and constant is rectal bleeding. Blood in the stool of patients with ulcerative colitis is marked billeting n but, even in the remission phase. During the exacerbation phase, the amount of blood in the feces increases. Most often it is scarlet, with veins on the nose, if the feces are formalized, then the blood seems to envelop it. Post about yannye bleeding caused significant disturbances of the microcirculation thick ki w ki, light vulnerability vessels, the presence of erosions and ulcerations.

Stool disorders are the second permanent sign of ulcerative colitis, while diarrhea occurs most often, especially in the acute phase; much less often constipation or change of constipation and diarrhea. Mechanism diarrhea - increased fluid secretion, and a decrease in its absorbance due to lesions slab and Zist, increased vascular permeability; at the same time, the longer the process in the intestine, the more frequent the stool. In addition, even small amounts of feces, mucus or pus, getting into the inflamed sigmoid and rectum, cause a reflex to defecate; This explains the lo w nye urging and tenesmus.

Abdominal pain is the third local symptom; they are usually localized to the left on the d vzdoshnoy area, the left side of the abdomen, at least around the abdomen. After a bowel movement, the pain subsides or, less often, increases.

Common complaints include weakness, decreased performance, and weight loss. Very often develop asthenic-hypochondriac, Despres with sive syndromes often cancerophobia.

The acute form of ulcerative colitis is characterized by a violent onset of the disease with the most pronounced local and general symptoms. Stool is frequent, sometimes up to 20 times a day, scanty, bloody; abdominal pain, fever, signs of intoxication and circulatory disorders. Syndrome of exudative enteropathy with the development of hypoproteinemia and edema can be observed. The course of the disease is complicated by massive bleeding, colon perforation. The prognosis of acute adverse tons ny, mortality is high.

The most common chronic recurrent form of ulcerative colitis and that. It is characterized by the alternation of phases of exacerbation and remission. There are two variants of this form - a sudden, rapid, which is very n of Hozh acute form; and slow, gradual, when the clinic of exacerbation grows slowly, there is usually no severe and n toxicity.

Chronic continuous form is characterized in that the enteric symptoms and activity of inflammation extend continuously in tech e of many years.

### **Data from laboratory and instrumental methods**

The decisive method for the diagnosis of ulcerative colitis is sigmoidoscopy or better colonoscopy. The most important and almost constant feature of peptic ulcer of the second colitis is easily vulnerable mucosa, contact bleeding appearance when promoting proctoscope tube or endoscope. Mucosal hyperemia, swelling of folds, submucous hemorrhages, erosion, ulcers, pseudopolyps are often determined. Diag about styryl advantageously hemorrhagic erosive or ulcerative hemorrhagic syndromes. The changes detected during endoscopy cannot

be considered specific only for ulcerative colitis, they are also noted in other forms of intestinal pathology. However, proper recognition of ulcerative colitis assist features such as contact bleeding, slow regeneration of erosions and ulcers, even when active therapy. In milder forms with few severe macroscopic changes expedient is look fat biopsy mucosa. Colonoscopy is performed less frequently in severe and moderate forms due to the risk of perforation. It should be carried out in case of suspicion of malignancy, in the phase of a dying exacerbation or remission.

In a classic series of studies include barium enema, which allows to evaluate the extent of lesions and helps in the differential diagnosis of ulcerative colitis, Crohn's disease, diverticulosis, and tumors of the colon, ischemic for a cast.

### **Complications**

Distinguish between local (intestinal) and general (systemic) complications.

Local complications include massive intestinal bleeding, toxic megacolon, perforation, peritonitis, polyposis development and swollen on whether colon.

The risk of malignancy (the formation of a malignant tumor) of the UC is highest with a long-term course of the disease (more than 10 years) and total lesion of the colon. In this regard, the patients experienced disease for over 10 years and extensive lesions of the colon on a mandatory item of the row is recommended to regularly (every 1-2 years) colonoscopy with biopsy of the mucosa in the various parts of the colon.

General systemic complications. There are various approaches to grouping them.

They are divided into three groups according to the pathogenetic principle:

1) arising from systemic "hypersensitivity" - loses Soest and Islands, eye, skin, oral mucosa;

2) arising from bacteremia and antigenemia in the portal system - damage to the liver and biliary tract;

3) secondary to long-term disturbances in the colon - anemia, electrolyte disorders.

The extraintestinal manifestations of ulcerative colitis include:

1) The skin symptoms (erythema nodosum, pyoderma gangrenosum, vegetative th conductive purulent disease, vezikulopustuleznaya exanthema, cutaneous vasculitis, etc.).

2) Disorders of the joints (arthritis, sacroiliitis, ankylosing spondylitis (b of Leznov spondylitis))

3) Inflammatory eye diseases (scleritis and episcleritis, iridocyclitis, changes in the fundus)

4) Liver and Biliary (primary sclerosing cholangitis, fatty liver, chronic active hepatitis, holangiotsell w polar carcinoma, etc.).

5) Vasculitis

6) Violations of hemostasis and thromboembolic complications

7) Blood diseases

8) Amyloidosis

9) Disorders of bone metabolism (osteoporosis)

It should be noted that the course of inflammatory bowel disease, despite the careful study of many decades, still remains a very difficult task for doctors and patients themselves. For ulcerative colitis, as well as disease Kr on to, modern medicine can not predict, so particular importance is given to questions by e refrain remission and preventive treatment .

### **Treatment**

#### **Diet**

There is one common dietary restriction for all forms of ulcerative colitis in the acute phase - the exclusion of dairy products due to the large percentage of patients with hypersensitivity to milk proteins. Rivers of mended a diet enriched in proteins due to low-fat varieties of cooked meats, fish, low-fat cottage cheese. Fats and carbohydrates are limited. In the hospital, patients are usually assigned a 4-table diet. Patients with so I zhelymi forms a phase of the expressed exacerbation, with a decrease in body weight in the short term may be



administered parenteral nutrition. Cannulated cannula Vienna, introduced protein preparations, essential amino acids, glucose, fat on the stems of the emulsion and vitamins.

### **Drug treatment**

The acute phase of the disease of patients with moderate to COG e lymf forms need to be hospitalized, in mild treatment may be Ambuhl and Thorne.

There is no etiotropic therapy for ulcerative colitis. The basis of the medical treatment of stavlyayut event pathogenetic therapy. Correction of immunological disorders, mainly at their final stage - immune inflammation in the colon mucosa, as well as correction of dysbiosis and disorders of ps and chological status - is of leading importance.

Antibiotics in ulcerative colitis are shown only with the development of septic complicated e Nij - microabscesses in intestine, commonly purulent raids. It is better to prescribe broad-spectrum drugs in short courses. Certain value for correcting a dysbacteriosis have bacterial preparations, which are shown in the phase item and hayuschego exacerbation.

**Clinical examination** . Patients with ulcerative colitis must be on dispanse p nom registered by a gastroenterologist (the best option) or a local therapist. Ba in nye purpose of clinical supervision - prolongation of remission, relapse prevention, timely diagnosis of a complication in the, especially malignancy. Therefore, with a favorable course, the patient should be examined at least 1 time per quarter, if he takes maintenance doses of sulfasalazine or prednisolone - monthly. Endoscopic examination should be carried out at least 1 time per year, with deterioration of the condition, changes in the clinical course - more often. Necessary employment bol s Foot - exemption from work-related trips, night shifts, of irregular at the polar diet, emotional overload. Sanatorium treatment for patients with ulcerative colitis is not indicated .

### **Used in this lesson, new educational technologies, "Che p ny box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then discussing the answers and are, given addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

In acute toxic dilatation of the colon with ulcerative colitis is not typical.

#### **USING THE WEB METHOD**

Steps:

6. Pre students are given time to prepare questions on the passed of as nyatiyu.
7. Participants sit in a circle.
8. One of the participants is given a skein of thread, and he asks his prepared n ny question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
9. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. S members continue and give questions and answer them, until everything will be in the web.
10. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

### **6.2. Analytical part**

**Situational tasks:**

A 32-year-old patient complains of pain throughout the abdomen, nausea, vomiting, weakness. At the beginning of the disease, frequent loose stools with blood and mucus then pyo of the first character. The abdomen is swollen, painful on palpation in all parts of the abdomen. Your tactics Survey and dia g ERA.

- A. colonoscopy, NUC \*
- B. ultrasound, hepatitis
- B. X-ray, Ulcer perforation
- G. Ultrasound, Acute cholecystitis
- D. laparoscopy, pancreatitis

**6.3. Practical part**

A quest for practical skills (to hold the differential di and prognosis and to substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, ultrasound, X-ray, endoscopy).

**1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.**

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                              | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                    | 0                 | 35                             |
| 3   | Based on complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnostics, make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                              | 0                 | 100                            |

**4. PRESENT AN APPROPRIATE DIET AND Routine TREATMENT.**

**Purpose:** Treating the disease

| No.  | Event                                                                                             | Not<br>ful l Neal | Completely<br>correctly s full |
|------|---------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The study of the characteristics of medicinal art of fishing by Pevzner                           | 0                 | ten                            |
| 2    | Choosing the right diet table for your diagnosis                                                  | 0                 | ten                            |
| 3    | Evaluation of the usefulness of the diet                                                          | 0                 | 20                             |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy    | 0                 | 20                             |
| five | In accordance with the diagnosis, COG e Stu disease and stage assignment sim p -automatic therapy | 0                 | 20                             |
| 6    | Preparation for planned surgery                                                                   | 0                 | 20                             |
|      | Total                                                                                             | 0                 | 100                            |

**7. Forms of control of knowledge, skills and abilities**

- oral;
- written;

- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment                     | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5"              | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, an a lyse.                 |
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| five | 76-80%                | Good<br>" 4"                   | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                       |
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| 7    | 66-70%                | Satisfied<br>literally<br>" 3" | The correct answer to half of the questions asked. Understands the essence of the issue, speaks with confidence, has                                                                                                                                                                                                                                |

|          |        |                                     |                                                                                                                                                                                |
|----------|--------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |                                     | accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response.                                         |
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### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                 | Lesson forms                                                                            | PRODO l resident s NOSTA<br>min. 90 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                                                                                         | five                                |
| 2    | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation                                                                       | 25                                  |
| 3    | Summing up the discussion                                                                                                                                                                                            |                                                                                         | five                                |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                                                                                         | ten                                 |
| five | Independent work of students from a military skills                                                                                                                                                                  |                                                                                         | fifteen                             |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge                                                                                                              | Oral survey<br>IPR s menny survey<br>tests, checking Practical<br>results and cal work, | 25                                  |

|   |                                                                                                                                                                                                            |                                                                             |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------|
|   | and the results of Practical and cal operation and in view of the assessment of the group                                                                                                                  | discussion<br>obsu Well denie.                                              |      |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations | five |

### 10. Test questions

1. Diseases of the colon, incidence, etiology and pathogenesis, clinical manifestations, diagnosis and lech e Nia.
2. Colon diseases, principles of conservative therapy.
3. To teach the diagnosis of colon disease, preoperative preparation.
4. Indications for surgical treatment of at abolevaniyah thick ki w ki.

### 11. Recommended reading

1. Sh.I. Karimov "Surgical diseases", 1991
2. M.I. Kuzin "Surgical diseases", 1995
3. A.G. Astapenko. "A Practical Guide to surgically Bole of yum" 1984
4. CM. Agzamkhodzhaev. "The surgeon casalliklari" 1991
5. Voitenko. Operations on the abdominal organs. 2000 year
6. Babalich A.K. Surgical treatment of patients with duodenal ulcer and duodenal ulcer. // Surgery 2002 №7 p. 19-22
7. Gurin N.N., Logunov K.V., Dmitrenko V.V., Soldatov A.I., Makarev M.R. About ext and rhenium indications for surgical treatment of gastric ulcer. // Bulletin of surgery 2001. p. 17-19.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## TOPIC № 20. RECTAL DISEASE.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, ward, dressing room
- posters, tables, charts classification as tion of the disease, the treatment regimen, radiographs, video films.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

To teach students methods of examination, diagnosis, differential diagnosis, the choice of methods of treatment for diseases of the rectum using the example of supervised patients. To

analyze the etiology, pathogenesis, clinic, course and general principles of treatment with diseases of the rectum.

### **Tasks**

#### ***The student should know:***

7. Definition, frequency, etiopathogenesis, clinical picture, diagnosis and treatment of rectal diseases.
8. The principles of conservative therapy for hemorrhoids.
9. Learn how to diagnose diseases of the rectum, preoperative preparation.
4. Indications for surgical treatment of rectal diseases (hemorrhoids, rectal prolapse, cracked).

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills in the examination of patients with diseases of the rectum, to carry out special methods of examination data of patients, objectified the indications and contraindications for surgical interventions.

### **4. Motivation**

Suggestion students need for timely adequate operations and attention to the development of serious complications and in their development - familiarity with and more informative and modern methods of diagnosis, surgical and Skog treatment of patients, familiarity with possible complications is the operation and the operational period of Prof. and galaxies, ... Development of students' clinical thinking. Development of present-day alternating view of the problem the issue from the perspective of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this subject is based on the students' knowledge bases and on the normal and pathological physiology of blood circulation. Obtained knowledge during the classes will be used in the Research Institute of Gastroenterology, internal medicine and other clinical subjects.

### **6. Content of the lesson**

#### **6.1. Theoretical part**

The rectum is the part of the intestine that is more likely than others to be susceptible to various diseases. They can be caused by malformations of its development, traumatic injuries, prolapse, pathological changes in hemorrhoids, anal fissure, inflammatory changes in the mucous membrane and peri-rectal tissue, neoplastic processes. The frequency of rectal disease is evidenced by the following static data: more than 10% of the population suffer from hemorrhoids, chronic proctitis occurs in 5 per 100 practically healthy individuals, and cancer is observed in 10 people per 10,000 of the population.

### **Anatomical and topographic features of the rectum**

The rectum ( rectum ) is a continuation of the colon. The rectum is divided in length into three sections: the perineal, or sphincter zone (2-4 cm), the ampullary - the widest (10-12 cm) and the supra-ampullary (5-6 cm).

Patient research methods:

- A) Interviewing patients, including clarifying complaints and collecting anamnesis.
- B) Objective examination of the patient
  1. Inspection of the anal area
  2. Palpation of the anus
  3. Digital rectal examination

Additional research methods

1. Rectoscopy
2. X-ray examinations
3. Colonoscopy
4. Fistulography
5. Sphincterometry

### **PROCTIT**

Proctitis ( proctitis ) - acute or chronic inflammation of the rectal mucosa.

Acute proctitis is characterized by pain, burning sensation and fullness in the rectum, increased urge to defecate, secretion of liquid mucus, serous-bloody fluid, sometimes mixed with pus.

Chronic proctitis can develop from acute, and in some cases, independently. There are catarrhal and ulcerative forms of chronic proctitis.

In the treatment of acute proctitis, the patient needs rest, facilitated by a low-slag diet. Locally, 50 ml of a 0.5% solution of collargol or drying oil is injected into the rectum.

In chronic proctitis, the rectum should be flushed daily with a weak solution of potassium permanganate, silver nitrate (1: 5000).

For the treatment of proctitis, chronic constipation, colitis, etc., subaquatic enemas are used.

## HEMORRHOIDS

One of the most common proctological diseases. Hippocrates coined the term "hemorrhoids", which in Greek means bleeding. More than 10% of the adult population suffers from hemorrhoids, and its share among rectal diseases is about 40%.

There are a number of theories for the development of hemorrhoids. Some authors consider the cause of hemorrhoids - standing or sedentary work, chronic constipation, alcoholism, spicy food, repeated pregnancies and some diseases of internal organs. At the heart of the development of hemorrhoids is a violation of the outflow of blood through the venules from the cavernous bodies located in the wall of the rectum, which are the substrate of the hemorrhoid.

According to localization, hemorrhoids are conventionally divided into internal (or submucous) and external (subcutaneous), along the course can be acute or chronic.

During the period of precursors, the most characteristic complaints are unpleasant sensations in the anus, slight itching, and some difficulty in the act of defecation. Then bleeding of varying intensity appears. Chronic hemorrhoids are accompanied by pain in the back, arising during bowel movements and in violation of the diet. The next step is the prolapse of internal hemorrhoids. Thrombosis of nodes may occur.

Hemorrhoids should be differentiated from anal fissure, polyp, paraproctitis, villous tumor, rectal cancer.

In the initial stages of hemorrhoids, conservative treatment is indicated (regulation of the act of defecation and the consistency of feces, compliance with the hygienic regime). In chronic hemorrhoids, complicated only by bleeding, it is possible to use injections of sclerosing substances (varicocide, thrombovar).

Chronic hemorrhoids, especially with prolapse of hemorrhoids, are subject to surgical treatment.

Of the operations - the most often used are bandaging and excision of hemorrhoids in various modifications.

Before the operation, the following preparation is carried out: within 2-3 days, a strict slag-free diet, from 2 to 4 days - mechanical cleaning of the intestines; immediately before the operation, the hair in the anus is shaved off.

Pain relievers (promedol, analgin) are administered within 2-3 days after the operation. From the second day after the operation, a Pevzner zero diet is prescribed (all liquid), from about the third day, table number 1 is prescribed.

Operations are most often performed under local anesthesia. With a favorable course of the postoperative period, patients are discharged from the hospital for 8-10 days, and then for 18-21 days for light work.

## Fissure of the rectum

It ranks second in frequency after hemorrhoids. More than a third of patients are of working age; women suffer more often (more than 60% of all patients).

An anal fissure occurs as a result of damage to the mucous membrane of the anal canal with constipation and diarrhea, as well as as a result of trauma by foreign bodies contained in the feces.

In 85% of patients, the crack is localized on the posterior wall of the rectum. In the presence of a crack, symptoms are characteristic: pain during or after the act of defecation.

To detect cracks, carefully dilute the buttocks and examine the area of the anus. In this case, a crack is usually visible.

Approximately 70% of patients can be cured with conservative treatment - daily in the morning and in the evening, a cleansing enema, then after the act of defecation, a sit-down bath with a weak solution of potassium permanganate is prescribed, after which a candle (morning and evening) of the following composition is administered: belladonna extract 0.015, xeroform and novocaine equally 0.1, cocoa butter 1.7. Treatment is carried out for 4-6 weeks.

During the treatment, a fermented-vegetable diet is prescribed, with the exception of spicy, salty, bitter dishes and irritating spices, as well as alcoholic beverages (including beer).

Surgical treatment of cracks is undertaken in case of their chronic course (they perform excision of the crack, dosed sphincterotomy).

### **PARAPROCTITIS**

Paraproctitis is an inflammation of the peri-rectal tissue. There are acute and chronic paraproctitis. Men get sick more often than women (7: 3). It is caused by mixed microflora. Most modern researchers consider the most likely way of infection to enter the pararectal tissue through the ducts of the anal glands. The penetration of infection can be facilitated by dense lumps of feces, foreign bodies, trauma, etc.

Acute paraproctitis usually begins acutely, fever, chills appear, pain in the rectum, perineum or pelvis increases. This period lasts from 2 to 10 days. Then, if adequate treatment is not performed, the inflammation spreads to the cellular space and there can be three outcomes of the disease: the formation of a rectal fistula, the development of recurrent paraproctitis, and recovery.

Subcutaneous paraproctitis is the most common form (50% of all patients with acute paraproctitis). It is characterized by a painful swelling around the anus with flushed skin on it.

Submucous paraproctitis occurs in 1.9-6.3% of patients. It is detected when examining the rectum with a finger - there is a bulging of the abscess and the lumen of the intestine.

Sciatic - rectal paraproctitis (ischio - rectal) occurs in 35-40% of patients. Digital examination of the rectum reveals compaction and flattening of the intestinal wall above the anal canal.

Pelvic - rectal (pelveo - rectal) paraproctitis is a common and most severe form of acute paraproctitis. The disease develops gradually. When examining the rectum, the soreness of one of the walls of its middle or upper ampullar section is determined. A sigmoidoscopy is necessary, since the upper pole of the infiltration is not reached with a finger.

Treatment of acute paraproctitis is surgical. Basic principles of the operation: 1) opening and drainage of the abscess; 2) elimination of its internal opening through which the abscess cavity communicates with the rectum.

A radial incision is made with subcutaneous and submucosal forms of acute paraproctitis, a semilunar incision - with ishiorectal, pelveorectal and retrorectal localizations of the abscess.

The operation is performed under general anesthesia in a hospital setting.

### **Fistulas of the rectum**

Rectal fistulas should be understood as fistulous passages located near the anus. Rectal fistulas are also considered as a pathological course or abnormal communication between the rectum and adjacent tissues, pelvic organs, or the skin of the perineal-gluteal region.

The formation of fistulous passages develops in the following stages: 1) the gate of infection on the mucous membrane of the anal canal; 2) primary purulent course; 3) pararectal abscess; 4) rectal fistula.

Fistulas of the rectum are a consequence of acute paraproctitis, in which in one of the Morgan crypts there is always a more or less pronounced internal opening of the abscess.



According to the anatomical location, the fistulas are divided into subcutaneous submucosal, ischio-rectal, pelvis-rectal, retro-rectal and recto-vaginal.

In relation to the sphincter - intrasphincteric, transsphincteric and extrasphincteric.

According to the location of the fistulous openings - complete (external and internal), incomplete (external and internal) with a temporarily recurrent internal opening.

According to the clinical picture, they are simple, complex (branched, with enlargements, streaks, infiltrates), horseshoe-shaped and recurrent.

Diagnosis of rectal fistulas begins with an external examination, which determines the location of the external opening of the fistula, the number of external openings, the nature of the discharge. The closer the external opening of the fistula to the anus, the easier the fistula. On palpation, a cordlike cord corresponding to the course of the fistula can be determined. Finger examination of the rectum finds the internal opening of the fistula, which can be located in one of the crypts - anterior, posterior or lateral. The study of the fistulous tract with a bulbous probe is mandatory, it helps to determine the location of the fistula in relation to the sphincter. If the thickness of the tissues above the probe does not exceed 1 cm, then we can assume the intra- or transsphincter direction of the fistulous tract. In cases where the fistulous passage is convoluted and the probe does not pass into the rectal lumen, a 1% solution of methylene blue is injected into the fistulous passage to determine the location of the internal opening of the fistula.

Fistulography is used for complex fistulas to clarify the directions of additional moves, the presence of streaks, pockets. For subcutaneous submucosal, intrasphincteric fistulas, Gabriel's operation is used - dissection along the fistula probe and removal in the form of a small triangle of the skin and mucous membrane covering it. With transsphincter fistulas, Gabriel's operation with suturing the bottom of the wound and the intersected sphincter fibers is also applicable. With extrasphincteric fistulas with minor cicatricial changes around the internal opening, plastic surgery according to Aminev, Blinnichev or excision of the fistulous tract with suturing of the sphincter is possible. In case of recurrent extrasphincteric fistulas with large cicatricial changes, infiltrates, leaks, the ligature method is used. After excision of the fistulous tract, a silk ligature passed through the inner opening is conveniently tied on the sphincter fibers and part of the wound is sutured. The tightening of the ligature begins from the 9-15th day after the operation, when the perineal wound is performed with granulations.

During operations for rectal fistulas, fissures, epithelial-coccygeal passages, anal papillae, patients on the eve of the operation in the morning and at lunchtime receive a normal diet. In the evening, the patient can eat one egg, 50-75 g of cottage cheese without bread, drink a glass of tea.

At 21-22 hours, a cleansing enema is given. The next day, at 7 o'clock, the hair on the perineum and pubis is shaved off, a second cleansing enema is applied, and after it the patient takes a shower or a general hygienic bath. On the day of the operation (at 6: 00-6: 30), in order to avoid the development of acidosis, the patient is allowed to drink a glass of sweet tea and eat one egg. Such a breakfast at 9:30 does not interfere with anesthesia and surgery, since the stomach by this time will be free of food mass.

In the postoperative period, a zero table and chloramphenicol or phthalazol are prescribed, 0.5 g 4 times a day for three days. From the 4-5th day, patients take 30-40 grams of vaseline oil and have an independent velvety stool.

The ligature is erupted on average 21-23 days. Relapses after surgery with extrasphincteric fistulas are observed in 15-25% of patients.

The main reason for the unsuccessful results of surgical treatment of rectal fistulas is associated with an undifferentiated approach to the choice of the method of surgical treatment depending on the shape of the fistula, with insufficient processing of the internal opening of the fistula, and improper postoperative wound management.

The main measure for the prevention of rectal fistulas is radical and timely treatment of acute paraproctitis.

## **Basic principles of preoperative preparation and postoperative treatment of proctological patients**

The general principles of preparation for surgery and postoperative treatment of proctological patients differ little from those adopted in modern surgery and resuscitation. Features are determined by the specificity of the disease and surgical interventions associated with manipulations on the colon - an organ that always contains a variety of opportunistic and pathogenic aerobic and anaerobic flora, which can be relatively easily and quickly included in the wound process and determine the course of wound healing and the outcome of treatment. Therefore, the main feature of the pre - and postoperative management of proctological patients is the prevention and control of septic complications.

In this regard, in diseases of the rectum and colon, great importance is attached to: 1) correction of metabolic disturbances identified before the operation and thereby increasing the immunological reactivity of the patient's body; 2) thorough cleansing of the colon from its contents in order to prevent massive infection of wounds and peritoneum during incisions of the colon that are inevitable during surgery; 3) scrupulous observance of all the rules of asepsis during the operation and careful drainage of cavities in the depths of surgical wounds; 4) continuation of strictly justified corrective infusion, restorative and antiseptic therapy in the postoperative period.

Proctological operations, performed not for acute purulent diseases, should be considered as "clean", they cannot be performed in "purulent" operating rooms.

**Used in this lesson, new pedagogical technology: "Black Box", "Web".**

### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active work as well as in the classroom each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options Problems of owls included.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the holes is, you discussed, given addition of etiopathogenesis, clinical technique NIJ. At the end of the method the teacher says correctly answer, Explain about vannot, the degree of activity of students.

This technique contributes to the student's speech, the formation of a new critical thinking, as In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competition.

Annotation options:

4. Diagnose: The patient has itching in the anal area, the presence of a bloody streak in the feces.
5. Make a diagnosis: A 65-year-old patient has a large amount of scarlet blood during and after the act of defecation.

### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions about the denominated occupation.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared any question (which itself needs to know the complete answer), to hold on Heff hank yarn and transferring any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. Participants continue to ask and answer questions until everyone is on the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Caution students that we should be attentive to GOVERNMENTAL to each answer, because they do not know who to throw a hank.

## **6.2. Analytical part**

**Situational tasks:**

6. 1. A 65-year-old patient has a large amount of scarlet blood after and after the act of defecation.

I of . Your diagnosis:

A. hemorrhoids \*

B. colitis

B. gastritis

D. Fissure of the anus

E. colon polyp

II . clinical picture of hemorrhoids

A. scarlet blood, in large quantities \*

B. bloating

B. Redness of the skin

D. Abdominal pain

D. there is no correct answer

### Practical part

A quest for practical skills (questioning the patient about the used conductive inspection and examination of the body parts to carry out a differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment).

## 1. INTERVIEW OF THE PATIENT, GENERAL INSPECTION AND INSPECTION OF PARTS OF THE BODY.

### Goal:

- obtaining the information necessary for diagnostics;
- assessment of the likelihood of the disease;
- identification of other sources of information (relatives, other doctors, etc.);
- establishing a trusting relationship with the patient;
- assessment of the individual patient and his attitude to the disease (internal ka p Tina's disease);
- assess the state of consciousness and mental status of the patient, his claim of decomposition, a general view, the state of external coverings and the individual sections of t e la.

**Indications:** the survey is mandatory for all patients who are in consciously and at all times; examination is carried out for all patients.

**Equipment:** well-lit wards, doctors' offices, fluorescent LIGHT e Nia.

**Test conditions:** absence of extraneous persons of confidence b nstallation.

### Performed stages (steps):

| No.   | Event                                      | Not s full | Completely correctly s full |
|-------|--------------------------------------------|------------|-----------------------------|
| 1     | Passport data inquiry                      | 0          | five                        |
| 2     | Collection of complaints                   | 0          | fifteen                     |
| 3     | Taking a medical history                   | 0          | 20                          |
| 4     | Taking a life history                      | 0          | fifteen                     |
| five  | Epidemiological and llergich e sky history | 0          | five                        |
| 6     | Objective examination of the patient       | 0          | five                        |
| 7     | Make a survey plan                         | 0          | five                        |
| eight | Correct diagnosis                          | 0          | five                        |
| nine  | Differential diagnosis                     | 0          | 20                          |
| ten   | Draw up a treatment plan                   | 0          | five                        |
|       | Total                                      | 0          | 100                         |

## 2. CONDUCT DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**The goal :** to train to conduct the differential diagnosis of an eye and justify Mr. definitively diagnosed.

| No. | Event | Not s full | Completely |
|-----|-------|------------|------------|
|-----|-------|------------|------------|

|   |                                                                                                                                                                    |   |                  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------|
|   |                                                                                                                                                                    |   | correctly s full |
| 1 | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                           | 0 | 25               |
| 2 | Differential diagnosis of major Klinichev e Sgiach syndromes                                                                                                       | 0 | 35               |
| 3 | Based on complaints, history, and objective data RESULT a comrade of Lab and Thorn instrumental studies and differential dia g -diagnosis set definitive diagnosis | 0 | 40               |
|   | Total                                                                                                                                                              | 0 | 100              |

### 3. APPOINT APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                                  | Not s full | Completely correctly s full |
|------|--------------------------------------------------------------------------------------------------------|------------|-----------------------------|
| 1    | The study of the characteristics of leche b GOVERNMENTAL tables on Pevzner                             | 0          | ten                         |
| 2    | Choosing the right diet table for your diagnosis                                                       | 0          | ten                         |
| 3    | Evaluation of the usefulness of the diet                                                               | 0          | 20                          |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy         | 0          | 20                          |
| five | In accordance with the diagnosis, COG e Stu disease stage and desig and chenie symptomatic ter and FDI | 0          | 20                          |
| 6    | Preventive measures                                                                                    | 0          | 20                          |
|      | Total                                                                                                  | 0          | 100                         |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                                                  |
|-----|-----------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes and analyzes independently . Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Inter to tive games properly takes about a Nova solutions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes and analyzes independently . Solves                                                                                                                                                                                                                                                    |

|        |          |                               |                                                                                                                                                                                                                                                                                                                                                                      |
|--------|----------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        |          |                               | situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes part in them.                                                                                                                                                                                       |
| 3      | 86 - 90% | Excellent " 5"                | Questions raised covered full of story, but there are 1-2 inaccuracies in the response. With a mostoyatelno analyzes. Inaccuracies in solving situational problems, but with the right approach. Actively participates in interactive games, makes the right decisions.                                                                                              |
| 4      | 81-85%   | Good " 4"                     | Questions raised covered full of story, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, speaks with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not sufficient justification for it but. He actively participates in interactive games, makes decisions correctly. |
| five   | 76-80%   | Good " 4"                     | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented it. Actively participates in interactive games. On case studies gives incomplete solutions.                                                                                                                             |
| 6      | 71-75%   | Good " 4"                     | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented it. On case studies gives Nepo l decisions.                                                                                                                                                                             |
| 7      | 66-70%   | Satisfied literally " 3"      | The correct answer to half of fasting in PARTICULAR issues. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                             |
| eight  | 61-65%   | Satisfied literally " 3"      | The correct answer to half of the questions posed. He tells neuv e Renno has accurate representations only on specific issues topics. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                                                                                                                  |
| nine   | 55-60%   | Satisfied literally " 3"      | Answer with errors to half of the questions asked. He tells neuv e Renno has partial presentation on the topic. Situational tasks solved none is true.                                                                                                                                                                                                               |
| ten    | 50-54%   | Not satisfied literally " 2 " | The correct answer to 1/3 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                                                                                  |
| eleven | 46-49%   | Unsatisfied sly " 2"          | The correct answer to 1/4 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                                                                                  |
| 12     | 41-45%   | Unsatisfied                   | Coverage of 1/5 of the questions posed with                                                                                                                                                                                                                                                                                                                          |

|          |        |                            |                                                                                |
|----------|--------|----------------------------|--------------------------------------------------------------------------------|
|          |        | sly<br>" 2"                | errors. It gives incomplete and partially<br>n e correct answers to questions. |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2" | 1/10 coverage of the issues in the district ie the<br>right approach.          |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2" | Doesn't give answers to questions.                                             |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                                | Lesson forms                                                                                                                         | Prolonged s NOSTA<br>min. 90 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1    | Introductory word of the teacher<br>(Settle and of threads)                                                                                                                                                                         |                                                                                                                                      | five                         |
| 2    | Discussion topics associated<br>practical I ment, baseline<br>assessment of student learning<br>using new pedagogical<br>technologies (small groups, the<br>situation n nye tasks, business<br>games, slides in and deofilmy, etc.) | Poll, explanation                                                                                                                    | 25                           |
| 3    | Summing up the discussion                                                                                                                                                                                                           |                                                                                                                                      | five                         |
| 4    | Providing students with visual aids<br>and giving explanations to them                                                                                                                                                              |                                                                                                                                      | ten                          |
| five | Independent work of students<br>from a military skills                                                                                                                                                                              |                                                                                                                                      | fifteen                      |
| 6    | Clarification of the extent to which<br>the target classes based on the<br>disbursed theor and iCal<br>knowledge and the results of<br>Practical and cal operation and in<br>view of the assessment of the<br>group                 | Oral questioning,<br>written questioning,<br>testing, inspection<br>p e result Pract and cal<br>work, discussion<br>obsu Well denie. | 25                           |
| 7    | The conclusion of the teacher for<br>this lesson. Assessment of<br>students' knowledge according to a<br>100 point system and its<br>announcement. Giving an<br>assignment for the next lesson (set<br>of questions)                | Information, questions<br>to<br>himself about pendent<br>Getting on Preparations                                                     | five                         |

### 10. Test questions

- Anatomical and functional features of the rectum.
- Blood supply and lymph drainage from various parts of the rectum.
- Methodology for preparing a patient for endoscopy of the rectum and colon.
- Classification of the most common diseases of the rectum.
- Methods of examination of proctological patients.
- Etiology, pathogenesis, clinic and complications of various diseases of the rectum.
- Classification of pararectal fistulas.
- Methods of conservative and surgical treatment of proctological patients.
- Features of preoperative preparation and management of the postoperative period during surgery on the rectum.

### 11. Recommended reading

1. Sh.I. Karimov - "Surgical diseases" Tashkent 2005
2. A.M. Aminev, Guide to Proctology. Kuibyshev 1973
3. Sh.I. Karimov, N.Kh. Shamirzaev., Surgical diseases. Tashkent 1994
4. I.Yu. Yudin. Surgical treatment of ulcerative colitis: the possibilities of reconstructive surgery, Moscow 1976.
5. Sh. Drobny "Bowel surgery", Budapest 1983.
6. M.F. Mazurik "Outpatient Surgery" 1988

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## **TOPIC № 21. ACUTE INTESTINAL OBSTRUCTION.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, sling h naya
- posters, tables, disease classification schemes, treatment schemes, radiographs, videos.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Introducing students with IPOs, the reasons for its development, clinical features, differential diagnosis, optimal treatment, postoperative care, re and bilitatsiey patients.

Tasks

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to justify the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- to acquire certain practical skills examination bol s GOVERNMENTAL with IPOs;
- **n auchitsya special methods of investigation.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical skills of b follow patients with IPOs that have special methods of examination of these patients to determine the indications and contraindications for surgical im e -interference.

### **4. Motivation**

Suggestion students need adequate timely surgery before the development of severe complications and in their development - meeting the most informative and modern - GOVERNMENTAL methods of diagnosis, surgical treatment, familiarity with possible complications is the operation and the operational period of, prevention. Development Klinichev e Skog students thinking. Development of a modern view of the problem from the perspective of world medicine and general practitioner.

### **5. Intersubject and intrasubject communications**

Teaching this subject is based on the students' knowledge of anatomy basics Normal s Noah and Pathological Physiology. Obtained knowledge during the classes will be

used during the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

## 6. Content of the lesson

### 6.1. Theoretical part

Acute intestinal obstruction (*acute intestinal obstruction, ileus, acute ileus*) is a condition that develops when **the passage of contents along the to and the cervical tube stops**.

The incidence of acute intestinal obstruction is relatively low and amounted to wish to set up the various data from **4 to 20** cases per **100,000** population. Ideas about the stalemate of the genesis of intestinal obstruction evolved in the struggle between two theories: **the reflex and intoksik and translational**.

#### **Etiology and classification of acute intestinal obstruction**

Among the etiological factors of acute intestinal obstruction, it is customary to distinguish **predisposing** and **producing ones**.

**Contributing** factors are the basis for the subsequent development of acute Kish h Noah obstruction. They can be **congenital** and **acquired**.

By **birth** are all sorts of peculiarities and anomalies in the anatomical structure of the gut and intestinal wall: **Elongation colon sections** (megacolon, dolichosigma), **intestinal malrotation**, **congenital stenosis and intestinal occlusion** (eg., and measures achalasia rectum), **malformations of the neuromuscular gut apparatus** (colon agangliosis or Hirschsprung's disease).

By **acquired** factors include adhesions in the abdominal cavity after surgery developing and inflammatory diseases of the abdominal cavity, sold e tennye **interior and exterior hernia**, the presence of **tumors**, obturation lumen **gallstones phytobezoars fecal stones, helminths**. It proved predisposing role of **irregular, unbalanced and untill a tatochnogo power** in the development of susceptibility to ileus.

**Dynamic** (functional) intestinal obstruction such forms are called ileus in which termination of passage of gut contents occurs **due Hard Of e Nia her motor function**. The mechanisms of this disorder are varied as regular I tion motor is carried out by a complex set of neurohormonal effects. Ba in nye causes ileus this form are given in the table. Dynamic intestinal cont of divergence can be spastic and paralytic.

**Strangulation CACH**, occurring in **15-40%** of cases from different obturation N hydrochloric primarily to the fact that in addition to *compression* intestine (from the outside) is compressed and mesentery that straight and leads to **poor circulation in the intestine segment**. In this form of obstruction increases rapidly destructive changes in the strangulated loop, fast-paced endoto to sycosis and peritonitis. The strangulation type of intestinal obstruction includes **volvulus, nodulation and entrapment of the intestine in the external and internal hernial in the mouth**.

**Mixed** forms of IPOs have symptoms and obstructive and strangulation raznovi d Nosta ileus. A striking example of the mixed nature of IPOs is intussusception, the primarily e - governmental occurring in children. In intussusception intestine portion with the mesentery introduce m camping in the neighbor intestine portion, the lumen occlusive own wall, and the compression of the marginal vessels leads to acute ischemia invaginate about vavshey intestine.

**Adhesive** intestinal obstruction occupies a special place among other forms of ileus. Currently it is - most often (in **78-86%** of cases) common type of acute Kish h Noah obstruction.

#### **The clinical picture and diagnostic program at acute intestinal n e patency**

When examining a patient with suspected **acute intestinal obstruction**, it is necessary to obtain answers to the following questions:

- Does the patient have intestinal obstruction?
- What character is it (mechanical or dynamic)?
- What is the form of mechanical obstruction (obstructive or strangulation naya)?
- How pronounced are the violations of the water-electrolyte balance, acid-base state and endotoxiosis?



The first step in the diagnosis of AIO is the **collection of anamnesis**. It should be the neck of a thread, whether the patient had **predisposing** (congenital malformations of the digestive tract development, transfer n nye operation, signs of tumors of the abdominal cavity, etc.) and **producing** (as rights and lo physical or load food) IPOs factors. Is required to carefully evaluate **the terms and x and rakter beginning of the disease, especially pain**, the development of ill and Nia before the inspection.

Periodically developing peristaltic waves form typical **cramping pains**, alternating with light intervals. **Delay of the chair** is not a permanent feature of acute intestinal n e patency and occurs only in **60-70%** of patients.

At the beginning of her sick it does feel a little better about Dr. Nako picture soon changed. **Bloating** is progressing. In the later stages of intoxication phase reappearing I etsya **vomiting**.

Along with flatulence important evidence in favor of the acute intestinal impassable for STI is **apparent intestinal peristalsis - a symptom Hoses (Schlange)**, either alone, I tion and induced by palpation or effleurage on the anterior abdominal wall.

Visible abdominal asymmetry, visible peristalsis, palpable swollen bowel loops, and high tympanitis on percussion are called Wal **syndrome**. Participation in the abdomen stomach and Research Institute is stored for a long time, until the development of excessive flatulence or Periton and that.

Palpation of the abdomen in a patient with AIO should be performed as carefully as possible. Gy in bye, tough action can not only cause unnecessary suffering to the patient (in response to palpal a tion may develop painful contractions), but also provoke gap diastatic pref about dyaschey or strangulated bowel that will weight considerably worsen the condition of the patient and so forth on the prognosis. On palpation, it is necessary to assess the **consistency of the abdominal wall, areas of local pain, tension of the abdominal muscles, symptoms of peritoneal irritation**. It is important not to confuse **resistance** n e Independent user abdominal wall above the swollen intestine loops and **tension** it during stimulation peritoneum. Sometimes palpation is possible to determine the tumor, infiltration, and cervical node or intussusception.

The study of peritoneal symptoms must also be carried out with great care. Such soreness will not indicate irritation of the peritoneum. For d of stovernyh results **symptom Blumberg-Shchetkina** should be checked when the superficial palpation.

An important sign assessed by palpation is the "**splash noise**" described by **I.P. Sklyarov (1923)**. This symptom is detected with a slight lateral concussion of the abdominal wall, it can be localized or defined throughout the abdomen. The emergence of the f e nomen indicates the presence overstretched paretic loop filled with liquid on Stu and gas. **Mathieu (Mathieu)** has described the emergence of splashing noise at fast percussion nadpupochnoy of B domain.

When percussion with plessimetrom simultaneously with auscultation can reveal **symptom Kivulya (Kiwull, 1902)**, percussion sound with a clear meta l-crystal shade.

With a significant bloating is possible to identify a **symptom L about teissen (Lotheissen)** - listening through the abdominal wall of the respiratory sounds and heart tones, but which p IU is thus not carried out. Auscultation also possible to detect a falling drop noise (**B m ptomu S.I.Spasokukotskogo**).

Mandatory step examination of any patient entering the emergency item on the row in the surgical department, and especially patient with suspected acute intestinal obstruction, a **digital examination of the rectum**. In this case, sometimes it is possible to discover the cause of the obstruction - a tumor of the rectum, fecal obstruction. Furthermore, in this study, can be determined dehiscence anal sfinkt e ra ballonoobraznaya empty ampoule and rectum is known as a **symptom OBUKHOV in tion hospitals, symptom I.I.Grekova (1928) or symptom Hogenegga (Hochenegg)**. When intussusception relaxation anal sfinkt e ra is known as a **symptom of Hirschsprung (Hirschsprung)**.

X-ray examination is required to perform all patsie n comrade with acute intestinal obstruction. In the first stage, a **review X-rays on the Distribution of the abdominal**

**cavity** . The picture is taken **in a standing position in frontal projection** . Nal and Chie on radiographs horizontal liquid levels (bowls Kloiher) and to n turiruemyh kerkringovskih folds (Casey positive symptom or "fishbone") is the indisputable sign of acute intestinal radiologic neprohod and bridges. In earlier stages of ileus may be determined radiographically gas cluster (without uro in fluid AEs) in the loop of intestine respectively determined clinically symptom Val - **symptom Gintse (Hintze)** . In correspondence stretched and strained bowel loop gas accumulation zone in the form of an arch points **B m ptom Shtirina (Stierlin)** .

Currently, **ultrasound methods** are effectively used in the diagnosis of AIO . Ultrasonography reveals the so-called **intraluminal fluid deposition syndrome** , which is defined in all patients with ileus. Computed tomography is highly informative in the diagnosis of intestinal obstruction. CT allows you to reliably establish the presence, level and severity of the disease.

### **New pedagogical technologies used in this lesson: "Black box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Possible questions are attached.) Students should provide a detailed justification for their answer.

The student is given 3 minutes to think over each answer. Then the answers are discussed, and an addition is given on the etiopathogenesis and clinical course. At the end of the method the teacher says correctly answer, Expl about vannost, the degree of activity of students.

This technique contributes to the development of student speech, form the foundations of the critical e Skog thinking because In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 45-year-old patient complains of epigastric pain, nausea, vomiting, non-discharge of stools and gases. 10 years ago, underwent surgery in the abdomen, 12:00 n and ass began abdominal pain, nausea. The general condition is of moderate severity, the skin is flabby, dry. Tongue with leucorrhoea. Belly n e as swollen, painful on palpation around the navel, fluoroscopy - multiple bowls Clos d Berg. Your diagnosis.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed associated I Tia.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (in the cat about ing himself must know the full answer), hold the thread end and throwing the skein any student.
4. The student who received the skein answers the question (while the participant who asked him comments on the answer) and passes the question relay on. Members continue to ask in a millet and respond to them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive to each of holes is, that because they do not know who to throw a hank.

### **6.2. Analytical part**

#### **Situational tasks:**

A 45-year-old patient complains of epigastric pain, nausea, vomiting, non-discharge of stools and gases. 10 years ago, underwent surgery in the abdomen, 12:00 n and ass began abdominal pain, nausea. The general condition is of moderate severity, the skin is flabby, dry. Tongue with leucorrhoea. Belly n e as swollen, painful on palpation around the navel, fluoroscopy - multiple bowls Clos d Berg. Your diagnosis.

A. Exacerbation of duodenal ulcer

- B. Acute appendicitis
- B. Acute pancreatitis
- D. Acute adhesive intestinal obstruction
- E. Perforation of duodenal ulcer
- II . Optimal tactics:
- A. outpatient treatment
- B. direction in gastroenterology
- B. Emergency operation
- D. Conservative treatment for 2 hours in order to permit the intestinal impassable on STI, in the absence of the effect of surgical treatment
- D. everything is wrong

### 6.3. Practical part

A quest for practical skills (to hold the differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment, z o n dirovanie stomach ).

#### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**The goal :** to train to conduct differential diagnosis and justify the final dia g ERA.

| No. | Event                                                                                                                                                                    | Not<br>ful l Neal | Completely<br>correctly s full |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0                 | 25                             |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                          | 0                 | 35                             |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0                 | 40                             |
|     | Total                                                                                                                                                                    | 0                 | 100                            |

#### Determination symptom Sklyarova at acute intestinal n e patency .

**Objective:** To identify signs of acute intestinal obstruction.

**Indications:** Absence of stool and gas, abdominal distention.

**Equipment:** Daybed, room with adequate lighting.

**Steps to be taken:**

| No.  | Event                                                                                                                                                               | Not<br>ful l Neal | Completely<br>correctly s full |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|
| 1    | The position of the patient. Determination Sklyarova symptom for acute intestinal neproh about gence position of the patient is carried out in l th Ms on the back. |                   | fifteen                        |
| 2    | The doctor's approach to the patient is from the right side.                                                                                                        |                   | 20                             |
| 3    | Applying a doctor in the hands of mesogastric b domain.                                                                                                             |                   | 20                             |
| 4    | Carrying motion palpation in mesogen and stralnoy area.                                                                                                             |                   | 20                             |
| five | Assessment of Sklyarov's symptom.                                                                                                                                   |                   | 25                             |
|      | Total                                                                                                                                                               |                   | 100                            |

**Certain symptoms Kivulya in acute intestinal indirectly to walk .**

**Objective:** To identify signs of acute intestinal obstruction.

**Indications:** Absence of stool and gas, abdominal distention.

**Equipment:** Daybed, room with adequate lighting.

**Steps to be taken:**

| No.  | Event                                                                                                                                                         | Not full | Completely full |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1    | The position of the patient. Determination of Kivul's symptom in acute intestinal obstruction and bridging is carried out with the patient lying on his back. |          | fifteen         |
| 2    | The doctor's approach to the patient is from the right side.                                                                                                  |          | 20              |
| 3    | Applying a doctor in the hands of mesogastric b domain.                                                                                                       |          | 20              |
| 4    | Carrying percussion movement in mesogen and stralnoy area.                                                                                                    |          | 20              |
| five | Assessment of Kivul's symptom.                                                                                                                                |          | 25              |
|      | Total                                                                                                                                                         |          | 100             |

### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying for content on the go, prepare the stomach for surgical interventions, the bleeding of the stomach and duodenum 12, gastrostasis.

| No.   | Event                                                                                                                     | Not full | Completely full |
|-------|---------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0        | ten             |
| 2     | Wear rubber gloves.                                                                                                       | 0        | ten             |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0        | ten             |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0        | ten             |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0        | ten             |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0        | ten             |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0        | ten             |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0        | ten             |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0        | ten             |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0        | ten             |
|       | Total                                                                                                                     | 0        | ten             |

## 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment        | Student knowledge level                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, an a lyse.                 |
| 2    | 91-95%                | Excellent<br>" 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes p e sheniya.                                                                               |
| 3    | 86 - 90%              | Excellent<br>" 5" | Questions raised covered full of Stu, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>" 4"      | Questions raised covered full of Stu, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                       |
| 6    | 71-75%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                        |
| 7    | 66-70%                | Satisfied         | The correct answer to half of                                                                                                                                                                                                                                                                                                                       |

|          |        |                                     |                                                                                                                                                                                                                               |
|----------|--------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |        | literally<br>" 3"                   | the questions asked. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                               |
| nine     | 55-60% | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                       |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                             |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                             |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2"          | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                         |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2"          | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                       |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2"          | Doesn't give answers to questions.                                                                                                                                                                                            |

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                                 | Lesson forms                                                   | PRODO l resident s NOSTA<br>min. 90 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------|
| 1    | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                                                                | five                                |
| 2    | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation                                              | 25                                  |
| 3    | Summing up the discussion                                                                                                                                                                                            |                                                                | five                                |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                                  |                                                                | ten                                 |
| five | Independent work of students from a military skills                                                                                                                                                                  |                                                                | fifteen                             |
| 6    | Clarification of the extent to which the target classes based on the disbursed                                                                                                                                       | Oral survey<br>IPR s menmy survey<br>tests, checking Practical | 25                                  |

|   |                                                                                                                                                                                                            |                                                                             |      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------|
|   | theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group                                                                                         | results and cal work, discussion obsu Well denie.                           |      |
| 7 | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information in a millet to myself about pendent Getting on Preparations | five |

### 10. Test questions

1. Reasons for the development of AIO.
3. Classification of OKN
4. The main complications of AIO.
5. Indications for urgent surgical treatment in AIO
6. The purpose of surgical treatment of patients with AIO.

### 11. Recommended reading

1. Galperin Yu.M. Paresis, paralysis and functional intestinal obstruction. / Moscow to VA . : Medicine, 1975
2. Dairov A.B., Elkin M.A. . Obstructive ileus / Alma-Ata: To a zahstan 1981
3. Dederer Yu.M. Pathogenesis and treatment of acute intestinal obstruction / Moscow.: M e Diqing 1971
4. Eryukhin I.A., Shashkov B.V. Endotoxiosis in a surgical clinic. / Saint Petersburg: Logos, 1995
5. Zhenchevsky R.A. Adhesive disease. / Moscow: Medicine, 1989

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

[http : // www . consilium - medicum . com / media / refer](http://www.consilium-medicum.com/media/refer)

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

## THEME № 22. ACUTE PERITONITIS.

### 1. Place of the lesson, equipment

- Department of Faculty and Hospital Surgery; training room, ward, dressing room
- posters , tables, charts classification as tion of the disease, the treatment regimen, radiographs, video films.

### 2. Duration of study of the topic

The number of hours is 4.9.

### 3. Purpose of the lesson

To teach students the methods of examination, diagnosis, differential diagnosis, the choice of treatment methods using the example of supervised patients, to disassemble the etiology, pathogenesis, clinic, course and general principles of treatment of peritonitis, postoperative management of patients.

### Tasks

***The student should know:***

10. Definition, frequency, etiopathogenesis, clinical picture, diagnosis and treatment of peritonitis.

11. The principles of conservative therapy for peritonitis.
  12. To teach the diagnosis of peritonitis, preoperative preparation.
4. Indications for surgical treatment of peritonitis.

***The student should be able to:***

- Perform practical skills - to acquire certain practical and calculation skills in examining patients with peritonitis, to carry out special methods of examination data of patients, objectified the indications and contraindications for surgical interventions.

**4. Motivation**

Suggestion students need for timely adequate operation to the development of serious complications and in their development - familiarity with and more informative and modern methods of diagnosis, surgical and Skog treatment of patients, familiarity with possible complications is the operation and the operational period of Prof. and galaxies, ... Development of students' clinical thinking. Development of present-day alternating view of the problem the issue from the perspective of world medicine and general practitioners.

**5. Intersubject and intrasubject communications**

Teaching this subject is based on the students' knowledge bases and normal, normal and pathological physiology of blood circulation. Obtained knowledge during the classes will be used in the Research Institute of Gastroenterology, internal medicine and other clinical subjects.

**6. Content of the lesson**

**6.1. Theoretical part**

Peritonitis is a serious complication of various diseases and injuries of the abdominal organs. The most common peritonitis, in which intestinal contents are secreted into the abdominal cavity. The loss of intestinal contents depends on the nature of peritonitis, the size of the defect in the intestinal wall and the patient's diet. The higher the level of the intestine is peritonitis, where the liquid and the most active contents are, the more significant the loss of intestinal contents, and the place with it of water, proteins, electrolytes and enzymes, and the effect on the surrounding tissues is more destructive. If we take into account that the formation of peritonitis is preceded, as a rule, by a pronounced purulent-inflammatory process leading to severe intoxication, then the formation of peritonitis against such a background leads not only to exhaustion, but also to additional infection of the wound, formation of streaks, and spread of infection, thereby, aggravating the purulent-inflammatory process and increasing intoxication.

Acute peritonitis is an inflammation of the visceral and parietal peritoneum, which is accompanied by severe general symptoms of the disease of the body and, within a short time, leads to serious, often irreversible damage to vital organs and systems. This is one of the most severe complications times of personal injuries and diseases of the abdominal cavity. There are two types of peritoneal injuries - open and closed.

**Classification of peritonitis.** In the last of day tend to concise classification of peritonitis. So, A.M. Karjakin (1968) divides peritonitis only to local and once cast, VI Pods with coauthors (1967) distinguishes local diffuse and diffuse (general) peritonitis. K.S. Simonyan (1971) believes that hospital incidence of peritonitis does not play a role and Vyd Vigano classification in which peritonitis is considered from the point of view gaperergicheskikh reactions, releasing during peritonitis three stages - phases: reactive, toxic and terminal.

The simplest and most convenient for clinical practice is the classification of peritonitis given by B.D. Savchuk (1979).

In the clinical course of peritonitis, there are three stages of development of acute purulent peritonitis.

**1. Reactive stage of peritonitis** (first 24 hours, with perforated - 12 hours) - the stage of maximum expression of local manifestations: acute pain syndrome, protective muscle tension, vomiting, motor excitement, etc. Common symptoms: increased heart rate up to 120 and more, increased blood pressure, shortness of breath, etc., are typical manifestations more for painful shock than intoxication.



**2. Toxic stage of peritonitis** (24-72 h, with perforated - 24 h) - the stage of subsiding of local manifestations and the prevalence of general reactions characteristic of severe intoxication: sharpened facial features, pallor, inactivity, euphoria, pulse more than 120 beats, decrease BP later vomiting, hectic nature pace ture, considerable purulent toxic shift in blood counts. From the local manifestations of the toxic stage is characterized by a decrease bo left syndrome, stomach protective voltage, increasing flatulence.

**3. End-stage** (more than 72 hours , when perforated - more than 24 hours) - the stage of deep intoxication on the verge of reversibility: Hippocratic face, weakness, prostration, often intoxication delirium, significant respiratory distress and cardiovascular activity STI, profuse vomiting of fecal odor , dropping the temperature pho not sharp-pyo-toksiches one shift in the formula of blood, sometimes tank teriemiya. From local manifestations characterized by a complete absence of ne ristaltiki, significant bloating, diffuse pain throughout the abdomen.

Emergency preoperative preparation of patients with peritonitis should be individual, taking into account concomitant diseases and intensive , with targeted correction of water-salt balance, acid base balance, protein metabolism and geodynamic disturbances, under the control of biochemical studies. It occupies a special place premedication and evacuation of the contents zhelud ka. The duration of preoperative preparation should not pre excess of 2 hours.

The method of choice of anesthesia for peritonitis is general endotracheal anesthesia with controlled breathing, which allows the elimination of pain, contributes to the correction and normalization of neurocirculatory and neurohumoral reactions of the body.

When establishing the diagnosis of acute peritonitis, in the vast majority of patients, a midline laparotomy is used as an operational access, since this access is less traumatic and makes it possible to conduct an adequate revision of the abdominal organs.

**If the source of peritonitis is an organ that can be removed** (appendix, gallbladder), and technical conditions allow this, it is advisable to radically remove the focus of infection from the abdominal cavity. In case of perforation of a hollow organ (for stomach ulcers, duodenal ulcers, colon diverticulum, stomach or colon cancer), suturing of the perforated hole is most often performed, especially if more than 6 hours have passed since the perforation and massive bacterial contamination of the abdominal cavity can be expected. In the event of a ruptured diverticulum or cancer, suturing of the organ defect is usually not feasible. In these cases, resection of the affected organ is indicated (if technically feasible) or the imposition of a discharge stoma. In postoperative peritonitis caused by the failure of the sutures of the previously imposed anastomosis, as a rule, it is not possible to suture the defect in the anastomosis, due to pronounced inflammatory-infiltrative changes in the surrounding tissues, therefore, more often it is necessary to limit ourselves to bringing a double-lumen drainage tube to the hole for aspiration of the intestinal contents of this area to delimit the focus infection or the formation of a fistula, or the removal of the anastomosis (interintestinal) from the abdominal cavity in the form of a stoma, to the anterior abdominal wall. The abdominal cavity is thoroughly dried with an electric suction and gauze napkins, loose fibrin deposits are removed. Then you should rinse the abdominal cavity with a solution of antiseptic agents: solutions of furacilin, dioxidine, chlorhexidine.

Before suturing the laparotomic wound of the anterior abdominal wall, a prerequisite is drainage of the abdominal cavity through counterperatures in the subcostal or iliac regions. Methods for draining the abdominal cavity completely depend on the degree of damage to the peritoneum. So, with local peritonitis, drainage is installed in the affected area, with diffuse peritonitis - 2 or 3 drains, for control and intra-abdominal administration of antibiotics.

For a practical doctor, diffuse purulent peritonitis, which is also an absolute indication for emergency surgical intervention , is of particular interest . Timely diagnosis of early forms of peritonitis and adequate surgical intervention are the key to success in the treatment of this formidable disease.

Operational intervention in this case should include:

- revision of the abdominal organs and elimination of the source of peritonitis,

- sampling exudate from the peritoneal cavity to express bacterioscopy, and bacteriological analysis of the microflora seeding for determining sensitivity to antibiotics.
- evacuating exudates, sanitation and abdominal lavage with ANTISEPTIC-Th Skim solutions (5-8 liters furazilina solution, Ringer's solution, physiological saline or rivanol).
- novokainization of the mesentery of the small intestine or mouth with Credited-set mikroiirrigatora for drip novocaine solution with a view to preventing intestinal atony.
- transnasal intestinal intubation by introducing a 2-lumen nasoenteric probe, for evacuation of the gastrointestinal tract contents, intestinal lavage and enteral tube feeding of the patient in the postoperative period.
- drainage of the abdominal cavity to control and conduct peritoneal lavage or dialysis in the postoperative period.

The operation is completed according to the indications: layer-by-layer suturing of the wound, suturing through all layers (tying them with a bow) or applying a zipper to the wound (for programmed revision of the abdominal organs) or leaving it open (laparostomy) for open management of patients.

**Used in this lesson, new pedagogical technology: "Black Box", "Web".**

#### USING THE BLACK BOX METHOD

The method provides for joint activities and active work as well as in the classroom each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options Problems of owls included.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then the holes is, you discussed, given addition of etiopathogenesis, clinical technique. At the end of the method the teacher says correctly answer, Explain about yourself, the degree of activity of students.

This technique contributes to the student's speech, the formation of a new critical thinking, as In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competition.

Annotation options:

1. Diagnose: The patient has a fever, pain throughout the abdomen, dry mouth.
2. Make a diagnosis: A 65-year-old patient after fasting for 24 days suddenly developed severe epigastric pain, which then spread throughout the abdomen.

#### USING THE WEB METHOD

Steps:

1. Pre students are given time to prepare questions about their own occupation.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (which itself needs to know the complete answer), to hold on to the hank yarn and transferring any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. Participants continue to ask and answer questions until everyone is on the web.
5. As soon as all students finish asking questions, the student holding the coil returns it to the participant from whom he received the question, while asking his own question, etc., until the coil is completely "unwound".

Note: Caution students that we should be attentive to each answer, because they do not know who to throw a hank.

### 6.2. Analytical part

**Situational tasks:**

3. 1. The patient has a fever, pain throughout the abdomen, dry mouth, board-like abdomen.

I of . Your diagnosis:

A. peritonitis \*

- B. colitis
- B. gastritis
- G. myalgia
- D. arthrosis
- II . clinical picture of peritonitis
- A. pain in the whole abdomen \*
- B. bloating
- B. Redness of the skin
- G. No pain
- D. there is no correct answer

#### 6.4. Practical part

A quest for practical skills (questioning the patient about the used conductive inspection and examination of the body parts to carry out a differential diagnosis and to substantiate a definitive diagnosis, assign an appropriate diet and routine treatment).

#### 1. INTERVIEW OF THE PATIENT, GENERAL INSPECTION AND INSPECTION OF PARTS OF THE BODY.

##### Goal:

- obtaining the information necessary for diagnostics;
- assessment of the likelihood of the disease;
- identification of other sources of information (relatives, other doctors, etc.);
- establishing a trusting relationship with the patient;
- assessment of the individual patient and his attitude to the disease (internal ka p Tina's disease);
- assess the state of consciousness and mental status of the patient, his claim of decomposition, a general view, the state of external coverings and the individual sections of the body.

**Indications:** the survey is mandatory for all patients who are in consciously and at all times; examination is carried out for all patients.

**Equipment:** well-lit wards, doctors' offices, fluorescent LIGHT e Nia.

**Test conditions:** absence of extraneous persons of confidence b nstallation.

##### Performed stages (steps):

| No.   | Event                                      | Not s full | Completely correctly s full |
|-------|--------------------------------------------|------------|-----------------------------|
| 1     | Passport data inquiry                      | 0          | five                        |
| 2     | Collection of complaints                   | 0          | fifteen                     |
| 3     | Taking a medical history                   | 0          | 20                          |
| 4     | Taking a life history                      | 0          | fifteen                     |
| five  | Epidemiological and llergich e sky history | 0          | five                        |
| 6     | Objective examination of the patient       | 0          | five                        |
| 7     | Make a survey plan                         | 0          | five                        |
| eight | Correct diagnosis                          | 0          | five                        |
| nine  | Differential diagnosis                     | 0          | 20                          |
| ten   | Draw up a treatment plan                   | 0          | five                        |
|       | Total                                      | 0          | 100                         |

#### 2. CONDUCT DIFFERENTIAL DIAGNOSIS AND JUSTIFY FINAL DIAGNOSIS.

**The goal :** to train to conduct the differential diagnosis of an eye and justify Mr. definitively diagnosed.

| No. | Event                                                                            | Not s full | Completely correctly s full |
|-----|----------------------------------------------------------------------------------|------------|-----------------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym | 0          | 25                          |

|   |                                                                                                                                                                         |   |     |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|
|   | disease                                                                                                                                                                 |   |     |
| 2 | Differential diagnosis of major Klinichev e Sgiach syndromes                                                                                                            | 0 | 35  |
| 3 | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis, make a final diagnosis | 0 | 40  |
|   | Total                                                                                                                                                                   | 0 | 100 |

### 3. APPOINT APPROPRIATE DIET AND Routine TREATMENT.

**Goal:** Treat the disease and achieve remission

| No.  | Event                                                                                                  | Not s full | Completely correctly s full |
|------|--------------------------------------------------------------------------------------------------------|------------|-----------------------------|
| 1    | The study of the characteristics of leche b GOVERNMENTAL tables on Pevzner                             | 0          | ten                         |
| 2    | Choosing the right diet table for your diagnosis                                                       | 0          | ten                         |
| 3    | Evaluation of the usefulness of the diet                                                               | 0          | 20                          |
| 4    | In accordance with the diagnosis, cord e Stu disease stage and appointment of a novnoy therapy         | 0          | 20                          |
| five | In accordance with the diagnosis, COG e Stu disease stage and desig and chenie symptomatic ter and FDI | 0          | 20                          |
| 6    | Preventive measures                                                                                    | 0          | 20                          |
|      | Total                                                                                                  | 0          | 100                         |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No. | Academic progress in% | Assessment     | Student knowledge level                                                                                                                                                                                                                                                                                                                     |
|-----|-----------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 96-100%               | Excellent " 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively participate in interactive games, the right to make informed decisions and sums up, an a lyse. |
| 2   | 91-95%                | Excellent " 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively participate in interactive games, correctly takes p e sheniya.                                                                  |

|        |          |                                     |                                                                                                                                                                                                                                                                                                                                                                         |
|--------|----------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3      | 86 - 90% | Excellent<br>" 5"                   | The questions posed are fully covered, but there are 1-2 inaccuracies in the answer. With a mostoyatelno analyzes. Inaccuracies in solving situational problems, but with the right approach. Actively participates in interactive games, makes the right decisions.                                                                                                    |
| 4      | 81-85%   | Good<br>" 4"                        | The questions posed are fully covered, but there are 2-3 inaccuracies and errors. Applies in practice, understands the essence of the issue, speaks with confidence, has accurate ideas. Situational problems are solved correctly, but the answer is not sufficient justification for l but. He actively participates in interactive games, makes decisions correctly. |
| five   | 76-80%   | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                                                              |
| 6      | 71-75%   | Good<br>" 4"                        | Correct, but incomplete coverage of the issue. Understands the essence of the issue, speaks with confidence, has accurate ideas . On case studies gives Nepo l decisions.                                                                                                                                                                                               |
| 7      | 66-70%   | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Understands the essence of the issue, speaks confidently, has accurate ideas only on certain issues of the topic. The situational tasks were solved correctly, but there is no justification for the answer.                                                                                                         |
| eight  | 61-65%   | Satisfied<br>literally<br>" 3"      | The correct answer to half of the questions posed. Tells uncertainly, has accurate ideas only on certain issues of the topic. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                                                                                                                                             |
| nine   | 55-60%   | Satisfied<br>literally<br>" 3"      | Answer with errors to half of the questions asked. Tells uncertainly, has partial ideas on the topic. Situational tasks solved n e is true.                                                                                                                                                                                                                             |
| ten    | 50-54%   | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                                                                                     |
| eleven | 46-49%   | Unsatisfied<br>sly<br>" 2"          | The correct answer to 1/4 of the questions posed. Situational tasks are solved incorrectly with the wrong approach.                                                                                                                                                                                                                                                     |
| 12     | 41-45%   | Unsatisfied<br>sly<br>" 2"          | Coverage of 1/5 of the questions posed with errors. It gives incomplete and partially n e correct answers to questions.                                                                                                                                                                                                                                                 |
| 13     | 36-40%   | Unsatisfied<br>sly<br>" 2"          | 1/10 coverage of the issues in the district ie the right approach.                                                                                                                                                                                                                                                                                                      |

|          |        |                            |                                    |
|----------|--------|----------------------------|------------------------------------|
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2" | Doesn't give answers to questions. |
|----------|--------|----------------------------|------------------------------------|

### 9. Chronological map of the lesson

| No.  | Stages of the lesson                                                                                                                                                                                         | Lesson forms                                                                                                      | Prolonged s NOSTA<br>min. 90 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1    | Introductory word of the teacher<br>(Settle and of threads)                                                                                                                                                  |                                                                                                                   | five                         |
| 2    | Discussion on practical training, assessment of students' background knowledge, using new pedagogical technologies (small groups, case studies, business games, slides in and deofilmy, etc.)                | Poll, explanation                                                                                                 | 25                           |
| 3    | Summing up the discussion                                                                                                                                                                                    |                                                                                                                   | five                         |
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                          |                                                                                                                   | ten                          |
| five | Independent work of students from a military skills                                                                                                                                                          |                                                                                                                   | fifteen                      |
| 6    | Clarification of the extent to which the target classes based on the mastering of theoretical knowledge and practical conference on the results and cal operation and in view of the assessment of the group | Oral questioning, written questioning, tests, checking the results of practical work, discussion obsu Well denie. | 25                           |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Giving an assignment for the next lesson (set of questions)           | Information, questions for self - preparation                                                                     | five                         |

### 10. Test questions

- 1) *The concept of peritonitis, etiopathogenesis, classification, clinical picture, diagnosis, diff. diagnostics, treatment. The causes of death.*
- 2) Preoperative preparation.
- 3) Symptoms of peritonitis.
- 4) The specific course of peritonitis in the elderly and pregnant women.
- 5) Principles of postoperative management of patients with peritonitis.

### 11. Recommended reading

1. Sh.I. Karimov - "Surgical diseases" Tashkent 2005
2. MI Kuzin "Surgical diseases". Medicine 1986
3. Sh.I. Karimov "Kasalliklar surgeon". Medicine 1994
4. Littmann I. "Operative Surgery" 1982.
5. Agzamkhozhaev S.M. "Surgeon Casalliklar" 1991
6. B.V. Petrovsky "Guide to surgery" 7 t. Medicine 1970.
7. Tutorial on the topic.
8. Karimov Sh.I., Babadjanov B.D. Diagnosis and treatment of acute peritonitis. Tashkent, 1994.

9. Savchuk B.D. Purulent peritonitis, Moscow, 1995.
10. Gostishchev V.K., Sazhin V.P. Peritonitis. Moscow, 2002.
11. Shurkalin B.K. Purulent peritonitis. Moscow, 2000.
12. Karimov Sh.I. Acute peritonitis. Methodical recommendation. Tashkent, 1985.
13. Karimov Sh.I., Akhmedov R.M. Peritonitis in elderly and senile patients. Methodical recommendation. 1985.
14. Asrarov A.A. Surgical and endovascular methods of prevention and treatment of purulent-septic complications and multiple organ failure in patients with diffuse purulent peritonitis, 1994.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://buxdti.uz>

## **TOPIC № 23. INTESTINAL FISTULAS.**

### **1. Place of the lesson, equipment**

- Department of Faculty and Hospital Surgery; training room, chamber, pens I dressing
- posters, tables, disease classification schemes, treatment schemes, x-rays about grams, videos.

### **2. Duration of study of the topic**

The number of hours is 4.9.

### **3. Purpose of the lesson**

Substantiation of the topic, indicating the importance for the professional training of students. Meeting students with intestinal fistulas, causes its development, clinical features, differential diagnosis, optimal methods of treatment, postoperative care, rehabilitation patients.

Tasks

#### ***The student should know:***

- methods for diagnosis and differential diagnosis and Oslo w neny;
- interpretation of the results of instrumental and diagnostic studies to substantiate the diagnosis and the choice of rational treatment;
- features of preoperative preparation for this category of patients;
- to determine the nature of surgical interventions and conservative treatment, to know their features;
- to prevent complications during and after operations;
- acquire certain practical skills in examining patients with k and cervical fistulas;
- **n auchitsya special methods of investigation.**

#### ***The student should be able to:***

- Perform practical skills - to acquire certain practical nav s ki in the examination of patients with intestinal fistulas, to carry out special methods of examination data of patients to determine the indications and contraindications for surgical im e -interference.

### **4. Motivation**

Suggestion students need adequate timely surgery before the development of severe complications, and in their development - familiarity with and more informative and modern methods of diagnosis and surgical treatment of patients, familiarity with possible complications is operas and tion and the operational period of, prevention. Development of students' clinical thinking. Development of the modern view of the prospect of Bloem issue from a position of world medicine and general practitioners.

### **5. Intersubject and intrasubject communications**

Teaching this topic is based on students' knowledge of the basics of anatomy, normal and pathological physiology. Obtained knowledge during the classes will Exe cu s Call the passage of Gastroenterology, internal medicine and other clinical Discitis claim lin.

## 6. Content of the lesson

### 6.1. Theoretical part

**Intestinal fistula** - Message of the intestinal lumen to the surface of the body or with a ray of light is, is another hollow organ.

#### **Classification of** intestinal fistulas

I - By the time of occurrence: congenital, acquired

II - On the etiology: traumatic imposed with the purpose of treatment incurred in Zabol e vaniyah intestine

III - By function: complete, incomplete

IV - By nature: labial, tubular

V - By the level of location on the intestine: high, low

VI - According to the presence of complications: uncomplicated, complicated

Fistulas can be congenital (for example, when the vitelline duct is not clogged) and acquired. Acquired fistulas occur in p th result of trauma, disease (Crohn's disease), the operation in which the fistula is applied for therapeutic purposes (eyunost about Miya total in inoperable gastric cancer, unnatural anus with inoperable colon cancer). Fistulas may be complication in operas and tions on the intestines and other abdominal organs. The fistula connecting the lumen of the intestine with the surface of the body is called external, one organ with another - internal. With a complete fistula, all intestinal contents are poured out, with incomplete fistula, part of it passes into the intestinal discharge loop. When the intestine opens directly on the skin so that its mucous membrane is adhered to the skin, it is a labial fistula. When there is a passage between the intestine and the surface of the body, it is a tubular fistula. Fistulas located on the jejunum are referred to as high, on the ileum and colon - to low. The changes occurring in the body are associated with the loss of proteins, fats, carbohydrates, vitamins, water and electrolytes through the fistula. The orally to the gut is a fistula, the more they claim about Tehri and the expressed violations of the used exchange substances and water and electrolyte balance. Maceration occurs on the skin around the intestinal fistula. Around the fecal fistula, phlegmon under the skin tissue, purulent or fecal leaks are often observed. In this case, they speak of a complicated fistula.

**Clinic and diagnostics** . External small intestinal fistulas are manifested by the release of liquid small intestinal contents. When the fistula l stop gut feces and released gases. Refinement localization fistula, its progress and location of features is accomplished by radiographic examination performed after solution cottages sul s veil barium through the mouth (for enteric fistula), or it is administered through rectum (irrigoscopy - with colonic fistulas). Valuable way to diagnose me to wish to set up fistulography X-ray examination after the introduction of water into the lumen of the fistula of soluble contrast agent.

**Treatment** is usually conservative (tubular fistulas of the small intestine). It is included as a nutritious food, the correction of metabolic disorders and aqueous electrolyte disorders obturation fistula via various devices (pelota, obturators), skin care around the fistula. Conservative treatment has the effect of more than 40% bol s GOVERNMENTAL with the average duration of treatment 4-6 weeks. A number of patients n good results and are observed during TPN.

With non-healing tubular and almost always with lip-shaped fistulas

it is necessary to resort to surgical interventions. When incomplete tubular and gubovidnyh fistulas used extraperitoneal methods of h and covered, with other types of fistulas - intraperitoneal (often straight on plague resected colon portion carrying the fistula with anastomosis between adductor and abductor loop type end to end) are tubular incomplete fistulas colon apply conservative Leche e of, as they are prone to spontaneous closure. With labial fistulas, pr and run to operations, the nature of which is determined by the type of fistula, complete or incomplete. For small incomplete labial fistulas, extraperitoneal methods of closing the fistula are used. They consist in a s fission gut wall and fistula zone suturing defect dual inline seam. At higher partial and complete gubovidnyh fistulas used



DNA methods for their closure in this case is isolated intestine around the fistula perimeter output it to the wound, then the fistulous opening of a Shiva (with incomplete fistulas) or impose anastomosis (at full fistulas). Sometimes they resort to resection of the section of the intestine carrying the fistula, with the next imposition of an anastomosis.

**Used in this lesson, new educational technologies, "Che p ny box", "Web".**

#### **USING THE BLACK BOX METHOD**

The method provides for joint activities and active participation in the classes of each student, the teacher works with the whole group.

Each student gets a question out of the black box. (Options adj issues and are.) Students must detail to justify your answer.

The student is given 3 minutes to think over each answer. Then discussing the answers and are, given addition of etiology and pathogenesis, clinical course. At the end of the method the teacher says correctly answer, Expl about vannot, the degree of activity of students.

This technique contributes to the development of the student's speech, the formation of the foundations of critical thinking, tk. In this case, the student learns to defend their opinions, analyze the answers to band members - participants in this competi p sa.

Annotation option:

A 22-year-old patient complains of fistula in the area of the postoperative wound of the right iliac region, from the anamnesis 6 months ago he underwent an appendix to tomia. The general condition is satisfactory, the skin is loose and dry. The language is clean. The abdomen is painless, lane and tonealnyh phenomena not, your tactics.

#### **USING THE WEB METHOD**

Steps:

1. Pre students are given time to prepare questions on the passed of as nyatiyu.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared n ny question (which itself needs to know the complete answer), hold the thread end and throwing the skein any student.
4. A student who has received a skein, answers the question (the party of and gave his comments on the response) and passes the baton to the issue further. S members continue and give questions and answer them, until everything will be in the web.
5. Once all students have finished asking questions, the student holding a skein of s rotates his party, from whom he received the question, while asking a question, etc., to complete "uncoiling" coil.

Note: Caution students that we should be attentive s mi to each answer, because they do not know who to throw a hank.

### **6.2. Analytical part**

**Situational tasks:**

A 22-year-old patient complains of fistula in the area of the postoperative wound of the right iliac region, from the anamnesis 6 months ago he underwent an appendix to tomia. The general condition is satisfactory, the skin is loose and dry. The language is clean. The abdomen is painless, there are no lingering or tonal phenomena, your tactics

- A. Fistulography + excision of the fistula
- B. Colonoscopy + bowel resection
- B. Removal of the altered part of the intestine
- D. Outpatient treatment
- D. All wrong answer

### **6.3. Practical part**

A quest for practical skills (to hold the differential di and prognosis and to substantiate a definitive diagnosis, assign an appropriate diet plan and a howling treatment, nasogastric intubation ).

### 1. CONDUCT A DIFFERENTIAL DIAGNOSIS AND SUBSTITUTE THE FINAL DIAGNOSIS.

**Purpose :** to teach to conduct a differential diagnosis and substantiate the final diagnosis.

| No. | Event                                                                                                                                                                    | Not full | Completely correct |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|
| 1   | List the disease, wedge and cal symptoms, which are similar to the so called nym disease                                                                                 | 0        | 25                 |
| 2   | Conduct a differential diagnosis of the main clinical syndromes                                                                                                          | 0        | 35                 |
| 3   | On the basis of complaints, anamnesis, objective data and the results of laboratory and instrumental studies, as well as differential diagnosis , make a final diagnosis | 0        | 40                 |
|     | Total                                                                                                                                                                    | 0        | 100                |

### 3. PROBING OF THE STOMACH

**Purpose:** prevention of asphyxia contents of the stomach, gastric emptying of the contents of the stomach to the preparation of surgical intervention, the blood flow is, chenie of the stomach and duodenum 12, gastrostasis.

| No.   | Event                                                                                                                     | Not full | Completely correct |
|-------|---------------------------------------------------------------------------------------------------------------------------|----------|--------------------|
| 1     | Reassure the patient, explain the course of the upcoming manipulation.                                                    | 0        | ten                |
| 2     | Wear rubber gloves.                                                                                                       | 0        | ten                |
| 3     | Measure the distance from the mouth to the stomach.                                                                       | 0        | ten                |
| 4     | Enter through the nasal passage des thin at zling probe.                                                                  | 0        | ten                |
| five  | Suck the stomach contents for n of power Janet syringe.                                                                   | 0        | ten                |
| 6     | Secure the probe segment bi n that and tie a bandage around her face n and the patient's.                                 | 0        | ten                |
| 7     | Rinse the probe physiological pa to create, periodically moving the probe to prevent adhesion to mucus and stand stomach. | 0        | ten                |
| eight | Suck again until the stomach is completely cleansed .                                                                     | 0        | ten                |
| nine  | Place in a container with a disinfectant solution Forge-Scarred items Medici Mr. Skogen destination.                      | 0        | ten                |
| ten   | Remove the gloves and put them in e m a bone with a disinfectant solution.                                                | 0        | ten                |
|       | Total                                                                                                                     | 0        | ten                |

### 7. Forms of control of knowledge, skills and abilities

- oral;
- written;
- solving situational tasks;
- demonstration of mastered practical skills.

### 8. Criteria for assessing monitoring

| No.  | Academic progress in% | Assessment        | Student knowledge level                                                                                                                                                                                                                                                                                                                                 |
|------|-----------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | 96-100%               | Excellent<br>" 5" | Complete correct answer to questions. Summarizes and makes decisions, thinks creatively, analyzes independently. Case studies decides straight and correctly, with a creative approach, full justification response. Actively and creatively involved in Interactive games right to make informed decisions and sums up, analyzes.                      |
| 2    | 91-95%                | Excellent<br>" 5" | Complete correct answer to questions. Thinks creatively, analyzes independently. Solves situational problems correctly, with a creative approach, with justification of the answer. Actively and creatively involved in Interactive games properly takes part in them.                                                                                  |
| 3    | 86 - 90%              | Excellent<br>" 5" | Questions raised covered full of Student, but there are 1-2 inaccuracies in the response. Analyzes independently. Inaccuracies in addressing the situation and onnyh problems, but with the right approach. He actively participates in interactive games and makes the right decisions.                                                                |
| 4    | 81-85%                | Good<br>" 4"      | Questions raised covered full of Student, but there are 2-3 inaccuracies, errors. Applies in practice, understands the essence of the issue, tells with confidence, has accurate ideas. The case of a garden resolved correctly, but the answer is not adequately study. Actively participates in interactive games, etc. and correctly make decisions. |
| five | 76-80%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia. Actively participates in interactive games. On case studies gives n e complete solutions.                                                                                                           |
| 6    | 71-75%                | Good<br>" 4"      | Correct, but incomplete coverage of the issue. Understands the essence of the issue, the story's Vaeth confidence has accurately represented e Nia . On case studies gives Nepo l decisions.                                                                                                                                                            |

|          |        |                                     |                                                                                                                                                                                                                                                             |
|----------|--------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7        | 66-70% | Satisfied<br>literally<br>" 3 "     | The correct answer to half of the questions asked. Understands the essence of the issue, speaks with confidence, has accurate ideas only on individual questions of the topic. Situational tasks dec th us is true, but there is no justification response. |
| eight    | 61-65% | Satisfied<br>literally<br>" 3 "     | The correct answer to half of the questions posed. Tells unsure n but is accurate representations only on specific issues topics. Makes mistakes in dealing with the situation Mr GOVERNMENTAL.                                                             |
| nine     | 55-60% | Satisfied<br>literally<br>" 3 "     | Answer with errors to half of the questions asked. Describes uncertainly has partial representation of t e IU. Situational tasks solved Neva river but.                                                                                                     |
| ten      | 50-54% | Not satisfied<br>literally<br>" 2 " | The correct answer to 1/3 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| eleven   | 46-49% | Unsatisfied<br>sly<br>" 2 "         | The correct answer to 1/4 of the questions posed. Situational tasks solved correctly if n is, the right approach.                                                                                                                                           |
| 12       | 41-45% | Unsatisfied<br>sly<br>" 2 "         | Lighting 1/5 questions posed with errors and mi. Gives incomplete and partially wrong about so answers to a question.                                                                                                                                       |
| 13       | 36-40% | Unsatisfied<br>sly<br>" 2 "         | Covering 1/10 of the questions with the wrong approach.                                                                                                                                                                                                     |
| fourteen | 31-35% | Unsatisfied<br>sly<br>" 2 "         | Doesn't give answers to questions.                                                                                                                                                                                                                          |

### 9. Chronological map of the lesson

| No. | Stages of the lesson                                                                                                                                                                                                 | Lesson forms      | PRODO l resident s NOSTA<br>min. 90 |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|
| 1   | Introductory word of the teacher (justification t e we)                                                                                                                                                              |                   | five                                |
| 2   | Discussion on practical training, evaluation of initial knowledge of students to and from the use of new educational technologies (small GRU n nN, case studies, business games, slides, form of films, and others.) | Poll, explanation | 25                                  |
| 3   | Summing up the discussion                                                                                                                                                                                            |                   | five                                |

|      |                                                                                                                                                                                                            |                                                                                                                           |         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------|
| 4    | Providing students with visual aids and giving explanations to them                                                                                                                                        |                                                                                                                           | ten     |
| five | Independent work of students from a military skills                                                                                                                                                        |                                                                                                                           | fifteen |
| 6    | Clarification of the extent to which the target classes based on the disbursed theor and iCal knowledge and the results of Practical and cal operation and in view of the assessment of the group          | Oral survey<br>IPR s menmy survey<br>tests, checking Practical<br>results and cal work,<br>discussion<br>obsu Well denie. | 25      |
| 7    | The conclusion of the teacher for this lesson. Assessment of students' knowledge according to a 100 point system and its announcement. Cottage tasks for the next th present occupation (set of questions) | The information<br>in a millet to<br>myself about pendent<br>Getting on Preparations                                      | five    |

### 10. Test questions

1. Reasons for the development of intestinal fistulas
2. The main disorders arising from intestinal fistulas.
5. Indications for surgical treatment of intestinal fistulas.
6. The goal of surgical treatment of patients with intestinal fistulas
7. Methods restore the continuity of the gastrointestinal tract in Kish h GOVERNMENTAL fistula.

### 11. Recommended reading

1. Karimov Sh.I. "Surgical diseases" Tashkent 1991.
2. Oripov U.A., Karimov Sh.I. "Corinne bushligi azolari oshigich zharrohligi" That sh Kent in 1991.
3. Littman I. "Operative Surgery" Budapest. 1981.
4. V.S. Savelyev 'Guidelines for emergency surgery of Bru sh body cavity "Moskva.1986.
5. Wangxiang "Intestinal Fistulas" 1982.
6. Abakumov M.N. et al. Features of diagnostics and surgical treatment of duodenal injuries. // Vestn. surgeon. them. I.I. Grekova, 1989, v. 142, no. 2, p. 116-120.
7. Aslanyan A.A. et al. Surgical treatment of open and closed lesions of the duodenum. // Surgery, 2000, No. 4, p. 84-87.
8. Astashkina K.V. et al. Injury of the duodenum in a child. Hira // p ogy, 2002., № 9, p. 18-19.
9. Akhundzhanov B.A. et al. Analysis of causes of intestinal fistula after a n pendektomii and the results of treatment. // Honey. zhurn. Uzbekistan, 1984, No. 4, p. 33-35.
10. Kuzin M.I. "Surgical diseases" 1995.

Internet addresses related to the topic of the lesson:

<http://www.tma.tmn.ru/Vestnik>

<http://medi.ru/doc/83.htm>

<http://www.rmj.net/index.htm>

<http://www.consilium-medicum.com/media/refer>

<http://www.mediasphera.aha.ru>

<http://buxdti.uz>

# **Test questions for Faculty Surgery**

**Topic: Hernias of the anterior abdominal wall.**

1. As part of any hernia, the following are classically described elements:

- A. Hernia gate
- B. Hernial sac
- C. Presence of hernial swelling
- D. Contents of the hernial sac

\* E. A B D

2. Richter's hernia is characteristic of hernias:

- \*AND. With narrow hernial ring
- B. With a wide hernial ring
- C. Giant
- D. With multiple hernial sacs
- E. Maydl type

3. The evolution of hernias can be as follows:

- A. Self-healing
- B. Development of life-threatening complications
- C. Increase in size

\* D. B and C

E. Malignant transformation

4. Richter's hernia is not characterized by:

- \* A. Signs of intestinal obstruction
- B. Small size of hernia
- C. Narrow hernia orifices
- D. Moderate pain syndrome
- E. Danger of necrosis of the restrained organ

5. Which of the following factors contribute to the appearance of hernias?

- A. Renal failure
- B. Gastro-duodenal ulcers

\* C. Chronic cough

D. Hyperthyroidism

E. Lower lobe pneumonia

6. The aim of hernia surgery is:

- A. Reduction of hernial contents
- B. Treatment of hernial contents

\* C. Plastic hernia gate

D. Removal of the hernial sac

E. Isolation of the hernial sac

37. The main cause of hernias of the anterior abdominal wall is:

- A. Exercise
- B. Obesity
- C. Fast weight loss

D. Depletion

\* E. Features of the structure of the anterior abdominal wall

**Topic: Hernia of the white line of the abdomen. Umbilical, femoral and inguinal hernia.**

1. The contents of the hernial sac are often:

- A. Transverse colon
- B. Small intestine
- C. Fallopian tube
- D. Large oil seal

\* E. B and D

2. Which type of hernia does the hernial sac contain several bowel loops?

A. Epigastric hernia

\* B. Hernia Maydl

C. Hernia Richter

D. Hernia of the obturator hole

E. Femoral hernia

3. The development of hernial phlegmon is not affected by:

- A. Venous congestion in strangulated organs
- B. Hypertension in the hernial sac and in the intestine
- C. Disorders of microcirculation in the intestinal wall
- D. Decreased intestinal wall barrier function

\* E. Pathological changes in the intestines without infringement

4. Phlegmon of the hernial sac is manifested:

- A. Fever
- B. Intoxication
- C. Swelling and redness in the hernia area

\* D. A B C

E. there is no right answer

5. Uncharacteristic symptoms of external restrained hernia are:

- A. Acute onset
- B. Severe pain in the area of hernial protrusion

\* C. Intestinal obstruction

D. Positive symptom of cough thrust

E. Irreducibility

6. In the inguinal hernia, Mekelev's diverticulum was trapped, which

ry after dissection of the restraining ring was defined as  
viable. Surgical tactics of choice include:  
A. Reduction of the diverticulum into the abdominal cavity  
B. Diverticulum resection  
C. Wedge-shaped bowel resection with diverticulum  
\* D. Intestinal resection with T-T anastomosis

7. The main points of the operation for hernial phlegmon bag are not:  
A. Laparotomy  
B. Intestinal resection  
C. Opening of the hernial sac, extirpation of gangrenous pet-whether  
\* D. Closure of the hernial opening

8. What techniques are risky in case of irreducible hernia:  
A. Palpation of hernial protrusion  
B. Urgent surgery  
C. Determination of cough thrust  
\* D. Manual reduction  
E. Digital examination of the rectum or vagina

9. With early and free eviscerations, surgical procedures teak includes:  
A. Delayed operation  
B. Establishing a drainage with active lavage  
\* C. Urgent restoration of the abdominal wall  
D. Comprehensive paraclinical examination  
E. Follow-up observation

10. In the diagnosis of diaphragmatic hernias, the primary role plays:  
A. Pain syndrome  
B. Signs of cardiovascular failure  
C. Signs of intestinal obstruction  
D. Objective syndromes affecting the chest  
\* E. X-ray examination

**Topic:** Incisional hernias and rare forms of hernias. Complication of hernias (inflammation, infringement, and prostate).

1. The most common complication of hernias is:  
A. Hernial tumor

\* B. Infringement of a hernia  
C. Foreign bodies inside the hernial sac  
D. Hernial peritonitis  
E. Hernial tuberculosis

2. Rare types of hernias do not include:  
A. Hernia of the obturator opening  
\* B. Femoral hernia  
C. Perineal hernia  
D. Sciatic hernia  
E. C and B

3. The most common complication of abdominal hernias:  
A. Hernial peritonitis  
\* B. Irreducible hernia  
C. Hernial tumor  
D. Hernial injury  
E. Foreign bodies

4. Rare hernias of the abdominal wall include:  
A. Umbilical hernia  
B. Femoral hernia  
C. Lumbar hernia  
D. Sciatic hernia  
\* E. C and D

5. The category of rare hernias does not include:  
A. Spigel line hernia  
B. Hernia of the obturation hole  
C. Hernia Richter  
D. Lumbar hernia  
\* E. A B C D

6. During clinical examination in case of a strangulated hernia women note:  
A. Irreducible hernia is not considered  
B. Pain on palpation of hernia  
C. The skin in the area of the hernial protrusion is stretched  
\* D. Sucked stomach  
E. Absence. Of a cough thrust symptom

7. The most unfavorable complication of hernias is:  
\* A. Infringement  
B. Hernial tuberculosis  
C. Hernial peritonitis  
D. Irreducibility  
E. Hernial tumors

8. Which of the following situations do not apply to complications niyam hernias?  
A. Hernial tuberculosis  
\* B. Hiatal hernia  
C. Hernial peritonitis  
D. Richter's hernia  
E. Hernial tumors



9. What type of hernia is characterized by parietal infringingment  
 niy?  
 A. Hernia of the obturation hole  
 B. Hernia Maydl  
 \* C. Hernia Richter  
 D. Umbilical hernia  
 E. Inguinal hernia

10. In hernias, it is more often infringed:  
 A. Stomach  
 \* B. Small intestine  
 C. Large intestine  
 D. Bladder  
 E. Uterus with appendages

11. Among the listed hernias, the following are less often infringed:  
 A. Oblique inguinal  
 \* B. Straight inguinal  
 C. Femoral  
 D. Umbilical  
 E. Postoperative

12. It is not typical for a restrained hernia:  
 A. Severe pain at the level of the hernia  
 C. Irreducibility  
 C. The skin in the area of hernial protrusion is stretched  
 D. Absence of symptom of cough impulse  
 \* E. Pain on rectal examination

13. Hernias Richter and Littre differ from one another:  
 A. The intensity of the pain syndrome  
 B. Effects on intestinal transit  
 C. The depth of disturbance of microcirculation in the restrained organ-  
 nah  
 D. Contents of the hernial sac  
 \* E. By the type of infringingment

14. To the factors contributing to the development of fecal delinquencies include:  
 \* A. Physical activity  
 B. Irreducible hernia  
 C. Dimensions of the hernial opening  
 D. Adhesions in the hernial sac  
 E. Violation of intestinal motility

15. Not accompanied by the development of intestinal obstruction the following strangulated hernias:  
 \* A. Richter  
 B. Previously unidentified  
 C. Hernia of the obturation hole  
 D. Spiegel line  
 E. T

16. A restrained hernia must be differentiated from:

A. Irreducible hernia  
 B. Coprostasis  
 C. Pseudo-disturbance  
 D. Intestinal obstruction  
 E. all answers are correct

17. What is the name of the infringingment when the hernial sac contains 2 bowel loops?  
 A. Fecal impaction  
 B. Pinching in the elastic ring  
 C. Parietal  
 \* D. Retrograde  
 E. Pseudo-confusion

18. Which of the listed phenomena are not associated with development thymus of pathological changes in the intestine proximal the level of infringingment?  
 \* A. Decreased absorption  
 B. Intraluminal gas accumulation  
 C. Venous congestion  
 D. Microcirculation disorders  
 E. Vomiting

19. While the time of the infringingment does not exceed 2 hours, try stimulate spontaneous clearance of the hernia is acceptable in in the following cases, except:  
 A. Severe condition of the patient  
 B. Myocardial infarction  
 C. Significant disorders of cerebral circulation  
 D. Senile age  
 \* E. Refusal of surgery

20. Attempt to force reduction (taxis) of a strangulated hernia accompanied by the danger:  
 A. Breaking the restrained loop  
 B. Development of intestinal paresis  
 C. Incomplete reduction  
 D. Intra-abdominal bleeding  
 E. all answers are correct

21. After spontaneous reduction of a strangulated hernia, there is a need for:  
 A. Observation in dynamics  
 B. Laparoscopy  
 C. Urgent laparotomy  
 D. Herniotomy  
 E. all answers are correct

22. During skin incision, spontaneous reduction occurred hernia. What tactical options are acceptable in this system tuations?

A. Herniotomy with follow-up of the patient  
 B. Herniotomy with examination of the restrained organ through hernio-laparotomic incision  
 C. Herniotomy after diagnostic laparotomy  
 D. all answers are correct  
 E. there is no right answer

23. During a surgical intervention with a restrained hernia, special attention is paid to:  
 A. Isolation of the hernial sac  
 B. Cutting the restraining ring  
 C. Opening the bag  
 \* D. Release and fixation of the restrained organ

24. To determine the viability of the loop is taken into account mania:  
 A. Color  
 B. Peristalsis  
 C. Pulsation of mesenteric vessels  
 \* D. A B C  
 E. there is no right answer

25. What to do if determining viability loops in the area of infringement difficult?  
 A. Reduction of the intestine into the abdominal cavity and diagnostic sky laparotomy in 24 hours  
 B. Intussusception of the zone of infringement by serous-serous sutures  
 C. Wedge-shaped bowel resection  
 \* D. Bowel resection with T-T anastomosis

26. Which of the following factors do not affect the volume of pre-surgical preparation for strangulated hernias?  
 A. Condition of the patient  
 B. Term of restraint  
 C. Comorbidities  
 \* D. Hernia size

27. The restrained inguinal hernia should be differentiated from:  
 A. Inguinal lymphadenitis  
 B. Acute orchiepididymitis  
 C. Tumor metastases to the inguinal lymph nodes  
 D. Restrained femoral hernia  
 \* E. All correct answers

28. Surgical ways to eliminate postoperative hernias include:  
 A. Hernioplasty  
 B. Autoplasty

C. Plastic hernia orifice with synthetic material  
 D. Intestinal resection  
 \* E. A B C

29. What factors affect the surgical tactics in case of lent incisional hernias?  
 A. Age and condition of the patient  
 B. Term of restraint and changes in restrained organs  
 C. Dimensions of the hernia  
 D. Topography of hernia  
 \* E. A B C

30. What organs can be impaired in diaphragmatic herzhah?  
 A. Stomach  
 B. Transverse colon  
 C. Loop of the small intestine  
 D. Parenchymal organs  
 \* E. all answers are correct

31. What is the proposal for postoperative anti-bioticotherapy is wrong?  
 \* A. Antibiotics are indicated in all cases of strangulated hernias  
 B. They are indicated for bowel resection  
 C. Prescribed when the operation is performed in conditions of phlegm mona hernial sac  
 D. Mandatory for peritonitis  
 E. Become necessary when postoperative onny complications

32. Treatment of strangulated hernias:  
 \* A. Requires urgent surgical intervention  
 B. It is sufficient to resolve the hernia by means of a forceful right-laziness (taxis)  
 C. Orthopedic treatment is sufficient  
 D. Requires elective surgery

### Topic: Acute appendicitis.

1. Which of the above statements concerning acute appendicitis are not correct?  
 A. Most often occurs between 10-40 years  
 B. May occur in both the elderly and adults  
 C. Low likelihood of developing in newborns and infants children  
 D. Is the most common cause of acute abdomen  
 \* E. Often treated conservatively

2. Diagnostic program for acute appendicitis

includes:

- A. Careful collection of anamnestic data
  - B. Excludes somatic diseases that may cause to mimic acute abdominal pathology
  - C. Rectal examination in men and additional vaginal research in women
  - D. Conducting laboratory tests
  - \* E. all answers are correct
3. The main role among the factors involved in development of acute appendicitis, plays:
- A. Spasm or thrombosis of the appendicularis
  - B. Excess protein in the diet
  - C. Caecal motility disorders
  - \* D. Blockage of the lumen of the appendicular process
  - E. Enterogenous or hematogenous dissemination of infection
4. Blockage of the lumen of the appendix leads to obstruction by the type of a closed loop, in which both the following processes take place, with the exception of:
- \* A. Reducing pressure in the lumen of the appendix
  - B. Proliferation of microbial flora
  - C. Disorders of microcirculation in the wall of the organ
  - D. Microbial invasion
  - E. Infarction of the antimesenteric edge of the worm-shaped wall of the appendix
5. The most significant of the early symptoms of appendicitis is:
- \* A. Anorexia
  - B. Abdominal pain
  - C. Vomiting
  - D. Bowel disorder
  - E. Temperature
6. Signs of acute appendicitis, depending on the form of the location of the appendix varies widely. What is the form of location at which the abdominal signs are expressed minimally:
- A. Retrocecal
  - B. Subhepatic
  - \* C. Tazov
  - D. Left-sided
  - E. Medial

7. Of all the variations in the location of the appendicular process, the most common form, reaching the destructive process, is:
- A. Subhepatic
  - \* B. Retrocecal
  - C. Left-sided
  - D. Pelvic
  - E. Medial
8. A positive psoas symptom is typical for:
- A. Empyema of the appendix
  - B. Appendicular infiltrate
  - C. Pelvic location of the appendicular process
  - \* D. Retrocecal location of the appendicular process
  - E. Perforated appendicitis
9. With the gangrenous form of appendicitis, all the symptoms listed below, except:
- A. Intoxication
  - B. Tachycardias not related to temperature
  - \* C. Persistent (severe) abdominal pain
  - D. Intestinal paresis
  - E. Leukopenia
10. Dysuria, leukocytes, and sometimes erythrocytes in the urine meet are at:
- \* A. Pelvic appendicitis
  - B. Hernial appendicitis
  - C. Empyema of the appendix
  - D. Appendicitis in the first half of pregnancy
  - E. Gangrenous appendicitis
11. Pain in the right hypochondrium, skin hypersensitivity, integument, muscle tension, positive Shchetkin-Blumberg are trivial features of acute appendicitis. However, depending on the variation of the location, general condition and age of the patient, presence of concomitant pathology, etc., the clinical picture may differ from the classic one. To clarify the diagnosis, in such conditions the most necessary research will be:
- A. Rectal examination
  - B. Radiological examination with contrast agent
  - \* C. Laparoscopy
  - D. Puncture of the abdominal cavity

E. Puncture - lavage of the abdominal cavity

12. It is clinically impossible to carry out differential diagnosis of acute appendicitis with:

- A. Acute cholecystitis
- B. Perforated stomach and duodenal ulcer
- C. Acute pancreatitis
- \* D. Meckel's diverticulum
- E. Acute gastroenteritis

13. The most important symptom that allows differentiation to treat acute pyelonephritis from acute appendicitis is:

- A. Temperature with chills
- B. Lombalgia
- C. Positive psoas symptom
- \* D. Bacteriuria level
- E. Leukocyturia

14. Acute pains in the hypochondrium with irradiation into the perineum, into the inner thigh; tenesmus, vomiting; at re-a physical examination reveals a rounded formation, elastic, smooth, movable from the uterus. What is your diagnosis?

- A. Acute appendicitis
- B. Rupture of the Graafian follicle
- C. An interrupted ectopic pregnancy
- \* D. Torsion of the ovarian cyst
- E. Acute salpingo-oophoritis

15. In the middle of the menstrual cycle, acute pain in the lower abdomen, moving to the groin areas, often radiate into the vagina, perineum, rectum; in- There may be a temporary loss of consciousness. What is your diagnosis?

- A. Acute appendicitis
- \* B. Ruptured Graaf follicle
- C. An interrupted ectopic pregnancy
- D. Torsion of the ovarian cyst
- E. Acute salpingo-oophoritis

16. Skin cyanotic, hypotension, anemia, symptom Kulenkampf, puncture of the posterior vaginal fornix reveals blood that does not coagulate:

- A. Acute appendicitis
- B. Rupture of the Graafian follicle
- \* C. An interrupted ectopic pregnancy
- D. Torsion of the ovarian cyst
- E. Acute salpingo-oophoritis

17. What are the approaches of surgical intervention recommended occur in cases when the diagnosis of acute appendicitis \* is made presumably?

- A. Lennander's pararectal approach
- B. Extended Volkovich-Dyakonov access
- C. Median subumbilical laparotomy
- D. Median supra- and sub-umbilical laparotomy
- \* E . A and C

18. What needs to be done before removing the worm of the leg with signs of superficial inflammation?

- A. Examination of the ileum for at least 1 m
- B. Examination of the uterus and its appendages
- C. Examination of the relevant parts of the large intestine
- Nika
- D. Internal use of indigo carmine solution
- \* E . all answers are correct

19. Treatment of perforated appendicitis with clinical signs of peritonitis in the hypogastric region, before surgery, includes:

- A. Lower midline laparotomy
- B. Appendectomy
- C. Lavage of the abdominal cavity
- D. Drainage of the abdominal cavity
- \* E . A B C D

20. In cases where the immersion of the stump of the worm-like ot-sprout is impossible, will be produced:

- A. Ligation of the stump with non-absorbable suture, leaving in the abdominal cavity
- B. Extraperitonization of the stump area
- C. Cecostomy placement
- \* D. The method will be chosen based on the circumstances.

21. Re-hospitalization for appendectomy after dissemination suction of the appendicular process is performed through:

- A. 1-2 months
- \* B. 3-4 months
- C. 6 months
- D. 8 months
- E. 12 months

22. At the time of laparotomy in the right iliac region, observed a mass of greenish liquid with sour odor, hyperemia of the appendix and adjacent parts of the intestine. For which process are listed changes?

- A. Acute cholecystitis
- B. Intestinal obstruction
- C. Acute pancreatitis
- \* D. Perforated ulcer
- E. Inflammation of Meckel's diverticulum

23. Which of the following actions are rational

in the case when there is no confidence in the adequacy

mostase, when the appendix or part of it was not

the ability to remove when the process stump is insufficiently protected pulled?

- A. The operating wound is left open, without stitches on the skin
- B. Reexamination of the abdominal cavity after 24 hours
- C. Local application of antibiotics through a microirrigator
- \* D. Drainage of the abdominal cavity
- E. Antibiotic therapy

24. The primary role in the treatment of intra-abdominal abscesses

arising from surgical interventions on for an acute abdomen, including appendectomy, are occupied by:

- A. Antibiotics
- B. Proteolytic enzymes
- C. Immunomodulatory drugs
- D. Percutaneous drainage
- \* E. Surgical intervention

25. Of the total number of cases of acute appendicitis in the frequency of pathology in the first half of pregnancy is:

- A. 10%
- B. 25%
- C. 40%
- D. 55%
- \* E. 75%

26. Which of the following statements regarding acute appendicitis in late pregnancy is a mistake sideways?

A. Some symptoms of acute appendicitis and pregnancy can be confused

B. Localization of pain is atypical

C. Compromised muscle tension

\* D. Leukocyte reaction is usually absent

E. Primary pathology can be simulated by uterine

contractions caused by peritonitis

27. After removal of the appendix in a pregnant woman it is shown:

A. Bed rest

B. Magnesium sulfate

C. Vitamin E

D. Proserin

\* E . A B C

28. Rare appendicitis in children under 5 years old is explained by:

A. The shape of the appendicular process

B. Features of tissue regeneration of an infantile organism

C. Condition of the lymphatic system

D. Plastic features of the peritoneum

\* E . A and C

29. Acute appendicitis in children is extremely dangerous due to rank:

A. Immediate development of the disease

B. High complication rate

C. Underdevelopment of local and general protection mechanisms

D. Diagnostic difficulties

\* E . A B C D

30. In acute appendicitis in children, they resort to more energy

to the usual surgical tactics due to:

A. Development features

B. States of local protection mechanisms

C. The degree of resistance of the child's body to infections

D. Diagnostic difficulties

\* E . A B C D

31. Acute appendicitis in elderly patients is characterized by

is:

A. A high percentage of destructive forms

B. Local clinical manifestations of the disease

C. The presence of a temperature reaction

D. Leukocyte reaction

\* E . all answers are correct

32. In elderly patients after 70 years of age, acute appendicitis

perforates into:

A. 20% of cases  
 B. 26% of cases  
 C. 32% of cases  
 D. 40% of cases  
 \* E. 50% of cases

33. Clinical signs of the pelvic form of location acute appendicitis are:  
 A. Pain in the lower abdomen  
 B. Acute urinary retention  
 \* C. A D E  
 D. Frequent urination  
 E. Tenesmus (bladder and rectum)

34. The most common violation of the transit of gastrointestinal tract in acute appendicitis is:  
 \* A. Constipation  
 B. Diarrhea  
 C. Rectorragia  
 D. Melena  
 E. Bloody diarrhea

35. How is the Dieulafoy triad characterized?  
 A. Pain in the right iliac region  
 B. Pain in the epigastric region  
 C. Skin hypersensitivity  
 \* D. A C E  
 E. Muscle tension in the right iliac region

36. "Syndrome of the 5th - 7th day", described at the beginning in children and recognized in adults, characterized by:  
 A. Sudden onset on the 5th - 7th day of the usual postoperative rational 'period'  
 B. Manifested by diffuse abdominal irritation syndrome - us with muscle tension and temperature  
 \* C. A B D E  
 D. During the operation, the cause of peritonitis was not identified  
 E. Is the result of processing from the stump of the appendix and contact with peritoneum

37. Specify the features of the clinical picture of acute appendicitis with the location of the appendix in the small pelvis:  
 A. Lack of tenderness in the Scherer triangle  
 B. Admixture of blood in feces  
 C. Severe pain reaction of the anterior rectal wall  
 Ki in rectal examination  
 D. Lack of temperature response

\* E. A and C

38. The use of rubber-gauze tampons after appendages dectomy is indicated for:  
 A. Failure to remove all or part of the vermiform scion  
 B. Lancing of the periappendicular abscess  
 C. Doubts about the reliability of hemostasis and parenchymal blood flow from the bed of the appendix  
 D. Dangers of development of insolvency of seams, immersed stump of the appendix due to infiltration of the dome of the blind intestines  
 \* E. ABCD

39. Only during the operation is differential diagnosis of acute appendicitis with:  
 A. Terminal ileitis (Crohn's disease)  
 \* B. Inflammation of Meckel's diverticulum  
 C. Pyelonephritis  
 D. Diverticulum of the right half of the large intestine  
 E. Acute pancreatitis

40. For acute appendicitis in elderly and elderly patients age is characterized by:  
 A. Prevalence of destructive forms of the disease  
 B. Frequent development of primary gangrenous appendicitis  
 C. Erased clinical manifestations of the disease  
 D. Lubrication of the epigastric phase of pain syndrome  
 \* E. A B C D

41. Distinguishing features of acute appendicitis during the second half of pregnancy are:  
 A. Weak severity of pain syndrome, similar to that um due to stretching of the ligamentous apparatus of the uterus  
 B. Absence of Kocher's symptom  
 C. High localization of pain in the right half of the abdomen  
 \* D. A C E  
 E. Positive reverse Sitkovsky symptom

42. In the diagnosis of pelvic appendicitis, they are guided by:  
 A. Rapid demarcation of the inflammatory process in the cavity

pelvis  
 B. Mild or no symptoms of irritation  
 peritoneum  
 C. Blurred appendicular symptoms  
 D. The exceptional value of these rectal  
 and vaginal  
 research  
 \* E. A B C

43. Retrocecal appendicitis is more  
 characteristic of:  
 A. Delayed diagnosis  
 B. Late admission of patients to hospital  
 C. Frequent development of destructive  
 forms  
 D. Mild symptoms of peritoneal irritation  
 \* E. A B C D

44. For differential diagnosis between  
 acute ap-  
 pendicitis and right-sided renal colic that  
 you  
 accept?  
 A. Administration of antispasmodics  
 B. Drug injection  
 C. Urgent urine examination  
 D. Chromocystoscopy  
 \* E. A C D

45. A 23-year-old patient has a 32-week  
 pregnancy  
 in the surgical department 18 hours with  
 dynamic observation  
 denia, acute appendicitis cannot be  
 completely ruled out. Your  
 treatment tactics?  
 \* A. The patient needs to be operated on  
 B. Continue monitoring the patient  
 C. Perform abdominal ultrasonography  
 D. Together with the gynecologist, cause  
 an artificial interruption  
 pregnancy and then have an appendectomy  
 E. Perform laparoscopy and if the  
 diagnosis is confirmed  
 operate -,

46. What symptoms are characteristic of  
 the gangrenous form of acute  
 th appendicitis?  
 A. Plaque belly  
 B. Sudden increase in pain in the right iliac  
 region  
 C. Reduction of pain  
 D. Tachycardia  
 \* E. C and D

47. Which research method is the most  
 informative in the differential  
 fferential diagnosis of acute appendicitis  
 and impaired

noisy ectopic pregnancy?  
 A. Study of leukocytosis in peripheral  
 blood  
 B. Skin thermometry  
 C. Plain radiography  
 \* D. Puncture of the posterior fornix  
 E. All answers are correct

48. Surgical intervention for acute  
 appendicitis  
 contraindicated in case of:  
 \* A. Development of appendicular  
 infiltrate  
 B. Pregnancy 36-38 weeks  
 C. Decompensated heart disease  
 D. Acute myocardial infarction  
 E. With catarrhal appendicitis

49. Choose the most rational method of  
 processing the stump  
 appendix in adults:  
 A. Dressing with silk ligature with stump  
 immersion  
 B. Immersion with silk ligature without  
 immersion of the stump  
 C. Immersion of an unbound stump  
 D. Ligation with catgut ligature without  
 immersion of the stump  
 \* E. Catgut ligation ligation with stump  
 immersion

50. The development of the pathological  
 process in acute appendix  
 the quote begins:  
 A. From the serous cover of the appendix  
 \* B. From the mucous membrane of the  
 appendix  
 C. From the muscular layer of the  
 appendix  
 D. From the mucous membrane of the  
 dome of the cecum  
 E. From lymphangitis of the mesentery of  
 the vermiform process

### Topic: Complications of acute appendicitis.

1. The most probable complications of  
 perforation ap-  
 pendix are:  
 \* A. Intra-abdominal abscesses  
 B. Septic shock  
 C. Diffuse purulent peritonitis  
 D. Pylephlebitis

2. Possible complications of acute  
 appendicitis:  
 A. Appendicular infiltrate  
 B. Appendicular abscess  
 C. Acute suppurative diffuse peritonitis

D. Pylephlebitis

\* E . all answers are correct

3. Abscess formation of appendicular infiltrate

is driven by the following symptoms, except:

with A. Hectic temperature

B. Intoxication

C. Pain in the right iliac region

\* D. Erythema and fluctuations

E. High leukocytosis

4. What will be the further tactics if during the operation

appendicular infiltrate found?

A. Appendectomy

B. Appendectomy and abdominal drainage

C. Appendectomy with cecostomy placement

D. Closure of the abdominal cavity

\* E. Drainage of the abdominal cavity

5. A 36-year-old man underwent appendectomy. On the 10th

day there was a temperature of a hectic nature, pain in

right hypochondrium with irradiation to the shoulder, increasing

on a deep breath. Radiological examination showed

abnormal increase in the dome of the diaphragm on the right, atelect-  
zy of the basal segments of the lungs,  
effusion into the pleural cavity.

What is the most likely complication?

A. Pneumonia

\* B. Abscess subfrenicus

C. Liver abscess

D. Subhepatic abscess

E. Pylephlebitis

6. On the 5-7th day after appendectomy, a list of

symptoms below. Which ones contain information,

which could indicate the formation of a septic focus

ha?

A. Temperature

B. Abdominal pain

\* C. Dysuria, tenesmus, diarrhea

D. The number of leukocytes in urine - 103ml

E. Increased leukocytosis 38.

7. With appendicular diffuse peritonitis in pregnant

It is recommended for those with the term of delivery:

A. Caesarean section

B. Appendectomy

C. Lavage and abdominal drainage

D. Hysterectomy

\* E . A B C

8. The most common options for the location of the appendix, ve-

leading to the development of an appendicular abscess are?

A. Retrocecal

B. Medial

C. Pelvic

D. Iliac

\* E. A and B

9. Clinical signs of subphrenic abscess are:

A. Pain in the right side of the chest and upper sections

abdomen when inhaling

B. Tenderness to pressure in the lower ribs

C. Hectic temperature

D. Bulging of the lower costal spaces

\* E. A B C D

10. In the differential diagnosis of subphrenic

abscess with right-sided lower lobe pneumonia

The most important signs of an abscess are:

A. Restriction of movement of the right dome of the diaphragm when chest fluoroscopy

B. The presence of a suprahepatic fluid level during an overview

abdominal radiography

C. Receiving pus by puncture of the pleural cavity

D. Obtaining pus during puncture of the subphrenic

wanderings

\* E. A B C D

11. Appendicular infiltration usually develops:

A. In the first 2 days from the moment of illness

\* B. 3-4 days from the moment of illness

C. On 7-9 days from the moment of illness

D. In the early period after appendectomy

E. In the late period after appendectomy

12. In case of complication of acute appendicitis by appendicular

infiltration is indicated for conservative treatment because:

A. Possible self-healing

B. Resorption of the infiltrate is possible



C. When trying to make an appendectomy, iatrogenic damage to adjacent organs

D. After resorption of the infiltrate, a mild form develops.

diseases - chronic appendicitis

\* E. A and C

13. When opening the abscessed appendicular infiltrate not included

A. 66. For the treatment of dense pelvic infiltrates without recognition abscess formation:

A. Elevate the head end of the bed

B. Use broad-spectrum antibiotics

C. Apply warm chamomile microclysters

D. Prescribe a gentle, easily digestible high-calorie diet

\* E. A B C

14. Perform the operation under general anesthesia

B. If possible, use extraperitoneal access (according to Pirogov)

C. The infiltrate is carefully divided bluntly, avoiding damage to infiltrated bowel loops

\* D. The destructively modified worm is selected and removed.

malignant process

E. The abscess cavity is thoroughly washed and drained

15. For acute appendicitis complicated by the appendicular infiltrate, unlike a tumor of the cecum, does not typically:

A. Short medical history

B. Acute pain in the right iliac region, with rising temperature

C. Kocher's symptom

\* D. Frequent phenomena of partial intestinal obstruction in anamnesis

E. The tendency towards a decrease in tumor formation in the observation process

16. In acute pylephlebitis in 75% of cases, the source of infection is not:

The venous ports are not:

A. Acute appendicitis

B. Acute cholecystitis

C. Pancreatic necrosis

\* D. Nonspecific ulcerative colitis

E. Purulent process of the retroperitoneal space

17. According to the summary data of the literature, acute pylephlebitis is observed as a complication of acute appendicitis:

\* A. B 0.03% -0.15%

B. In 2.5% -6.4%

C. At 10.4% -12.4%

D. B 7.8% -12.8%

E. All Answers Are Wrong

18. The clinical signs of acute pylephlebitis are:

A. Pain in the right side of the abdomen

B. Hectic temperature, chills

C. Yellowness of the skin

D. Irradiation of pain in the back, right shoulder, collarbone

\* E. All answers are correct

19. Acute pylephlebitis is characterized by:

A. High leukocytosis (20-30).! O12 / l with pronounced neutrophilic shift

B. Bilirubinemia, increased aminotransferase activity

C. Hyperfibrinogens

D. Small liver abscesses on ultrasound

\* E. Positive symptom of Spizharsky

20. A reliable method for diagnosing acute pylephlebitis is an:

A. Plain fluoroscopy of the abdominal organs

B. Liver scintigraphy

C. Selective celiacography

D. Laparoscopy

\* E. Transpulogenography

21. Phlegmon of the retroperitoneal space, as a complication acute appendicitis, develops when:

A. Anterior subhepatic location of the vermiform appendix

B. Local peritonitis in the right iliac region

\* C. Retroperitoneal location of the appendix

D. Medial location of the appendix

E. The location of the appendix laterally from the next sigmoid colon

### **Topic: Postoperative ulcers**

1. Complete gastrectomy is applicable for:

A. Early dumping syndrome

B. Late dumping syndrome  
 \* C. Recurrence of peptic ulcer due to the syndrome  
 Zollinger-Ellison  
 D. Alkaline reflux gastritis  
 E. Postvagotomy diarrhea  
 2. Irrigoscopy is of decisive importance in the diagnosis  
 stick:  
 A. Postvagotomy gastrostasis  
 \* B. Gastrointestinal fistula  
 C. Recurrent peptic ulcer of gastro-duodeno-anastomosis  
 D. Dumping syndrome  
 E. All of the above  
 3. The frequency of recurrent peptic ulcers depends primarily on  
 queue from:  
 A. Patient's age  
 B. Duration of illness  
 C. Localization and size of the ulcer  
 D. Complications of peptic ulcer present at the time  
 primary surgery  
 \* E. Type of primary surgery  
 4. As a result of which operation, the appearance of recurrent peptide  
 Which ulcers are least likely?  
 A. Gastroenteroanastomosis  
 B. Resection of 2/3 of the stomach  
 C. Stem vagotomy with drainage surgery  
 \* D. Trunk vagotomy with economical gastrectomy  
 E. Selective proximal vagotomy  
 5. For chronic adductor loop syndrome, the most  
 a characteristic symptom is:  
 \* A. Epigastric pain, nausea, vomiting  
 B. Heartburn  
 C. Anorexia  
 D. Constipation  
 E. Tachycardia  
 6. Due to which of the listed interventions may  
 to experience alkaline reflux gastritis?  
 A. Stem vagotomy with pyloroplasty  
 B. Resection of the stomach 2/3 according to Bilroth I  
 C. Stem vagotomy with gastro-duodeno-anastomosis  
 D. Stem vagotomy with gastroentero-anastomosis  
 \* E. Any of the following  
 7. The most common reason for the occurrence of recurrent

peptic ulcer is:  
 \* A. Economical gastric resection  
 B. Incomplete vagotomy  
 C. The remainder of the mucous canal of the pylorus in the stump of the 12-fold intestines  
 D. Gastrinoma  
 E. Primary hyperparathyroidism  
 8. The exclusion of gastrinoma in a peptic ulcer patient should be  
 mend with:  
 A. Ultrasound computed tomography  
 B. Selective angiography  
 C. Secretin test  
 D. Serum gastrin determinations  
 \* E. Gastric secretion tests  
 9. Recurrence of peptic ulcer is most often defined:  
 \* A. Wrong choice and operation  
 B. Hyperparathyroidism  
 C. Gastrinoma  
 D. Helicobacter pylori infection  
 E. Duodeno-gastric reflux  
 10. On the 5th day after gastric resection according to Bilroth II in the  
 the patient is sub-icteric, increased temperature  
 round, severe persistent pain in the epigastric region and in  
 right hypochondrium, nausea, vomiting, tachycardia, leukocytosis,  
 amylazemia. Locally: the stomach is involved in the act of breathing, in the  
 epiga-  
 the national region and in the right hypochondrium is determined by the  
 disease  
 ness and rigidity of the abdominal wall, in the same place it is determined  
 tumor formation. Radiologically  
 determined  
 an enlarged pebble of the intestine that contains air. Passage  
 barium - no peculiarities. Repeated clinical trial  
 vaniya indicates a violation of the general condition. What  
 complication you think?  
 A. Postvagotomy gastroparesis  
 B. Inconsistency of sutures of the duodenal stump  
 \* C. Acute adductor loop syndrome  
 D. Dynamic postoperative obstruction  
 E. Acute hepatitis

11. For agastral asthenia, the following symptoms are characteristic we, except:  
 A. Diarrhea  
 B. Irritability  
 C. Anemia  
 \* D. Repeated vomiting  
 E. Drowsiness

12. For agastral anemia, the following symptoms are characteristic we, except:  
 A. General weakness  
 B. Dizziness  
 C. Erythropenia, hypoglobinemia  
 D. Pallor of the skin  
 \* E. Weight gain

13. Which of the diseases of the operated stomach most often requires re-intervention?  
 A. Dumping syndrome 1-P art.  
 B. Agastral anemia  
 \* C. Recurrent peptic ulcer of gastro-duodeno-anastomosis  
 D. Postvagotomy diarrhea  
 E. Enterogenic malabsorption

14. Name diseases of the operated stomach:  
 A. Intra-abdominal bleeding on the 4th day after resection stomach  
 B. Hypoglycemic syndrome  
 C. Agastral asthenia  
 D. Post-gastro-resection anemia  
 \* E. B C D

15. Name the pathologies that are diseases of the bathroom stomach:  
 A. Dumping syndrome III degree  
 B. Gastrointestinal fistula  
 C. Failure of the sutures of the carina of the stomach  
 D. Peptic ulcer of the jejunum  
 \* E. A B D

16. Show the disease of the operated stomach:  
 A. Postoperative gastric bleeding for the second Day after surgery  
 B. Postvagotomy diarrhea  
 \* C. Recurrent peptic duodenal ulcer  
 D. Inconsistency of sutures of the duodenal stump  
 E. Inconsistency of sutures of the gastrointestinal anastomosis

17. What disease is neither a complication of an ulcer nor

a disease of the operated stomach?  
 \* A. Insufficiency of the cardia  
 B. Biliary reflux gastritis  
 C. Pyloric stenosis  
 D. Gastrointestinal fistula  
 E. Penetration of ulcers

18. Disease of the operated stomach is:  
 \* A. Peptic ulcer of the small intestine  
 B. Acute postoperative pancreatitis  
 C. Acute strangulation obstruction of the adductor pet-whether due to spikes  
 D. Bleeding from an ulcer of a disconnected duodenal ulcer  
 E. Inconsistency of the sutures of the duodenum 12

19. Disease of the operated stomach is:  
 \* A. Disease manifested in late postoperative period, after etiopathogenetically grounded operations produced on the stomach for ulcers  
 B. Pathology that develops only after resection of the female ludka  
 C. Organic and functional postvagotomy pathologi  
 D. Diseases arising from interventions with the purpose of gastric drainage  
 E. Diseases that arise as a result of operations on about peptic ulcer

20. Postvagotomy syndrome is:  
 A. Cicatricial stenosis of the gastrointestinal anastomosis  
 B. Acute ulcer of the small intestine  
 \* C. Gastrostasis  
 D. Atrophic gastritis  
 E. Dumping syndrome

21. Post-gastro-resection syndrome is:  
 A. Agastral anemia  
 B. Chronic adductor loop syndrome caused by malrotation of the duodenum  
 \* C. Biliary reflux gastritis  
 D. Pyloroduodenal stenosis after suturing perforated ulcers, duodenal ulcer after selective proximal vagotomy  
 E. Recurrent

22. The most informative in the diagnosis of Dumping syndrome is an:

- A. Determination of the clinical manifestations of the disease
- B. Medical history
- C. Data of X-ray contrast study with barium mixture  
sue gastric tract
- D. Studies of gastric secretory function  
HC1
- \* E. Test with 50% glucose solution
23. The main clinical symptom of recurrent pep-  
a typical ulcer is:
- A. Heartburn
- \* B. Pain in the epigastric region
- C. Nausea and vomiting
- D. Depletion
- E. Constipation
24. What research should be used to start  
diagnosing recurrence  
marvelous peptic ulcer?
- A. Irrigoscopy
- B. Urease test for the determination of  
Helicobacter pylori
- C. X-ray examination of the upper part of  
the food  
brewing tract with barium mixture
- \* D. Endoscopic examination
- E. Study of gastric secretion
25. The best method of surgery for  
Zollinger syndrome -  
Ellisson of the second type is:
- A. Roux-en-route gastric resection
- B. Resection with truncular vagotomy
- C. Truncular vagotomy
- \* D. Complete gastrectomy regardless of  
the fact of removal of gastritis  
nomes
- E. Removal of detected gastrinoma
26. The most advanced method of  
diagnosing the syndrome  
the small stomach is:
- A. FEGDS
- B. Biopsy of the stomach
- C. Intragastric pH meter
- \* D. X-ray barium examination
- E. All of the above
27. The incidence of diseases of the  
operated stomach is in  
limits:
- A. 3-5%
- B. 5-10%
- \* C. 10-25%
- D. 25-50%
- E. 50-75%
28. The cause of dysphagia after surgery  
for ulcers is  
small intestine and 12 duodenal ulcer is:
- A. High resection of the stomach
- B. Anastomositis
- C. Biliary reflux gastritis
- \* D. Esophageal denervation
- E. Incomplete vagotomy
29. Late dumping syndrome appears after  
eating  
through:
- A. 30 min.
- B. 1 hour
- \* C. 2-3 hours
- D. 3-4 hours
- E. 6 hours
30. The methylene blue solution taken per  
os can be  
useful in diagnostics:
- A. Postvagotomy diarrhea
- B. Reflux gastritis
- \* C. Gastrointestinal fistula
- D. Gastrinomas
- E. Dumping syndrome
31. The following studies are helpful in  
identifying the causes  
recurrent peptic ulcer:
- A. Esophagogastroduodenoscopy
- B. Bioptical examination
- C. Investigation of gastrinemia
- D. Serum calcium test
- \* E. all answers are correct
32. Treatment of recurrent peptic ulcers  
includes:
- A. H2 antagonists
- B. Diclofenac to reduce peri-ulcer edema
- C. Vitamins
- D. Infusion with amino acid solutions
- \* E. all options can be applied
33. The causes of recurrent peptic ulcer are  
considered  
the following, except:
- A. Economical gastric resection
- B. Wide gastroenteroanastomosis
- C. Continuous acceleration of gastric  
evacuation  
my
- D. Partial cell hyperplasia
- \* E. B C
34. List the operations after which the  
disease of the operated stomach:
- A. Closure of perforated ulcer
- B. Bilroth I gastric resection
- C. Letter loop gastrointestinal anastomosis  
"omega"

D. Truncular vagotomy with excision of the ulcer and pyloroplasty

Coy by Djudd

\* E. A C

35. List the correct statements regarding the syndrome Zollinger-Ellison:

A. The dominant symptom is salt hypersecretion.

noah acid

B. Manifested by hypergastrinemia

C. May be due to pancreatic D-cell tumor current

D. May be due to mucosal G-cell hyperplasia antrum

\* E. all answers are correct

36. Primary hyperparathyroidism is manifested by:

A. Hyperchlorhydria

B. Hypercalcemia

C. Phosphaturia

D. Multiple endocrine adenomatosis

\* E. all answers are correct

37. List the statements that correctly define gastrin:

A. Produced by G-cells of the antrum mucosa

B. Produced by D-cells of the pancreas

C. Serum level in a healthy person 50-200 pg

D. Serum level in a healthy person 500-600 pg

\* E. A B C

38. What are the radiological signs of dumping syndrome?

A. Funnel-shaped stomach

B. Failure of barium mass from the stomach into the small intestine

C. Accelerated movement of food through the small intestine

D. Diarrhea 15 minutes after administration of the barium mass

\* E. all answers are correct

39. What is not typical for the I degree of dumping syndrome?

A. Increase in heart rate by 10-15 beats per minute after taking

carbohydrate food

B. Drop in blood pressure by 10-15 mm Hg. Art.

C. Ineffectiveness of conservative treatment

D. Disability

\* E. C D

40. The causes of chronic afferent loop syndrome are not:

A. Stenosis of the adductor loop

B. Postoperative gastrostasis

C. Duodenal denervation

D. Intestinal malabsorption

\* E. B D

41. Acute adductor loop syndrome is characterized by:

A. Stenosis of gastro-duodeno-anastomosis

B. Is a threat to the patient's life

C. Appears due to intussusception of the adductor loop

D. Appears due to the inversion of the leading loop

\* E. B C D

42. List the applied operations in acute syndrome of the leading loop:

A. Reduodenization

B. Resection with redistribution of gastroentero-anastomosis on the loop "U" according to Ru

C. Jejunoduodenoplasty

D. Reverse segment of the jejunum

\* E. B C

43. List postvagotomy syndromes:

A. Gastrostasis

B. Late dumping syndrome

C. Duodenostasis

D. Chronic adductor loop syndrome

\* E. A C

44. List the types of postoperative malabsorption:

A. Gastrogenic

B. Enterogenic

C. Pancreatogenic

D. Hepatogenic

\* E. A B C D

45. List the clinical symptoms of malabsorption:

A. Cachexia

B. Anemia

C. Hyperhidrosis of the skin

D. Steatorrhea

\* E. A B D

46. List the predisposing factors for the appearance of postvagotomy diarrhea:

A. Minimal HCl secretion

B. Dysbacteriosis

C. Disorders of fatty acid metabolism

D. Intestinal motility disorders

\* E. A B C

47. List the causes of recurrent peptic ulcer after

after vagotomy:

A. Incomplete transection of gastric branches of vagus nerves

B. Economical gastric resection

C Inadequate gastric drainage

D. Hypercalcemia

\* E. A C

48. List the causes of recurrent peptic ulcer after

after gastric resection according to Bilroth II:

A. Helicobacter pylori invasion

B. Economical gastric resection

C. The remainder of the antral mucosa in the duodenal stump

intestines

D. Hypergastrinemia

\* E. B C

49. List the ineffective operations for recurrent

peptic ulcer caused by residual antrum zystoma in the stump of the duodenum:

A. Reduction of the size of gastroenteroanastomosis

B. Reduodenization

C. Reconstruction of the Billroth 11 anastomosis in Bilroth I

D. Reduodenization by gastro-ejunoduodenoplasty

\* E. all answers are correct

50. List the effective operations in the treatment of dumping

syndrome:

A. Reverse segment of the jejunum

B. Isoperistaltic gastro-jejunoplasty

C. Jejuno-duodenostomy

D. Reconstruction of the anastomosis from Bilroth II to Bilroth I

\* E. A B D

**Topic:** Complications of gastric ulcer and duodenal ulcer (bleeding, perforation).

1. The source of bleeding into the lumen of the gastrointestinal

the path is most often localized in:

A. Esophagus

\* B. Stomach

C. Duodenum

D. Small intestine

E. Large intestine

2. Where is the border that allows the qualification of blood

flow as coming from the upper or lower parts of the

digestive tract?

A. At the level of the Vater nipple

B. At the place of transition of the I part of the duodenum into

Part III

\* C. At the level of the duodeno-jejunal angle

D. 30-50 cm distal to the tract ligament

E. At the level of the bauginine flap

3. Of the clinical signs of bleeding, the least possible

can serve as a criterion for the severity of blood loss:

A. Bloody vomiting

B. Pulse quality and blood pressure

\* C. Respiratory rate

D. Signs of peripheral vasoconstriction

E. Melena

4. Does not participate in the process of compensation for acute blood loss:

A. Autonomic nervous system

B. Cardiovascular system

C Endocrine system

D. Hematopoietic system

\* E. Immune defense system

5. About the influence of microcirculatory disorders on the condition

internal organs in conditions of hypovolemia caused by blood

loss, the easiest way to judge by functional impairment

from the side:

A. Brain

B. Hearts

C. Lungs

D. Intestine

\* E. Kidney

6. From methods for diagnosing bleeding from the upper section

The most important digestive fact is:

\* A. Endoscopy

B. X-ray contrast study

C. Scintigraphy

D. Selective angiography

E. Laparotomy with revision of the abdominal organs

7. Risk of continuation or recurrence of ulcerative bleeding

Not very high when:

A. There is a state of shock

B. The amount of hemoglobin <70 g / l

C. Endoscopically detected actively bleeding ulcer stomach

D. Age over 50

\* E. Age does not exceed 30 years

8. To endoscopic signs of active ulcerative blood currents include:

A. Arterial blood stream

B. Visible vessel

C. Leakage of blood from under the thrombus

D. Blood clots in the stomach

\* E. A and C

9. What does not determine the surgical tactics for ulcerative bleeding?

A. Condition of the patient

B. Hematocrit and hemoglobin levels

C. Endoscopy data

D. Resuscitation results

\* E. Patient gender

10. Absolute indications for surgery for ulcerative blood

The following are:

A. Shock or unstable hemodynamics

B. Relapse of bleeding in the first hours or days after hospitalization

C. Bleeding associated with ulcer perforation

D. Insignificant leakage of blood from under the clot at a bumpy hemodynamics

\* E. A B C

11. Choosing a method of surgical treatment of ulcerative blood currents, take into account:

A. Localization of the ulcer

B. Possible type of secretion

C. The patient's condition

D. The fact of repeated bleeding in anamnesis

\* E. A B C

12. What is the difference between stress ulceration and chronic peptic ulcers?

A. Etiopathogenesis

B. Morphological characteristics

C. Clinical course

D. Complications

\* E. A B C

13. Which of the statements concerning acute peptic ulcers, right?

A. Observed in severe conditions characterized by high risk to life

B. Multiple ulceration

C. Asymptomatic until complications appear

D. Complicated by bleeding and perforation

\* E. Bleeding from acute ulcers is prone to spontaneous new

14. For initial therapy of bleeding arising on the for acute ulceration and ulceration, it is used:

A. Blockade of histamine H2 receptors

B. Antacids

C. Selective infusion of vasopressin

\* D. Intravenous infusion and gastric lavage with ice-cold left solution

E. Vitamin A in high doses

15. Continued bleeding after conservative treatment of acute ulcers dictates the need for additional measures such as those listed below. Which one deserves preference?

\* A. Diathermo- and photocoagulation

B. Truncular vagotomy with pyloroplasty

C. Truncular vagotomy with antrumectomy

D. Subtotal gastric resection

E. Gastrectomy

16. Threatening diffuse bleeding from the gastric mucosa can not be stopped by conventional conservative measures, supplemented by selective infusion of vasopressin, embolysis gastric vessels and photocoagulation. Transfused in 24 hours 2.5 liters of blood, but the patient's condition remains unstable. The most rational in this case seems to be:

A. Truncular vagotomy with pyloroplasty

B. Truncular vagotomy with antrum resection

C. Subtotal gastric resection

D. Proximal gastric resection

\* E. Gastrectomy

17) Rupture of the mucous membrane in Mallory-Weiss syndrome has meao:

\* A. In the zone of the esophageal-gastric junction

B. On the anterior wall of the antrum

C. On the back wall of the antrum of the stomach  
 D. On the lesser curvature of the stomach  
 E. In the gatekeeper's area  
 18. The occurrence of Mallory-Weiss syndrome is related to the following factors, excluding:  
 \* A. Disorders of the evacuation function of the stomach  
 B. Limited mobility of the mucosa and submucosa layer  
 C. Discoordination of movements of the muscles of the esophagus and stomach  
 D. Gastroesophageal reflux  
 E. Sudden increase in intragastric pressure  
 19. The number of elements of surgical intervention for syn-Mallory-Weiss drome does not include:  
 A. Wide gastrotomy  
 B. Examination of the whole stomach  
 C. Closure of the fissure with the capture of the submucosa and muscle layers  
 D. Audit of surrounding organs  
 \* E. Pyloroplasty  
 20. An effective means for reducing portal blood current for portal hypertension is:  
 A. Lactulose  
 B. Cimetidine  
 C. Neomycin  
 \* D. Vasopressin  
 E. Sedatives  
 21. Up to 80-90% of acute bleeding from varicose veins is the esophagus are controllable. From the methods used with this goal, priority is:  
 A. Vasopressin  
 B. Balloon tamponade  
 \* C. Sclerotherapy  
 D. Transhepatic gastric vein embolization  
 E. Portocaval anastomosis  
 22. Balloon tamponade of bleeding veins of the esophagus leads to complications in 4-9% of cases. Among them, the most common:  
 \* A. Aspiration  
 B. Tracheal obstruction  
 C. Necrosis of mucosal sites  
 D. Necrosis of the esophagus  
 E. Ruptured esophagus  
 23. There are 2 types of operations aimed at pre-

prevention and treatment of bleeding from varicose veins  
 esophagus - decompressive and uncoupling. Of the ways listed below, the dissociatives include:  
 A. Central spleno-renal anastomosis  
 B. Intraoperative gastric vein embolization  
 C. Porto-systemic anastomosis in the form of H  
 \* D. Operation Shugiura  
 E. Operation Kalba  
 24. A patient with stopped bleeding from the renal veins of the esophagus found serum bilirubin in within 35-50  $\mu\text{mol} / \text{l}$ , serum albumin - 30-35 g / l, transient ascites and minimal neurological symptoms then we; fatness is recognized as good. What are the ways to treat are suitable for this case:  
 A. Sclerotherapy  
 B. Porto-systemic shunting  
 C. Percutaneous, transhepatic embolization of gastric veins  
 D. Operation Shugiura  
 \* E. B and D  
 25. The most common cause of hemobilization is:  
 \* A. Liver injury  
 B. Tumors of the liver and biliary tract  
 C. Gallstone disease  
 D. Pathology of intra- and extrahepatic vessels  
 E. Liver abscess  
 26. Hemobilia is characterized by the following symptoms, except:  
 A. Hepatic colic  
 B. Jaundice  
 C. Bleeding into the lumen of the digestive tract  
 \* D. Hepatomegaly  
 E. Melena  
 27. What statement regarding bleeding from the lower department of the gastrointestinal tract, is it wrong?  
 A. Diseases complicated by bleeding differ great variety  
 B. Before the onset of bleeding, clinical manifestations of the disease in many cases, mild, nonspecific, or are present



C. Sources of bleeding can be localized in different segments of the intestine at the same time

D. Pathology found during preoperative research is not necessarily the cause of bleeding

\* E. Source identification is most easily achieved by laparotomy

28. Low massive bleeding from the gastrointestinal path are least likely in cases where the source is associated with:

\* A. Inflammatory process

B. Tumor growth

C. Intestinal anomaly

D. Mechanical reasons

E. Vascular pathology

29. Massive bleeding from the colon can be the first and only manifestation of the disease with:

\* A. Diverticulosis

B. Diffuse familial polyposis

C. Malignant neoplasms

D. Ulcerative colitis

E. Intestinal endometriosis

30. Massive bleeding with diverticulosis of the colon - ki is explained primarily by:

A. Weakness of the intestinal wall

B. The proximity to each other of many divertis kulov

\* C. The relationship of the diverticulum with the vessels of the intestinal wall ki

D. Retention in the diverticulum of intestinal contents

E. Diverticulitis

31. For intraoperative diagnosis of the causes of low blood lesions from the gastrointestinal tract are suitable:

A. Revision of the intestine

B. Videopanendoscopy

C. Selective mesenteric angiography

D. Entero- and colotomy

\* E. A B C

32. For the treatment of massive bleeding due to non-specific physical ulcerative colitis seems to be the best:

A. Conservative approach

B. Ileostomy

C. Left-sided hemicolectomy

\* D. Subtotal colectomy

E. Colproctectomy

**Topic: Complications of gastric ulcer and duodenal ulcer (stenosis, penetration and malignancy).**

1. Among the factors contributing to the perforation of chronic gastro-duodenal ulcers, the most important are:

\* A. Exacerbation of peptic ulcer

B. Food overflow of the stomach, alcohol consumption

C. Excessive exercise

D. Local autoimmune conflict

E. Duration of illness

2. The period of imaginary well-being during the perforated ulcers are caused by all of the following, except:

A. Dilutions of hydrochloric acid in the abdominal cavity of exudation Tom

B. Disorders of the sensitivity of nerve endings in paris talus peritoneum

C. Action of endorphins

\* D. Covering the perforation with fibrin or saline nickname

E. Adaptation to aggression

3. Of the following signs of a perforated ulcer, I decide the most important for diagnostics is:

A. Acute pain in the epigastric region or in the right sub-berrier

B. Vomiting

C. Symptoms of peritoneal irritation

\* D. Pneumoperitoneum

E. Dullness in sloping places of the abdomen

4. To confirm the diagnosis of ulcer perforation, resort to the following research methods:

A. Gastroscopy

\* B. Plain X-ray of the abdominal organs

C. Gastroduodenography

D. Laparoscopy

E. Puncture and peritoneal lavage

5. Pain in the right lower abdomen, nausea, sometimes vomiting, pain and muscle tension in the right side

otic region, the temperature rarely exceeds normal

more than 1 degree at:

A. Perforating ulcer

\* B. Acute appendicitis

C. Acute cholecystitis

D. Mesenteric infarction

E. Myocardial infarction

6. Acute pain in the epigastric region with irra-

radiation to the heart and subscapularis region, shortness of breath,

sometimes a single vomiting. Pulse weak and rapid, arrhythmia, hy-

sweating, attenuation of heart murmurs and expansion of the boundaries of

dullness, a feeling of pain on palpation in the epigastric

areas, sometimes muscle stiffness, peristaltic murmurs

normal, typical for:

A. Perforating ulcer

B. Acute appendicitis

C. Acute cholecystitis

D. Mesenteric infarction

\* E. Myocardial infarction

7. Sudden onset, sharp pain in the upper abdomen,

then spreading throughout the abdomen, motionless before

skewed abdomen, disappearance of hepatic dullness, frequent

shallow breathing; pulse rate, blood pressure

the temperature is initially close to normal. What is your diagnosis?

\* A. Perforated ulcer

B. Acute appendicitis

C. Acute cholecystitis

D. Acute occlusion of mesenteric vessels

E. Myocardial infarction

8. Acute onset, progressively increasing pain in the right

hypochondrium with irradiation to the right supraclavicular region,

muscle tension in the right hypochondrium, rapid pulse, high

juicy temperature. What pathology are you thinking about?

A. Perforated ulcer

B. Acute appendicitis

\* C. Acute cholecystitis

D. Mesenteric thrombosis

E. Myocardial infarction

9. Acute onset, severe abdominal pain without a clear lo-

calcifications, nausea, vomiting, fear, skin pallor

integument, bradycardia, the abdomen is soft, the temperature is normal

naya, stool mixed with blood, leukocytosis. Discrepancy between

severe general condition and local manifestations of

illnesses. What is your diagnosis?

A. Perforated ulcer

B. Acute appendicitis

C. Acute cholecystitis

\* D. Mesenteric thrombosis

E. Myocardial infarction

10. Conservative treatment, in the case of a perforated ulcer, by

Taylor's method can be realized in the following cases, for

exception:

A. Failure of one or more organs

B. Myocardial infarction

C. Severe condition caused by peritonitis or sepsis

\* D. Elderly patient

E. Patient refusal from surgery

11. Among the elements of conservative therapy for perforated ulcers

according to the Taylor method, the main role is played by:

A. Antibiotic therapy

B. Restoration of acid-base balance

C. Parenteral nutrition

D \*. Continuous aspiration of gastric contents

E. Analgesics

12. What research is needed at the final stage

conservative treatment of perforated ulcer according to the Taylor method?

\* A. Analysis of aspirated fluid from the stomach

B. Fibrogastroscopy

C. Plain X-ray of the abdominal cavity

D. Gastroduodenography

E. Puncture of the abdominal cavity

13. Methods and techniques for preparing a patient for surgery on

water perforated ulcer does not include:

A. Nasogastric aspiration

B. Plasma substitution solutions

C. Electrolyte solutions

\* D. Amino acid solutions and fat emulsions

E. Antibiotics

14. What factors determine the surgical tactics in case perforated ulcer tea?

A. Age and condition of the patient  
 B. Duration of ulcerative history  
 C. Localization of ulcers  
 D. Perforation duration  
 \* E . all answers are correct

15. Correct indications for suturing a perforated ulcer are:

A. Brief ulcerative history  
 B. Senile age  
 C. Concomitant severe pathology  
 D. Features of the topography of the stomach and ulcers  
 \* E . A B C

16. Suturing a perforated ulcer has a number of advantages, namely:

A. Operation is less traumatic  
 B. Suitable for critical situations  
 C. Doable with endoscopic technique  
 D. Provides lasting recovery for most patients  
 \* E . A B C

17. In what situations, from the following, resection of the is the best solution?

A. Perforation of gastric ulcers  
 B. Multiple perforations  
 C. Perforation of ulcers of doubtful malignancy growth  
 D. Perforation of gastric ulcer with bleeding  
 \* E . all answers are correct

18. Among the factors affecting the ability to perform vagotomy with a perforated ulcer, of lesser importance are:

\* A. Duration of illness  
 B. Patient's age  
 C. General condition  
 D. Topography of the ulcer  
 E. Perforation duration

19. Choosing a drainage operation that complements vagotomy, take into account first of all:

A. Duration of peptic ulcer history  
 B. Indications of past bleeding  
 \* C. The nature of local pathomorphological changes  
 D. Condition of the stomach wall

E. Patient's age

20. The patient was hospitalized 5 hours after the illness. with clear signs of covered perforation. In such case shown:

\* A. Urgent operation  
 B. Postponement of surgery until complete disappearance of the abdominal symptomatology  
 C. Cancellation of the operation  
 D. Surgery after 6 months  
 E. there is no correct answer

21. Which of the following measures in the treatment of postoperative bowel paresis are irrational?

A. Gastrointestinal decompression  
 B. Correction of water and electrolyte balance  
 C. Prescription of adrenergic agonists  
 D. Prescription of m-cholinomimetics and anticholinesterase agents drugs  
 \* E. C and D

22. Divergence of sutures of a sutured ulcer is most easily recognized:

A. Examination and palpation of the abdomen  
 B. Plain X-ray of the abdomen  
 C. Laparoscopy  
 \* D. Gastroduodenography  
 E. Ultrasonography

23. Of the complications possible after the operations undertaken for perforated ulcers, the first place in frequency is occupied by:

\* A. Pulmonary complications  
 B. Intra-abdominal abscesses  
 C. Impaired gastric evacuation  
 D. Thromboembolic complications  
 E. Suppuration of the surgical wound

24. Which of the following methods is unnecessary in the prevention of postoperative pulmonary complications?

A. Respiratory gymnastics  
 B. Early activation of the patient in bed  
 \* C. Artificial ventilation of the lungs with positive pressure exhalation  
 D. Administration of mucolytic drugs  
 E. Prolonged epidural anesthesia

25. After suturing a perforated gastric ulcer, after surgery

the rational period may be complicated by the formation of abscesses

sa:

- A. In the subphrenic region
- B. In the subhepatic region
- C. Interintestinal
- D. In Douglass space
- \* E. All options are possible

**Topic : Diseases of the thyroid gland.**

1. For sporadic goiter, the following signs are not characteristic

Ki:

- A. An increase in the volume of the thyroid gland
- B. Normal thyroid function
- \* C. Appears in 20% of the population of a certain area
- D. Appears more often in women
- E. Transmitted by recessive gene

2. In the evolution of sporadic goiter, the following may appear other complications:

- A. Compression of surrounding anatomical structures
- B. Interstitial bleeding
- C. Acute thyroiditis
- D. Hyperthyroidization
- \* E. all answers are correct

3. Scintigraphy of toxic adenoma shows:

- A. Diffuse homogeneous isotope accumulation
- B. Diffuse inhomogeneous isotope accumulation
- C. Chessboard Accumulation
- \* D. "Hot knot"
- E. "Cold node"

4. Which of the following changes about what are the hypotrophy of the cervical sympathetic trunk are the thyroid glands correct?

- A. Cyanosis of the face, swelling of the jugular veins
- B. Disorders of the cardiovascular and respiratory noah systems
- C. Aphonia, hoarseness
- \* D. Miosis, enophthalmos, ptosis of the century, bradycardia
- E. Brain disturbances, fainting

5. Which of the following statements is correct?

- A. In chronic Hashimoto's thyroiditis, anti-body to thyroglobulin and microsomes

B. With Graves' disease, thyroid-stimulating

immunoglobulins (TSIs, known as LATS-P)

C. Adenomas are benign tumors thyroid gland

D. Thymoma is a tumor of the thymus

\* E. All of the above statements are correct

6. Which of the following statements regarding Zollinger-Ellison Syndrome Are Right?

A. Zollinger-Ellison syndrome is the cause of

new duodenal ulcer in 10% of cases

B. Tumor (gastrinoma), usually located in the head

pancreas, clinically manifested by pepti-ulcer

C. The tumor can be localized in the liver, stomach, hilum spleen

D. 50-70% of tumors are malignant

\* E. All of the above

7. The most sensitive and specific method for

follow-up of a patient with Zollinger-Ellison syndrome is

A. Detection of antithyroid antibodies in blood plasma titration house

\* B. Determination of the level of gastrin in blood plasma

C. Measurement of catecholamine levels

D. pH-metry of gastric juice

E. All of the above

8. Which of the following statements regarding Zollinger-Ellison Syndrome Is Not Right?

A. Ulcers in gastrinoma are usually small or small

lazy (1 cm in diameter)

B. Diarrhea occurs in more than Y cases

C. Peptic ulcer occurs in 90-95% of cases

\* D. In patients with gastrinoma, uro-vein gastrin is <150 pg / dl

E. There is steatorrhea and vitamin B malabsorption | 2

9. A characteristic triad of manifestations for Zollin syndrome

Hera-Ellison:

A. Multiple ulcers, often recurrent, atypical, with heavy and rapid development

- B. Qualitative and quantitative gastric hyposecretion  
 C. The chemical composition of gastric juice indicates an increased basal hypersecretion  
 D. Presence of a gastrin-secreting tumor (gastrinoma)  
 \* E. A C D
10. Characteristics of thymoma:  
 A. Is a tumor of the thymus  
 B. Is a tumor of the adrenal gland  
 C. Is a tumor of the thyroid gland  
 D. Asymg may proceed somatically, the symptom is manifested compression of adjacent tissues or paraneoplastic syndromes  
 \* E. A and D
11. For the clinical picture of myasthenia gravis in patients with thymoma everything is typical except:  
 A. Acute onset and malignant course  
 B. Cholinergic crises and / or myasthenic crises  
 C. Severe motor disorders  
 D. Muscular wasting  
 \* E. Paradox breathing
12. Which of the following pathologies are not part of MEN II syndrome?  
 A. Multicentric medullary carcinoma  
 B. Pheochromocytoma  
 C. Primary hyperparathyroidism  
 D. C-cell hyperplasia  
 \* E. Thymic hyperplasia
13. MEN II B syndrome includes everything except:  
 A. Medular thyroid carcinoma  
 B. Pheochromocytomas  
 C. Ganglioneuromas of the intestine  
 \* D. Insulinomas  
 E. Mucous neuroma
14. Increase in the content of thyroid hormones in blood cannot manifest itself as follows:  
 A. Cardiothyroidism  
 B. Thyrotoxic enteropathy  
 C. Diabetes  
 \* D. Renal failure  
 E. Hepatosis
15. Decrease in the content of thyroid hormones in blood cannot manifest itself as follows:  
 A. Myxedema cardiopathy  
 B. Degenerative arthropathies

- \* C. Diabetes  
 D. Gallstone disease  
 E. Muscular dystrophies

**Topic: Thyrotoxic goiter: surgical methods of treatment, postoperative complications.**

1. Contraindications to surgical treatment of goiter are as follows:  
 A. Ineffective conservative treatment  
 \* B. Initial parenchymal goiter  
 C. Hyperthyroid goiter  
 D. Nodular goiter  
 E. Suspected malignancy of goiter
2. In the treatment of goiter, the following operations cannot be applied. tion (depending on the situation):  
 A. Subtotal thyroidectomy  
 B. Total lobectomy  
 C. Total thyroidectomy  
 D. Subtotal lobectomy  
 \* E. Radical dissection neck (radical neck dissection)
3. Indications for the treatment of thyrotoxicosis with radioactive i- the house includes:  
 \* A. Basedow's disease  
 B. Toxic adenoma  
 C. Hyperthyroidism - thyroid cancer association  
 D. Thyrotoxicosis resulting from the treatment of thyroid hormones  
 E. Secondary hyperthyroidia due to idiopathic tumors
4. What drugs are used in the treatment of thyrotoxicosis?  
 A. Mebendazole  
 B. Biseptol  
 \* C. Mercazolil  
 D. Omeprozole  
 E. Ampicillin
5. Treatment of thyrotoxicosis does not pursue the following goals:  
 A. Correction of rhythm disturbances and tachycardia  
 B. Reduction of hyperthyroidism  
 C. Prevention of thyrotoxic crises  
 D. Inhibition of the cortico-diencephalo-pituitary centers  
 \* E. Treatment of hyperparathyroidism
6. 24 hours after subtotal thyroidectomy by about thyrotoxicosis appears: excitement, preddelir-

osnoe state, tachycardia - 180 beats. per minute, arrhythmia, hyperthermia. What pathology do you think about?

- A. Paralysis of the recurrent nerves
- B. Hyperthyroidism
- C. Hypoparathyroidism
- \* D. Thyrotoxic crisis
- E. Gas embolism

7. Complications of thyroidectomy include everything except:

- A. Paresis of the recurrent nerve
- B. Myxedema
- C. Tetanic crisis
- D. Thyrotoxic crisis
- \* E. Exophthalmic syndrome

8. Thyrotoxicosis is:

- A. Cardio-vascular, gastrointestinal and neuropsychiatric syndromes
- B. Has neuropsychiatric features associated with etiologic factors, age and associated diseases
- C. Clinical and visceral manifestations are the result of volume increase in the amount of thyroid hormones
- D. Clinical and visceral manifestations are not related as a result of an increase in the amount of thyroid hormones glands
- \* E. A B C

9. The manifestations of a thyrotoxic crisis include:

- A. Hyperthermia, tachycardia, arterial hypertension
- B. Thermophobia, increased sweating, paresthesia
- C. Agitation, confusion, vomiting
- D. Exophthalmia, insomnia, muscle atrophy
- \* E. A and C

10. What is another name for toxic thyroid adenoma gland is correct?

- A. Basedow-Graves disease
- B. Goiter Hashimoto
- \* C. Plummer's disease
- D. Riedel's goiter
- E. All of the above options are incorrect

11. Which of the following factors provoke the emergence of a thyrotoxic crisis?

- A. Abrupt cessation of treatment

B. Attachment of infection or neuropsychic influences

consequences

C. Inadequate preoperative preparation

D. All statements are incorrect

\* E. All statements are correct

12. What statements regarding benign tumors

thyroid cholea are correct?

A. Present as adenomas, asymptomatic, slow develop

B. Acute, rapidly developing

C. Early and often metastasized

D. 70% are detected as a "cold" node on scintigraphy

\* E. A and D

13. For the preoperative diagnosis of malignant goiter

the following studies are used:

\* A. Thyroid scintigraphy

B. Detection of antibodies in blood plasma by titration

C. Measurement of basal metabolism

D. Establishment of the iodine binding index

E. Aspiration biopsy

14. What is not typical for multiple endocrine neoplasms

sia of the first type (MEN I syndrome)?

A. Formed by tumors or hyperplasia of the parathyroid

glands, islet apparatus of the pancreas, hypofiza

\* B. Formed by tumors or hyperplasia of the adrenal glands,

pancreas, pituitary gland

C. The most persistent manifestation of MEN I syndrome is

Xia hyperparathyroidism (90-100%)

D. Adenoma of the pituitary gland can be detected in almost all patients

MEN 1

E. MEN I syndrome is an autosomal dominant genetic

noah anomaly

15. Which of the proposed statements is incorrect

about Riedel's chronic thyroiditis?

A. The thyroid gland is filled with dense fibro-sclerosis

died cloth

B. May be combined with other fibrous idiopathic

defects

C. Clinically manifested as a dense goiter  
 \* D. The patient has a homogeneous goiter (palpation of the same wood of soft consistency, well defined knotty structure)  
 E. Scintigraphy I131 shows the presence of diffuse inhomogeneous gene structure

16. Which of the following statements are not typical for Hashimoto's lymphocytic thyroiditis?  
 A. Is an autoimmune disease  
 B. Mostly occurs in women  
 C. In the blood plasma of patients, high titers of anti-thyroid antibodies  
 D. The disease is family in nature and is combined with other my autoimmune diseases  
 \* E. Clinically manifests itself as a hard, crushing goiter

17. Which of the following statements are not typical us for Kerven's subacute thyroiditis?  
 A. More common in women  
 B. Occurs after previous upper respiratory infections - paths  
 C. The first manifestation is fever, chills  
 D. The thyroid gland rapidly increases in volume, with palpation is painful  
 \* E. It is a severe form of thyrotoxicosis

18. Which of the following statements are not correct for pheochromocytoma?  
 A. The disease accounts for 1-5% of all diseases of supra Chechniks  
 B. More common between the ages of 20-35  
 C. Is a chromophinic cell tumor  
 D. More often localized in the right adrenal gland  
 \* E. Is a malignant tumor

19. The main symptom characteristic of pheochromocytoma:  
 A. Arterial hypotension  
 B. Hyperthermia  
 C. Thermophobia  
 \* D. Arterial hypertension  
 E. Insomnia

20. Which of the following statements regarding pheochromocytoma treatment is wrong?  
 A. The only treatment is extirpation of the tumor  
 B. The need for conservative treatment during pre-operative, intraoperative, postoperative period for blood pressure correction  
 C. Enucleation of the tumor, partial resection of the over-renal or total adrenalectomy  
 D. Intraoperative interventions on the adrenal gland can provoke a hypertensive crisis  
 \* E. Adrenalectomy is performed only by thoracic access

21. Renal syndrome with hyperparathyroidism manifests with the following signs, except for:  
 A. Hypostenuric polyuria  
 B. Urolithiasis  
 C. Nephrocalcinosis  
 D. Renal failure  
 \* E. Atony of the bladder

22. For hyperparathyroidism, the following changes are characteristic neniya, except for:  
 A. Shortening of QT intervals on ECG  
 B. Muscular hypotension  
 C. Radicular syndrome  
 \* D. Increased bone tendon reflexes  
 E. Depressive state, asthenia

23. Clinical signs characteristic of primary hyperparathyroidism:  
 A. Thirst, polyuria, weight loss  
 B. Painful cramps, muscle fibrillation  
 C. General and severe muscle weakness  
 D. Pain in bones when pressing on them, pathological fractures  
 \* E. A C D

24. Which of the following statements concerning the na hyperparathyroidism are correct?  
 A. Develops slowly  
 B. There is nausea, indomitable vomiting, acute pain in there  
 C. Complicated by the development of renal failure with re-going into uremic coma  
 D. Decreases in body temperature  
 \* E . B C D

25. A hyperparathyroid attack (crisis) requires the following therapeutic measures:  
 A. Massive hydration of 0.9% NaCl (500 ml, repeated)  
 B. A solution of diazepam 2.0 ml / m repeatedly  
 C. Forcing diuresis with a solution of furosemide 40 mg, i.v. second  
 D. A solution of hydrocortisone hemisuccinate 100 mg IV repeatedly  
 \* E. A C D

26. Typical for a thyrotoxic crisis is:  
 A. Hyperthermia, tachycardia, arterial hypertension  
 B. Thermophobia, increased sweating, paresthesia  
 C. Agitation, confusion, vomiting  
 D. Exophthalmia, insomnia, muscle atrophy  
 \* E. A and C

27. For the diagnosis of malignant goiter, use the following studies:  
 \* A. Thyroid scintigraphy  
 B. Detection of antibodies in plasma by titration  
 C. Measurement of basal metabolic rate  
 D. Establishment of the iodine binding index  
 E. Aspiration biopsy

28. What is not typical for multiple endocrine disorder type 1 opasias (MEN I syndrome)?  
 A. Formed by tumors or hyperplasia of the parathyroid glands  
 B. Islet apparatus of the pancreas, pituitary gland  
 \* B. Formed by tumors or hyperplasia of the adrenal glands, pancreas, pituitary gland  
 C. The most persistent manifestation of MEN I is hyperparathyroidism (90-100%)  
 D. Pituitary adenoma is detected in almost all patients  
 E. Is an autosomal dominant genetic abnormality

29. Which of the following statements are characteristic for Kerven's subacute thyroiditis?  
 A. More common in men  
 B. Occurs after previous upper respiratory infections -

paths  
 C. The first manifestation is fever, chills  
 D. The thyroid gland rapidly increases in volume, with palpation is painful  
 \* E. B C D

30. MEN IIA syndrome does not include:  
 A. Multicentric medullary carcinoma  
 B. Pheochromocytoma  
 C. Primary hyperparathyroidism  
 D. C-cell hyperplasia  
 \* E. Thymus hyperplasia

31. MEN II B syndrome does not include:  
 A. Medullary thyroid carcinoma  
 B. Pheochromocytoma  
 C. Ganglioneuroma of the intestine  
 \* D. Insulinoma  
 E. Mucous neuroma

32. What clinical signs are characteristic of thyrotoxic crisis?  
 A. Dry skin, dermatitis  
 B. Curvature of the bones of the thigh and lower leg  
 C. Calcification of basal ganglia on radiography of the skull  
 \* D. Anxiety, high fever, tachycardia  
 E. Narrowing of the cortical bone and expansion of the bone medullary canal of long bones

33. Triad: exophthalmos, enlargement of the thyroid gland, arthritis is typical for:  
 A. Hashimoto's disease  
 B. Thyroid cancer  
 C. Endemic goiter  
 D. Chronic thyroiditis  
 \* E. Basedow's disease

34. Eye symptoms in Basedow's disease include everything  
 Besides:  
 A. Bullet eyes and vision fixation  
 B. Retractions of the upper eyelid  
 C. Insufficient convergence of the eyeballs  
 D. Exophthalma  
 \* E. Enophthalma

### Topic: Chronic cholecystitis: clinic, diagnosis and treatment methods

1. With catarrhal cholecystitis:  
 A. The disease begins with an attack of pain in the right hypochondrium  
 B. There are no symptoms of peritoneal irritation



C. Complete recovery possible  
D. When inflammation subsides and obtundation of the cystic duct, the development of dropsy of bile is possible  
foot bladder

\* E. All of the above is correct

2. With phlegmonous cholecystitis:

A. The inflammatory process is manifested by symptoms of limited

peritoneitis

B. Relief of the inflammatory process in the bile wall

bladder can result in empyema of the gallbladder

C. The inflammatory process goes beyond the walls of the gallbladder

row, which leads to the formation of an infiltrate

D. The course of the disease may be favorable and

see full recovery

\* E. All of the above can be observed

3. With gangrenous cholecystitis:

A. With the development of gallbladder necrosis in the clinical course

the phenomena of peritonitis come to the fore

B. There is a symptom of "toxic scissors"

C. Intestinal paresis is observed

D. Subjectively, there may be some decrease in the disease

ness in the right hypochondrium

\* E. You can observe 'all of the above

4. For gangrenous cholecystitis, the following are characteristic

symptoms:

A. Reduction of pain

B. Symptom Schetkin-Blumberg in the right hypochondrium

C. Absence of hepatic dullness

D. Tachycardia

\* E. A B D

#### Topic: Cholelithiasis and its fertilization.

1. To eliminate residual stones of the common bile duct in the way choice is:

\* A. Mechanical intervention

B. Application of contact solvents

C. Purpose medications

D. Lithotripsy

E. Surgical intervention

2. Of the possible consequences of cholelithiasis,

a new threat to life is:

A. Chronic biliary obstruction

\* B. Cholangitis

C. Secondary biliary cirrhosis

D. Portal hypertension

E. Jaundice

3. To complications caused by cholelithiasis,

blowing attributed:

A. Gangrene and empyema of the gallbladder

B. Acute pancreatitis

C. Jaundice

D. Cholangitis

\* E. All of the above except A

4. In asymptomatic cholelithiasis, preference is given to

lives:

A. Refusal to take any action

B. Periodic monitoring of the condition of stone carriers

C. Medication

D. Cholecystectomy

\* E. None of the above

#### Topic: Acute cholecystitis and its complications.

1. In what percentage of cases is the structure of extrahepatic bile

pathways and vessels corresponds to the classical description

nia?

A. 15%

\* B. thirty%

C. 50%

D. 70%

E. 85%

2. Acute cholecystitis in elderly patients, composition

says:

\* A. 22% ~ 64.4%

B. 10.8-30.8%

C. 64.2-70%

D. 15.4-12.5%

3. The Calotte Triangle includes:

A. Base of the triangle - common hepatic duct

B. The lower side - the cystic duct and the upper part of the neck-gallbladder  
 C. Upper side - cystic artery  
 D. Base of the triangle - common bile duct  
 \* E. A B C

4. The emergence of acute cholecystitis is associated primarily with:  
 \* A. Acute retention of bile in the bladder  
 B. Irritant effect of bile acids  
 C. Lipid hydrolysis in the bladder cavity  
 D. Infection  
 E. Bladder ischemia

5. Acute cholecystitis occurs most often as a result of acute stasis due to obstruction of the bladder neck. Therefore, the first of manifestations of a typical attack are:  
 A. High temperature  
 B. Anorexia and vomiting  
 \* C. An attack of biliary colic  
 D. Jaundice  
 E. Bladder palpable in the right hypochondrium

6. Jaundice in acute cholecystitis cannot be a consequence of:  
 A. Hepatitis  
 B. Spasm of the sphincter  
 C. Inflammatory infiltration of the biliary tract  
 \* D. Cystic duct blockages  
 E. Choledocholithiasis

7. Acute cholecystitis can be complicated by perforation of the a gap in the lumen of a neighboring organ. Most often, this organ is an:  
 A. Stomach  
 \* B. Duodenum  
 C. Small intestine  
 D. Hepatic angle of the colon  
 E. Kidney

8. Of the symptoms of acute cholecystitis listed below, the most more significant is:  
 A. High temperature  
 B. Repeated vomiting  
 C. Moderate jaundice  
 \* D. Tachycardia  
 E. Painful infiltration in the right hypochondrium

9. The best research method to confirm diagnosis of acute cholecystitis is:  
 A. Cholecystography

B. Ultrasonography  
 C. Computed tomography  
 \* D. Cholescintigraphy  
 E. Laparoscopy

10. What moment can be considered early for a surgical interventions for acute cholecystitis?  
 A. Immediately after the start of the attack  
 B. After proper preparation within 4-6 hours  
 \* C. After successful conservative therapy for 24-48 hours  
 D. In the cold period until discharge from the hospital  
 E. Re-hospitalization after 6-8 weeks

11. Initial therapeutic measures for acute cholecystitis includes all of the following except:  
 A. Intravenous infusion of fluids  
 B. Parenteral analgesics  
 C. Parenteral antibiotics  
 D. Hunger  
 \* E. Continuous gastric aspiration

12. At the time of surgery for cholecystitis, sharply altered gallbladder with multiple strands in the infundibular zone, the common bile duct is hidden by inflammation. When In such circumstances, it is recommended:  
 A. Cholecystectomy from the bottom  
 B. Cholecystectomy from the cervix  
 C. Cholecystostomy  
 \* D. Atypical cholecystectomy

13. What can serve as an indication for cholangiography during surgery for acute cholecystitis?  
 A. Small stones in the gallbladder  
 B. Choledocholithiasis  
 C. Dilated bile ducts  
 D. A history of jaundice  
 \* E. all answers are correct

14. Indications for choledochotomy during surgery do acute cholecystitis are:  
 A. History of obstructive jaundice or jaundice  
 B. Cholangitis  
 C. Concretions in the bile ducts  
 \* D. all answers are correct

15. A 58-year-old patient has phlegmonous-altered bile removed. The gallbladder containing many small calculi. During the operation, the common bile duct was also opened, expanded to

10 mm, but no calculi were found in it and bile in the common bile duct transparent, without flakes. With the help of cholangiography, normal patency of the bile ducts. Operation in this

case it is best to end with:

A. Closing the common bile duct and abdominal cavity tightly

B. Closing the common bile duct and draining the subhepatic duct wanderings

C. Choledochoduodenostomy

\* D. Drainage of the common bile duct

E. Choledochojejunostomy

16. Cholangiography through a T-shaped tube left after

cholecystectomy, calculi were found. What is the optimal

time to remove the tube?

A. 7th day

B. 14th day

C. 20th day

D. 30th day

\* E. 5th - 6th week

17. Increased risk of acute cholecystitis in the elderly and

old age is mainly due to:

A. Blurred clinical picture

B. The progressive nature of the development of the disease

C. A large proportion of destructive forms

D. Diagnostic difficulties

\* E. The background against which the disease develops

18. The following are a number of statements concerning acute stone cholecystitis. Which one is wrong?

A. It usually arises against the background of various kinds of critical conditions.

many

B. Pathogenesis not exactly known

C. Clinical manifestations of stoneless and calculous ho-

lecystitis are identical

\* D. Differs in a favorable course and a tendency to

military development

E. For the treatment of acalculous cholecystitis, it is permissible to conserve proactive approach

19. A patient, 72 years old, with obstructive jaundice due to choledocholithiasis, a high temperature appeared up to 39.2 ° C,

chills, intense persistent pain in the upper right

quadrant of the abdomen, repeated vomiting, oliguria, hypotension and

clouding of consciousness. The number of leukocytes is 12.10<sup>9</sup> / l with an

left shift. Bilirubin, transaminases and alkaline

phosphatase is increased, amylase level is normal. The most

the most likely reason for these phenomena:

A. Liver failure

B. Acute destructive cholecystitis

C. Liver abscess

\* D. Cholangitis

E. Acute pancreatitis

20. Of the factors contributing to the development of acute cholangi-

that, the most important is:

A. Iatrogenic stickers of the extrahepatic bile ducts

B. Neoplasms of the common bile duct

\* C. Choledocholithiasis

D. Stenosis of Vater's nipple

E. Chronic pancreatitis

21. Among the symptoms of acute purulent cholangitis with the most

The following is consistently observed:

\* A. Fever

B. Abdominal pain

C. Jaundice

D. Septic shock

E. Brain disorders

22. About the state of the biliary tract with symptoms of acute cholan-

gita is best judged by the results:

A. Ultrasonography

B. Computed tomography

C. Cholescintigraphy

\* D. Cholangiography

E. Laparoscopy

23. From laboratory tests of acute cholangitis is unfavorable

in prognostic terms:

A. Hyperleukocytosis

\* B. Leukopenia

C. Thrombocytopenia

D. Hyperbilirubinemia

E. Elevated serum ACT, ALT

24. After the initial stabilization of the patient's condition with

acute cholangitis, next actions should be directed

Lena for decompression of the biliary tract. Of the methods intended for this purpose, preference deserves:

- A. Cholecystostomy
- B. Cholecystectomy with choledochotomy
- C. Percutaneous, transhepatic biliary drainage

\* D. Endoscopic papillosphincterotomy

E. Nasobiliary drainage

25. What signs are characteristic of biliary colic?

- A. Pain radiates to the right shoulder blade
- B. Acute pain, forced posture

\* C. Appears and disappears, periodically with erased clinical painting

D. Fatty foods contribute to its appearance

E. Repeated vomiting

26. Clinical signs to confirm the diagnosis of acute cholecystitis are:

A. Prolonged biliary colic

B. High temperature

C. Increased contractility of the muscles of the abdominal wall

D. Infiltrate

\* E. A B D

27. Local manifestation of acute cholecystitis is:

A. Positive Shchetkin-Blumberg symptom

B. Positive Murphy symptom

C. Positive symptom of Georgievsky-Mussey

D. Positive Ortner symptom

\* E. All of the above symptoms

28. Acute acalculous cholecystitis may be due to vlen:

A. Throwing active pancreatic juice into the bile duct

gaze

B. Primary vascular disorder in the bile duct wall

blaze

C. Parasitic diseases of the gallbladder

D. The introduction of pathogenic microflora

\* E. All of the above reasons

29. For microlithiasis ( $d < 3\text{mm}$ ) it is true:

A. Predisposition to migrate

B. Complication of obstructive jaundice

C. Acute cholangitis

D. May cause biliary colic

\* E. A and D

30. Vomiting in acute cholecystitis:

A. Single entry

B. Brings relief

C. Type of coffee grounds

\* D. Multiple, no relief

E. With blood clots

31. Pain in the right hypochondrium with acute cholecystitis may irradiate:

A. In the right supraclavicular region

B. In the right shoulder

C. To the right shoulder blade

D. In the lumbar region

\* E. All answers are correct

32. With the development of perforation of the gallbladder wall with acute cholecystitis in the clinical picture is not observed:

A. Acute abdominal pain and repeated vomiting

B. Severe pallor of the skin, covered with cold afterwards

C. A sharp increase in body temperature

\* D. Increased blood pressure

E. Picture of diffuse peritonitis

33. Of the symptoms of acute cholecystitis listed below, the most more alarming is:

A. High temperature

B. Repeated vomiting

C. Moderate jaundice

\* D. Tachycardia

E. Painful infiltration in the right hypochondrium

34. At the time of the operation for cholecystitis, a

ny, sclerosed and sharply reduced in size

lymphatic bladder with inflammatory infiltrate in the area of the liver

nocturnal duodenal ligament, preventing identification

duct elements. In such circumstances, it is recommended

is:

A. Cholecystectomy of the bottom

B. Cholecystectomy from the cervix

C. Cholecystostomy

\* D. Atypical cholecystectomy

35. In acute cholecystitis, the development of biliary hypertension leads to:

A. Violation of blood supply in the wall of the gallbladder

B. The development of a picture, such as a secondary infarction of the bladder wall

row

C. Violation of the integrity of the mucous membrane and penetration infections

D. Development of infiltrative inflammation with damage to the deep side layers of the gallbladder wall

\* E. All of the above

36. As a bacterial basis for acute cholecystitis, occurs :

A. Escherichia coli

B. Staphylococcus

C. Streptococcus

\* D. Campilobacter piloridis

E. All of the above

37. In the complex of conservative treatment of acute cholecystitis do not include:

A. Purpose of hunger

B. Prescribing antispasmodic injections

\* C. Prescribing morphine as an analgesic

D. Perirenal blockade

E. Atropine

38. Indication for urgent surgery in acute cholecystitis is an:

A. Lack of effect of conservative treatment

B. Persistence of symptoms of intoxication

C. Preservation of local peritoneal phenomena

D. Increase in general intoxication and the appearance of symptoms irritation of the peritoneum

\* E. All of the above

39. In acute cholecystitis in combination with stenosis, pain

Do not perform the following duodenal nipple:

A. Papillosphincterotomy

B. Choledochoduodenostomy

C. Retrograde stone extraction through choledochotomy

hole

\* D. "Blind" bougienage of the common bile duct

E. None of the above methods

40. Indication for the introduction of tampons into the abdominal cavity with the operation performed for acute cholecystitis is:

A. General peritonitis

B. Subphrenic abscess

\* C. Peripubular abscess and inability to stop blood

flow from the gallbladder bed

D. Purulent cholangitis

E. All of the above

41. Damage to the extrahepatic bile ducts during removal

lesions of the gallbladder for acute cholecystitis can

be conditioned by:

A. Abnormalities in the development of the gallbladder

B. Inflammatory-infiltrative changes in the area

gallbladder neck

C. Cicatricial changes in the cystic duct

D. Technical and tactical errors of the surgeon

\* E. All of the above

42. What can serve as an indication for cholangiography during

surgery for acute cholecystitis?

A. Indication of a history of jaundice

B. Dilated common bile duct more than 10 mm in diameter

tre

\* C. Large diameter of the cystic duct, stones less than 5 mm

D. Hemolytic jaundice

E. Liver cirrhosis

43. With regard to laparoscopic cholecystectomy, it is true:

A. Patients spend a short period of hospitalization 1-3 days

B. Cosmetic and economic benefits

C. Contraindicated in the case of perivesicular infiltration,

her surgical interventions in the epigastric areas

D. Contraindicated in patients over 60 years of age

\* E. A B C

44. Which of the following increases the risk of intraoperative

national damage to the biliary tract:

A. Massive bleeding

B. Variations and abnormalities of the anatomical structure of the biliary

ways

C. Actions in pathologically altered tissues

D. Traction when ligating the cystic duct, instrumental

research "

\* E . all answers are correct

45. External drainage of the bile ducts through the stump

the cystic duct is named:

\* A. Vishnevsky  
 B. Pikovsky  
 C. Kera  
 D. Razdolsky  
 E. Petrovsky  
 46. External drainage of bile ducts with a T-shaped drainage is named:  
 A. Vishnevsky  
 B. Pikovsky  
 \* C. Kera  
 D. Petrovsky  
 E. Lukomsky  
 47. The complicated form of the course of acute cholecystitis is sit:  
 A. Phlegmonous  
 B. Catarrhal  
 C. Stoneless  
 D. Gangrenous  
 \* E. Combination with cholangitis  
 48. Acute calculous cholangitis in most cases is starts with:  
 A. Duodenostasis  
 B. Blockade of the choledochus by a wedged stone  
 C. Blockade of moves Lyushka  
 \* D. Hypertension of the extrahepatic bile ducts  
 E. All answers are correct  
 49. Cholangitis is characterized by:  
 A. Charcot's triad: fever; chills; jaundice  
 B. Spontaneous, often favorable evolution  
 C. Need urgent decompression and antibiotic therapy  
 D. Urgent transactions are not shown; ambulatory treatment  
 \* E. A B C  
 50. What confirmation of biliary ileus correct?  
 A. Clinically manifested by low intestinal obstruction  
 B. Gall stones 3-4 cm in size were evacuated after cut cholecystoduodenal fistula  
 C. On plain radiography of the abdominal organs determined by aerobilia  
 D. Radiologically determined "guard" loop of the skinny intestines  
 \* E. A B C

51. The reasons determining the development of biliary fistulas, following blowing:  
 A. Intentional or accidental opening of the biliary tract  
 B. Divergence of seams bilio-digestive, biliary anastomosis  
 C. Divergence of the ligature of the stump of the gallbladder duct  
 D. Presence of intraductal hypertension  
 \* E. A B C  
 52. The presence of gas in the biliary tract with a panoramic X-ray  
 The graphy of the area of the right hypochondrium determines:  
 A. Choledocholithiasis  
 B. Calculous cholecystitis  
 C. Perforated gastroduodenal ulcer  
 D. Diverticulum of common bile duct  
 \* E. Bilio-digestive fistula  
 53. Mirizzi's syndrome is not characterized by:  
 A. Pathological anastomosis of the gallbladder neck wall with choledoch  
 B. Pathological anastomosis of the gallbladder neck wall with duodenum  
 C. Always complicated by obstructive jaundice  
 D. Common bile duct is more common  
 \* E. B and C  
 54. With a strangulated stone in the area of the large duodenal the papilla follows:  
 A. Apply choledoduodenoanastomosis  
 B. Make a duodenotomy, remove the stone and suture the intestine  
 C. After duodenotomy and stone extraction, drain the choledox through the cystic duct stump  
 \* D. Open the common bile duct and try to remove the stone, if unsuccessful perform duodenotomy, remove calculus, apply sutures on the wound of the duodenum and drain the total bile duct  
 E. Apply choledochointerostomy  
 55. During surgery for acute cholecystitis, complicated pancreatitis (edematous form), the most appropriate

the tactics of the surgeon should be considered:

- A. Typical cholecystectomy
- B. After cholecystectomy, drain the common bile duct through the stump cystic duct
- C. After cholecystectomy, drain the common bile duct with a T-shaped drainage
- \* D. After cholecystectomy, drain the bursa
- E. Apply cholecystostomy

56. What treatment is indicated for a patient with an attack of biliary colic?

- A. Emergency operation
- \* B. Conservative treatment
- C. Emergency surgery after relief of an attack
- D. Antienzyme therapy
- E. Laparoscopic cholecystectomy

57. Which of the complications of gallstone disease requires emergency surgery?

- \* A. Spilled peritonitis
- B. Cicatricial stricture of the common bile duct
- C. Choledolithiasis
- D. Intestinal fistula
- E. Jaundice

58. What is the advantage of performing cholecystectomy from the cervix?

- A. Creation of conditions for bloodless removal of the gallbladder
- row
- B. The path of entry of purulent bile into the common bile duct is interrupted
- C. It is possible to avoid the migration of stones from the bladder to the common bile duct.
- D. Allows to refrain from choledochotomy

\* E. A B C

59. When is bottom cholecystectomy indicated?

- A. In the elderly
- B. If cholangitis is present
- C. In the presence of obstructive jaundice
- D. With a hammered stone of the bladder neck
- \* E. In the presence of a pronounced inflammatory infiltrate in the fins of the bladder neck and hepatoduodenal ligament

60. The course of acute cholecystitis in the elderly and senile

age is characteristic:

- A. Rapid development of complications
- B. Frequent development of the primary gangrenous form
- C. 'Blurred \*' clinical picture with a predominance of signs intoxication
- D. Often abortive course with rapid relief in conservative treatment

\* E. A B C

61. Emergency surgery in patients with acute cholecystitis shown at:

- A. Lack of effect from conservative therapy
- B. The clinical picture of gangrenous-perforated cholecystitis
- C. Growing signs of intoxication against the background of jaundice
- D. Elderly and senile age

\* E. A B C

62. The immediate causes of damage to the highway

All of the listed bile ducts can be:

- A. Congenital malformations and variability in the topography of the currents
- B. Inflammatory-infiltrative changes in the area of the liver
- C. Technical and tactical errors of surgeons
- D. Studies of ducts with probes, bougies, spoons and other my instruments

\* E. All of the above are correct

63. The value of intraoperative cholangiography is as follows:

- A. Allows and determine the number and size of bile calculi, their location
- B. Gives an accurate picture of the anatomical condition of the ice, patency of the common bile
- C. Reveals the pathological communication between the bile ducts
- D. Suggests the choice of rational operation in a specific case to avoid violation of choledochotomy
- \* E. All answers are correct

64. Complications associated with cholecystectomy:
- A. Biliary and other peritonitis
  - B. Intra-abdominal bleeding
  - C. External bile leakage
  - D. Obstructive jaundice
  - \* E. All answers are correct
65. Surgical interventions for acute cholecystitis are appropriately distinguish by timing:
- A. Urgently perform according to vital indications immediately after after receipt
  - B. Urgent within 12-72 hours
  - C. Delayed 3-10 days from the date of admission
  - D. Scheduled in 1-3 months
  - \* E. All answers are correct
66. Acute emphysematous cholecystitis is characterized by:
- A. More often caused by anaerobic infection with Clostridium Welchii
  - B. Secondary Escherichia coli infections
  - C. Secondary infections with anaerobic streptococci
  - D. Presence of calculi is mandatory
  - \* E. All answers are correct except D
67. What are the possible consequences of iatrogenic damage biliary tract not detected during the operation?
- A. Intra-abdominal septic process
  - B. External biliary fistula
  - C. Obstruction of the biliary tract
  - D. Cholangitis
  - \* E. All answers are correct
68. Iatrogenic injuries of the biliary tract detected timely, subject to immediate elimination because:
- A. The patient's condition, as a rule, allows it
  - B. There are no adhesions in the operational zone
  - C. The walls of the bile ducts are not changed
  - D. Duct diameter is normal
  - \* E. all are correct
69. The method of primary reconstruction in iatrogenic damage to the bile ducts is selected taking into account:
- A. Nature of damage
  - B. Directions of the wound
  - C. Defect size
  - D. Damage level
  - \* E. all answers are correct
70. The emergence of strictures after the elimination of iatrogenic damage to the extrahepatic biliary tract can be associated with:
- A. Leaky seam line
  - B. Ductal ischemia
  - C. Damage level
  - D. Drainage of ducts
  - \* E. all of the above are correct
71. Can iatrogenic damage to the biliary tract?
- A. Manifest in the immediate postoperative period
  - B. Introduce yourself after a few weeks or months
  - C. Become visible after a few years
  - D. Remain asymptomatic
  - \* E. A B C
72. Which of the following statements can not be us postcholecystectomy syndrome?
- A. Diagnostic error
  - \* B. Cardiovascular diseases
  - C. Diseases of the pancreato-hepatic region, as a complication cholelithiasis
  - D. Incomplete or inadequate surgery
  - E. Damage caused by improper surgery physical maneuvers (iatrogenic damage)
73. Which of the following signs speaks in favor of postcholecystectomy syndrome?
- A. Dysphagia
  - B. Hepatic colic
  - C. Transient jaundice
  - D. Heartburn
  - \* E. B and C
74. Postcholecystectomy syndrome is caused by:
- A. Diseases of hepatocholedochus and large duodenal papilla
  - B. Diseases of the liver and pancreas
  - C. Diseases of the duodenum
  - D. Diseases of other organs of the gastrointestinal tract
  - \* E. A B C
75. Which of the following methods of radiological studies allow to establish the cause of postcholecystectomy syndrome?



A. Retrograde endoscopic cholangiography  
 B. Duodenography with barium  
 C. Cholangiography through nuclear magnetic resonance  
 D. Oral cholangiography  
 \* E. A and C

76. The main factors that lead to keeping the length of the stump of the cystic duct or the remainder of the gallbladder:  
 A. Subhepatic inflammatory infiltrate  
 B. Anatomically complex variants  
 C. Surgical error  
 D. Cirrhosis of the liver  
 \* E. A B C

77. Most often, postcholecystectomy syndrome is caused by:  
 A. Obstructive biliary tract disease  
 B. Diseases of the large duodenal papilla  
 C. Diseases of the duodenum  
 D. Diseases of the pancreas  
 \* E. A and B

78. Gastro-duodenal transit with barium and hypotonic duodenography can be detected with postcholecystectomy syndrome:  
 A. Tumors of the ampullar region  
 B. Indirect signs of pancreatic tumors  
 C. Tumors of the stomach with germination in the hepato-duodenal new bundle  
 D. Diseases of the duodenum  
 \* E. All of the above

79. Conducting retrograde endoscopic cholangiography with postcholecystectomy syndrome allows you to establish:  
 A. Stenosing papillo-odditis  
 B. Choledocholithiasis  
 C. Benign and malignant stenoses of hepatocholedochus  
 D. Sclerosing cholangitis  
 \* E. All of the above

80. The most frequent complications of retrograde cholangiopancreatography are as follows, with the exception of:  
 A. Acute pancreatitis  
 B. Injuries of the intramural part of the common bile duct  
 C. Acute cholangitis

D. Bleeding  
 \* E. B and D

81. For the prevention of postcholecystectomy syndrome matter:  
 A. Complete pre- and intraoperative diagnosis  
 B. Correct technique of the surgeon  
 C. Adequate surgical management depending on the clinical situation  
 D. Use of intraoperative cholangiography  
 \* E. All of the above

82. Ultrasound examination in postcholecystectomy syndrome is not defined:  
 A. Dilation of the bile ducts  
 B. Choledocholithiasis  
 \* C. Duodenostasis  
 D. Diseases of the pancreas  
 E. Congenital liver disease

83. Obstructive jaundice is caused by the following pathological conditions, except for:  
 A. Choledocholithiasis  
 B. Cancer of the pancreas and large duodenal co-duodenal lobe  
 C. Cancer of hepatocholedochus and gallbladder  
 D. Primary and secondary malignant liver tumors  
 \* E. Duodenal malrotation (turn)

84. What are the most common reasons lead to the emergence of mechanical jaundice?  
 A. Choledocholithiasis  
 B. Congenital diseases of the bile ducts  
 C. Cancer of the head of the pancreas  
 D. Traumatic and inflammatory strictures of the bile ducts  
 \* E. A and C

85. Jaundice in cancer of the head of the pancreas is not characteristic termed:  
 A. Yellow-green tinge of the skin  
 B. Dark colored urine  
 C. Acholic stool  
 D. Skin itching  
 \* E. Occurs after hepatic colic

86. In which of the following situations from clinical pictures of pancreatic cancer Courvoisier's symptom from-

is there?

A. In a patient who underwent cholecystotomy

B. In a patient with choledocholithiasis

C. In a patient with scleroatrophic gallbladder

D. In a patient with liver cirrhosis

\* E. A and C

87. Using the gallbladder when applying bilio-digestive anastomosis in patients with pancreatic cancer

gland is justified in the following cases:

A. Absence of pain syndrome

B. Sufficient distance between the tumor and the confluence of the cystic duct into the common bile

C. Cystic duct pass

D. Absence of tumor spread to the stomach

\* E. B and C

88. Which of the following symptoms are typical for

obstructive jaundice of benign genesis?

A. Progressive jaundice

B. Intermittent jaundice

C. Onset of jaundice without preceding colic

D. Colic precedes jaundice.

\* E. B and C

89. Which of the listed research methods are not used

in a patient with bilirubinemia more than 30 mmol / L?

A. Echography

B. Internal cholangiography

C. Retrograde cholangiography

D. Oral cholangiography

\* E. B and D

90. Obstructive jaundice is characterized by the following indicators

by means of:

A. High levels of bilirubin in the blood

B. High levels of alkaline phosphatase

C. High cholesterol

D. High aminotransferase levels

\* E. A B C

91. Which of the following methods are not used for pre-

pre-operative decompression of the bile ducts in a patient with

obstructive jaundice complicated by purulent cholangitis?

A. Nasobiliary drainage

B. Endoscopic papillo-sphincterotomy

C. Endoscopic suprapapillary choledochoduodeno-

mia

\* D. Shock wave cholelithotripsy

E. Percutaneous cholangiohepatostomy

92. What surgical methods are used to restore

renewal of the passage of bile through the gastrointestinal tract

with tumors of the hepatopancreatoduodenal zone, except chenie:

A. Biliodigestive anastomosis

B. Extirpation of the tumor

C. Bypass biliodigestive anastomosis

D. External drainage in conjunction with microjejunostomy

Delaney

\* E. Pancreatojejunostomy

93 Final endoscopic techniques used for the treatment of obstructive jaundice of a benign gene

behind:

A. Papillosphincterotomy

B. Papillosphincterotomy with litextraction

C. Percutaneous cholangiohepatostomy

D. Nasobiliary drainage

\* E. A and E

94. Indications for external drainage during operations

performed on the biliary tract are as follows:

A. Acute suppurative cholangitis

B. Defective biliodigestive anastomosis

C. Uncertainty in restoring the outflow of bile into the gastrointestinal

intestinal tract

D. Liver metastases in malignant jaundice

\* E. A B C

95. For which of the following diseases are preferable

Is choledochojejunostomy on the Roux loop readily performed?

A. Traumatic strictures of hepaticocholedochus

B. Gallstone embedded in the papilla

C. Resectable malignant tumors of the common bile duct

D. Multiple stones of hepatic choledochus

\* E. A and C

96. Which of the following statements are characteristic

for acute cholangitis?

A. Hectic type of increase in body temperature

B. Fever with chills  
 C. Profuse perspiration, feeling thirsty  
 D. Hepatomegaly  
 \* E. All of the above

97. Intermittent jaundice is characteristic of the following diseases, except for:  
 A. Malignant tumor of hepatic choledochus  
 B. Stone of the gallbladder wedged into the cystic duct  
 C. An embedded stone in the greater duodenal papilla  
 D. Valve stone of hepaticcholedochus  
 \* E. A B C

98. The presence of a tumor of the head of the pancreas is impossible suggest on the basis of the following symptoms and paracl-natural research methods:  
 A. Expansion of the biliary tree  
 B. Enlarged and tense gallbladder  
 C. Skin itching  
 D. Bilirubinemia due to direct bilirubin  
 \* E. Anemia

99. Hepaticcholedochus must be examined during operation time in patients with the following pathologies, for exception:  
 A. Obstructive jaundice  
 B. Chronic pseudotumorous pancreatitis  
 C. Expansion of hepaticcholedochus  
 D. Choledocholithiasis  
 \* E. Duodenal diverticulum

100. The Charcot triad includes the following signs, with the exception of chenie:  
 A. High fever with chills  
 B. Yellowness of the skin  
 C. Palpable tumor in the right hypochondrium  
 \* D. C and E  
 E. Presence of a duodenal diverticulum

101. Mechanical malignant jaundice is characterized by usually with the following symptoms, except:  
 \* A. Fever with chills  
 B. Jaundice  
 C. Slimming  
 D. Skin itching  
 E. Dyspeptic phenomena

102. The causes of congenital obstructive jaundice are

the following diseases, except for:  
 A. Agenesis of the bile ducts  
 B. Caroli's disease  
 C. Hepatic fascioliasis  
 D. Aneurysms of the hepatic arteries  
 \* E. C and D

103. Which of the following is the main anatomical an element of intraoperative examination in a patient with obstructive jaundice?  
 A. Liver  
 B. Spleen  
 C. Duodenum  
 \* D. Choledoch  
 E. Right colon

104. Which of the following operations does not constitute an internal biliodigestive anastomoses?  
 A. Cholecysto-gastroanastomosis  
 B. Choledochoduodenoanastomosis  
 \* C. Choledochotomy with drainage Kher  
 D. Choledochojejunostomy  
 E. Cholecystojejunostomy

105. Pentad Dargan-Roundold, characterizing cholangitis, including tends:  
 A. Charcot triad  
 B. Hypotension  
 C. Encephalopathy  
 D. Ascites  
 \* E. A B C

106. Which of the following statements regarding icteric-uremic cholangitis are true?  
 A. Characterized by progressive hepatic-renal failure sufficiency  
 B. Eliminates choledocholithiasis  
 C. Needs long preoperative preparation  
 D. Needs urgent decompression of the bile ducts and adequate antibiotic therapy  
 \* E. A and D

107. What ways of penetration of infection into the biliary tract are the main ones?  
 A. Arterial pathway  
 \* B. Venous pathway  
 C. Lymphatic pathway  
 D. From the duodenum  
 E. For arteriovenous shunts

108. Of the symptoms of purulent cholangitis, the most constant are:

- A. Temperature
- B. Abdominal pain
- C. Jaundice
- D. Septic shock
- \* E. A B C

109. Which of the research methods for residual (os-set stones) choledocholithiasis is the most effective?

- A. Intravenous cholangiography
- B. Ultrasound examination
- C. Computed tomography
- \* D. Retrograde endoscopic cholangiography
- E. Cholangiomanometry

110. The following diseases may be accompanied by associated hyperbilirubinemia, except for:

- A. Cancer of the head of the pancreas
- B. Choledocholithiasis
- C. Rupture of the hydatid cyst into the bile ducts
- \* D. Gilbert's syndrome
- E. Ampulomas of Vater's papilla

111. Symptoms of choledocholithiasis include the following, for exception:

- A. Jaundice
- \* B. Ascites
- C. Hepatic colic
- D. Temperatures
- E. Dyspeptic syndrome

112. Radiological detection of air in the biliary tract indicates about:

- A. Choledocholithiasis
- B. Calculous residual cholecystitis
- \* C. Biliodigestive fistula
- D. Biliary fistula
- E. Diverticulum of the duodenum

113. In acute purulent cholangitis by a therapeutic method choice used for preoperative preparation, is an:

- A. Antibiotic therapy
- B. Plasmapheresis
- C. Gastric lavage and forced diuresis
- \* D. Decompression of the bile ducts
- E. Correction of protein metabolism

114. For the treatment of residual common bile duct stones by the method of choice is an:

- \* A. Endoscopic papilosphincterotomy with lithotripsy

- B. Topical application of solvents
- C. Medication
- D. Extracorporeal lithotripsy
- E. Surgical treatment - laparotomy and choledocholithotomia

115. Of the factors leading to purulent cholangitis, the most frequent are not:

- A. Duodenostasis
- B. Tumors of hepatocholedochus
- C. Choledocholithiasis
- D. Stenosis of biliodigestive anastomosis
- \* E. A and B

116. Choledocholithiasis can be complicated by the following diseases with the exception of:

- A. Odditi
- \* B. Duodenal ulcers
- C. Chronic pancreatitis
- D. Acute cholangitis
- E. Secondary biliary cirrhosis

### Topic : Surgical liver diseases. Liver abscess.

1. The most common benign tumor liver is:

- A. Lipoma of the liver
- \* B. Hemangioma of the liver
- C. Cystadenoma of the liver
- D. Liver leiomyoma
- E. Fibroma of the liver

2. False statements regarding alveococcosis of ne-cheny are:

- A. Characterized by a slow flow
- B. Diagnosis is difficult
- \* C. Is a malignant tumor
- D. Characterized by invasive growth and vague prognosis
- zoom

E. Peritoneal puncture-lavage is not optimal by treatment

3. To treat giant subcapsular hematoma, in the absence of rupture of the liver, apply:

- A. Puncture and evacuation of hematoma
- B. Dissection of the capsule and evacuation of the hematoma
- C. Evacuation of hematoma and treatment with diathermocoagulant the corresponding liver site
- D. Drainage of the abdominal cavity
- \* E. A B C

4. Hemobilia manifests itself in everything except:  
 A. Hepatic colic  
 B. Jaundice  
 C. Bleeding into the digestive tract  
 D. Hepatomegaly  
 \* E. A B D

5. What statement about benign tumor holi liver is accurate?  
 \* A. Has a slow flow  
 B. Surgical treatment has an absolute indication  
 C. It manifests itself mainly in women  
 D. Complicated by biliary fistula  
 E. Often accompanied by melena

6. What are the main side effects of antiparasitic therapy Escazolam:  
 A. Leukopenia  
 B. Renal failure  
 C. Cardiac arrhythmia  
 D. Transient increase in transaminases  
 \* E. A and D

7. Uncharacteristic for amoebic liver abscess is:  
 A. Infection with *Entamoeba histolitica* cysts comes from contaminated water  
 B. Usually single  
 C. In more than 75% of cases, located in the right lobe of the liver  
 D. Indirect hemagglutination reaction is positive in 95% cases  
 \* E. Is asymptomatic

8. Surgical treatment of nonparasitic liver cysts with costs from:  
 A. Cyst fenestration  
 B. Liver resections  
 C. Cystic-digestive anastomoses  
 D. Azigo-portal devascularization  
 \* E. A B C

9. The reasons for hemobilia are:  
 A. Liver injury  
 B. Disintegrating liver tumor  
 C. Gallstone disease  
 D. Budd-Chiari Syndrome  
 \* E. A and B

10. Hemobilia is characterized by the following symptoms:  
 A. Hepatic colic  
 B. Jaundice  
 C. Bleeding into the lungs  
 D. Hepatomegaly

\* E. Melena

11. For the diagnosis of hemobilia the following can be useful:  
 \* A. Endoscopy - fibrogastroduodenoscopy (FGDS)  
 B. Echography  
 C. Scintigraphy  
 D. Computed tomography  
 E. Selective tomography

12. Specify the number of liver segments according to Couinaud:  
 A. 12 segments  
 B. 10 segments  
 \* C. 8 segments  
 D. 7 segments  
 E. 6 segments

13. Indicate the correct answers regarding circulatory systems liver supply:  
 A. Venous to the superior vena cava system  
 B. Arterial from the branches of the celiac trunk  
 C. Venous to the inferior vena cava system  
 D. Venous from the portal vein  
 \* E. B C D

14. Typical for amoebic liver abscess is:  
 A. Infection with *Entamoeba histolitica* cysts comes from contaminated water  
 B. Usually single  
 C. In more than 75% of cases are located in the right lobe of the ne-cheney  
 D. Indirect hemagglutination reaction is positive in 95% cases  
 \* E. All answers are correct

15. Amebic liver abscess is characterized by the following statements, excluding:  
 A. Pain in the right hypochondrium  
 B. Right-sided pleurisy  
 C. Anemia, leukocytosis, increased ESR  
 D. Episodes of dysentery-like diarrhea  
 \* E. Lack of clinical manifestations

16. Choose the optimal amount of operation for non-parasitic noisy, uncomplicated liver cyst:  
 A. Atypical liver resection  
 B. Anatomical liver resection  
 C. Enucleation  
 D. External drainage  
 \* E. Cyst fenestration

17. Specify the optimal volume of surgery for bacterial liver abscess:

\* A. Puncture and drainage of an abscess under ultrasound control

B. Liver transplant

C. Hemighepatectomy

D. Marsupialization

E. Cryodestruction

18. Hemobilia is one of the most serious complications of liver injury. IN what is its essence?

A. The appearance of hemoptysis

B. Multiple erosions of the stomach and duodenum

C. A sharp decrease in the production of procoagulants in the liver

D. Portal vein thrombosis or variceal bleeding

veins

\* E. Bleeding into the lumen of the alimentary canal from the damaged vessels of the liver tissue through the biliary tract

19. Which of the following characterize pyogenes

ny liver abscess?

A. Local abdominal examination reveals painful

hepatomegaly in 50% of cases

B. Detected with a frequency of 10-16 cases per 100,000 hospitals

zations

C. Determines the immediate onset of renal failure

ness

D. Blood culture is positive in 40-50% of cases

\* E. A B D

20. In the treatment of bacterial liver abscess are applicable

the following methods:

A. Surgical evacuation of the abscess followed by drainage

rooting

B. Simple observation

C. Long-term antibiotic therapy

D. Percutaneous, transhepatic drainage under control

ultrasound of the abscess cavity

\* E. A and D

21. What is the optimal treatment regimen for amoebic abscess?

liver:

A. Radiation therapy before surgery + surgical treatment

B. Surgical treatment + radiation therapy after surgery

\* C. Metronidazole treatment

D. Chemotherapy + surgery

E. Surgical treatment is absolutely indicated

22. Which of the statements regarding liver hemangioma

nor are they correct?

A. Is the most rare benign tumor

choly liver

B. Puncture of this tumor is strictly contraindicated.

C. Does not become malignant

D. The operation is indicated only in the case of compression complications

and with the threat of bleeding

\* E. B C D

23. Complications of liver abscess are, excluding:

A. Perforation into the abdominal cavity

\* B. Primary liver tumor

C. Sepsis

D. Erosive bleeding from the hepatic vessels

E. Asphyxia

24. What research results are important in setting dia-

festering liver abscess?

A. Abdominal echography

B. Computed tomography

C. Katsoni reactions

D. Liver scans with labeled leukocytes

\* E. A B D

25. Liver abscess is characterized by:

A. Elevated body temperature

B. Pain in the right hypochondrium

C. Hemorrhagic syndrome

D. Toxic-infectious syndrome

\* E. A B D

26. What statement about liver hemangioma is not

Is it false?

A. Is the most common benign liver tumor

B. It manifests itself mainly in women and is detected on occasion

C. Puncture of the hemangioma is necessary

D. Manifested by a high risk of malignancy

\* E. A and B

27. Indicate the types of surgical interventions used

in case of liver injuries:

- A. Simple tamponade
- B. Direct surgical hemostasis
- C. Liver transplant
- D. Atypical liver resection
- \* E. A B D

28. What are the possible complications of liver injury:

- A. Hemoperitoneum
- \* B. Fecal peritonitis
- C. State of shock
- D. Intrahepatic hematoma
- E. Post-traumatic pyogenic abscesses

**Topic : Parasitic liver diseases.**

1. An intermediate host for Echinococcus granulosus can

Can be any of the following, except:

- A. Sheep
- B. Pigs
- C. Human
- \* D. Dogs
- E. Horses

2. Complications of liver echinococcus include, with the exception of eat:

- A. Breakthrough into the pleural cavity, into the bronchi
- B. Breakthrough into the abdominal cavity
- C. Breakthrough into the biliary tract
- \* D. Pylephlebitis
- E. Suppuration

3. What is the statement regarding echinococcus of the liver is is it wrong?

- A. Often solitary
- \* B. More often located in the left lobe of the liver
- C. Serological reactions characteristic of echinococcosis usually positive
- D. A breakthrough of the cyst into the biliary tract, pleural loin, abdominal cavity
- E. Surgery is mandatory

4. Indications for open echinococectomy are:

- A. Suppuration of an echinococcal cyst
- B. Calcification of an echinococcal cyst
- C. Presence of a biliary fistula
- D. Unfavorable anatomical location for the surgeon and a patient with an echinococcal cyst
- \* E. A C D

5. What statement concerning alveolar echinococcus- for the liver, right?

- A. Echographically displayed as a single cyst
- \* B. Transmitted mainly by foxes
- C. More common in Moldova and southern Ukraine
- D. Causative agent is Echinococcus granulosus
- E. Surgical treatment consists of suturing the cyst

6. What is the wrong statement regarding non-parameter

itary cyst of the liver:

- \* A. Has a sharp beginning
- B. May be post-traumatic
- C. Often asymptomatic
- D. Puncture under ultrasound guidance is a method of boron in the treatment of this pathology
- E. Potential evolutionary complications

7. The method of choice in the treatment of liver echinococcus is:

- A. Chemotherapy
- \* B. Surgical
- C. X-ray therapy
- D. Hormone therapy
- E. Antibiotic therapy

8 Specify the parameters characterizing the fluid uncomplicated echinococcal cyst:

- \* A. Transparent, colorless, odorless, density 1008-1015 and pH 6.7-7.2
- B. Transparent, yellowish, offensive, density 1016-1020
- C. Turbid, odorless, density less than 1007
- D. Turbid, whitish, odorless, density 1000
- E. Turbid, offensive odor

9. Surgical treatment of the residual cavity of postechinococectomy includes:

- A. Drainage of the residual cavity
- B. Capitonage of the residual cavity
- C. Closure of the residual cavity without drainage
- D. Cystic-digestive anastomoses
- \* E. All answers are correct

10. Ideal echinococectomy for liver echinococcosis

cauldron in the following situations:

- A. In all cases of liver echinococcosis, regardless of evolution

active stage

B. With suppurative echinococcus and hepatic pyosclerotic

The C. With echinococcus of the liver, complicated by a biliary fistula

D. When

breakthrough into the abdominal cavity

\* E. Pri

the marginal location of the echinococcal cyst

11. Specify the optimal access for the operation about echinococcal cyst located in the IV-V segment:

\* A. Upper midline laparotomy

B. Lower midline laparotomy

C. Transverse laparotomy at the level of the VIII intercostal space

D. Right-sided thoracophrenolaparotomy

E. Pfannenstiel laparotomy

12. Indicate the most common parasitic infection.

liver inflammation:

\* A. Echinococcosis

B. Diphyllbothriasis

C. Giardiasis

D. Alveococcosis

E. Amoebiasis

13. Select operations not used for the treatment of echinococcus - liver:

A. Perikystectomy

B. Closed echinococectomy

C. Liver resection with cyst removal

\* D. Cyst fenestration

E. Marsupialization

14. Specify the optimal volume of surgery for alveococcosis liver:

A. Enucleation of the cyst

B. Marsupialization

\* C. Liver resection with removal of the alveococcus

D. Fenestration

E. Lancing alveococcus

15. Which organs are most often affected by Echinococcus granulosus?

\* A. Lungs

B. Retina

C. Pancreas

D. Skeletal system and joints

E. CNS

16. Select antiparasitic solutions used for treatment of the residual cavity of postechinococectomy:

A. Formalin, H2O2

B. Hypertonic sodium chloride solution (20%)

C. 5 - fluorouracil

D. Octreotide

\* E. A and B

17. What are the treatment measures for calcified

echinococcal cyst of the liver:

A. Cystectomy and filling of the residual cavity

B. Repeated punctures under ultrasound guidance

\* C. All listed below

D. Simple clinical echographic observation

E. Enucleation

18. A suppurative echinococcal cyst of the liver is manifested:

A. Intense shortness of breath, severe cyanosis

B. Fever, pain, chills

C. Impaired pulmonary ventilation

D. Septic condition

\* E. B and D

19. Characteristic of an echinococcal cyst complicated by bile nym fistula is:

A. Migration of the parasite into the common bile duct

B. Appearance of bile in the residual cavity

C. Presence of clear liquid in the residual cavity

D. Presence of cloudy, viscous liquid

\* E. A and B

20. The principles of treatment of echinococcal cysts of the liver are not are:

\* A. Simple observation

B. Inactivation of cyst contents (NaCl 20%, ethanol 90%)

C. Removal of infectious components of the cyst (germinal noah shell, guide "sand", daughter cysts)

D. Treatment of complications

E. Closing or draining the residual cavity

21. Which of the following statements regarding

echinococcus liver are correct?

A. Echinococcosis is a zoonosis

B. The cyst contains a clear liquid, scolexes, daughter

cysts

C. Poses a high risk for malignant transformation

denia

D. Man is a random intermediate host



\* E. A B D

22. Surgical treatment of an echinococcal cyst of the liver

includes the following, excluding:

A. Open cystectomy

B. Liver transplant

C. Laparocentesis

D. Perikystectomy

\* E. B and C

### Topic: Diseases of the pancreas

1. The main duct of the pancreas in most cases

teas:

A. Spontaneously flows into the duodenum

B. Connecting with an additional duct, flows into the twelve the duodenum

\* C. Connecting with the common bile duct, it flows into the twelve the duodenum

D. Connecting with an accessory duct, flows into the stomach

E. Connecting with the common bile duct, flows into the skinny gut

2. Variants of fusion of the pancreatic duct with a common bile duct, which is important in the pathogenesis of acute pancreatitis:

A. In 55-65% of cases, the confluence of the ducts occurs with the formation shaping a common ampoule

B. In 12-26% of cases, the pancreatic duct flows into the chole-

dox

C. In other cases, the confluence of the ducts into the intestine occurs separately with or without OBD formation

D. Choices A and B are correct

E. Choices A, B and C are correct

3. During the day, the pancreas produces pancreatic

sky juice in volume:

A. 10-15 milliliters

B. 100-150 milliliters

C. 200-250 milliliters

\* D. 1000-1500 milliliters

E. 5000-6000 milliliters

4. Indicate the pressure in the main pancreatic duct.

PS is normal:

\* A. 300-500 mm water column

B. 250-450 mm water column

C. 100-150 mm water column

D. 50-100mm water column

E. 700-800 mm water column

5. What are the most important enzymes secreted by the pancreas gland:

\* A. Lipase, trypsin, chemotrypsin, amylase

B. Phospholipase, reductase, transaminase

C. Ronidase, chemodectase, aminotransferase

D. Cholinesterase, alkaline phosphatase, sorbitol dehydro-

I will name

E. Lactate dehydrogenase, alpha-glutamyl transpeptidase, DNA

azu

6. The pancreas in active form is secreted next

blowing enzymes:

A. Trypsinogen and lipase

B. Trypsinogen and amylase

C. Chemotrypsinogen and amylase

D. Chemotrypsinogen and lipase

\* E. Enzymes amylase and lipase

7. Which pancreatic enzyme has the greatest proteolytic, and therefore destructive active stue?

A. Amylase

B. Lipase

C. Trypsin

\* D. Elastase

E. Carboxypeptidase

8. What combination of factors prevails in the etiopathogenesis of acute th pancreatitis?

\* A. Biliary tract diseases and alcoholism

B. Infections and tumors

C. Trauma and surgery

D. Metabolic and hemodynamic disorders

E. Medicinal and toxic substances

9. It is not true that pain in acute pancreatitis:

A. Beginning suddenly

B. Intense

C. Permanent

D. Drug-resistant

\* E. Decrease in certain body positions

10. It is not plausible that pain sensitivity in acute

pancreatitis depends on:

A. Stretching of the capsule, edema and inflammation of the organ

B. Inflammatory exudation and the effects of enzymes on the retroperitoneal space

C. Enzymatic peritonitis

D. Obstruction and hypertension of the pancreatic ducts

\* E. Decreased tissue perfusion in pancreatic shock

11. Which symptom of the following is uncommon for acute pancreatitis?

\* A. Bradycardia

B. Decrease in blood pressure

C. High temperature

D. Inevitable vomiting

E. Confused consciousness

12. Of the signs of pancreatitis, the least characteristic is:

A. Abdominal pain

B. Repeated vomiting

C. Soreness in the epigastric region

\* D. Abdominal stiffness

E. Attenuated bowel sounds

13. Which of the following is observed in the early period of acute pancreatitis only as an exception?

A. Shallow and convulsive breathing

B. Wheezing in the lower lungs

C. High standing and limited mobility of the left compartment of the diaphragm

D. Left-sided pleural effusion

\* E. Respiratory failure

14. The most important cause of hemodynamic disturbances in hemorrhagic pancreatic necrosis is:

A. Toxic damage to the myocardium

\* B. Toxic damage to the terminal vascular bed

C. Change in rheological properties of blood

D. Disturbances in the hemostatic system

E. Hypovolemia

15. Name the form of acute pancreatitis, which is characteristic of the spread of hemorrhagic exudate in the retroperitoneal space with the development of enzymatic phlegmon:

A. Edematous pancreatitis

B. Cholecystopancreatitis

\* C. Hemorrhagic pancreatitis

D. Purulent-necrotizing pancreatitis

E. All Answers Are Wrong

16. The most reliable laboratory test used for the diagnosis of acute pancreatitis, consists in determining the level of:

A. Pancreatic isoamylase

B. Lipases

\* C. Pancreatic isoamylase and lipase at the same time

D. Trypsin

E. Methemoglobin

17. To eliminate pancreatogenic toxemia is not suitable:

A. Hemodilution and forced diuresis

\* B. Low molecular weight dextran infusion

C. Infusion of polyvinylpyrrolidone solutions

D. Hemosorption

E. Lymphosorption

18. In which situation, of the following, is the diagnosis of acute pancreatitis seems certain?

A. Abdominal pain and clinical signs progressing to times longer than 48 hours from the start of the attack

B. Bacteremia during the first three days of illness

C. Moderate increase in amylase and lipase activity in early attack period

D. Cases not responding to standard acute therapy

E. Areas of reduced density in the gland, identified by tomography, in a patient with symptoms of pancreatitis

19. Which sign of the following is specific for acute pancreatitis?

A. Pleural effusion

B. High standing of the dome of the diaphragm and effusion in the pleural cavities

C. Disciform atelectasis

D. Shock lung

\* E. None of them

20. Etiological factors that do not lead to the emergence of acute pancreatitis

\* A. Pancreatic hypersecretion

B. Pancreatic ductal hypertension, spasm or edema

BDS

C. Pancreatic ischemia

D. Damage to the pancreas by exo- or endotoxins  
bacterial or viral origin

E. Trauma to the pancreas, including operative

21. The development of pancreatic hypertension can lead to sti:

A. Gallbladder stones

B. Stone of the common hepatic duct

C. Stone of the cystic duct

\* D. Injured stone of the greater duodenal papilla

E. All of the above reasons

22. Fatty pancreatic necrosis is formed as a result of:

A. Accession of infection against the background of edematous pancreatitis

\* B. Activation and damaging effects of lipolytic enzymes

C. Activation and damaging effects of proteolytic enzymes

D. Activation and damaging effects of glycolytic enzymes

E. Involution of small focal pancreatic necrosis

23. Hemorrhagic pancreatic necrosis is formed as a result of:

A. Accession of infection against the background of edematous pancreatitis

B. Activation and damaging effects of lipolytic enzymes

\* C. Activation and damaging effects of proteolytic enzymes

D. Activation and damaging effects of glycolytic enzymes

E. Involution of small focal pancreatic necrosis

24 In acute pancreatitis, the greatest amount of activity

ned pancreatic enzymes contain:

A. In arterial blood

B. In venous blood

\* C. In the exudate of the abdominal cavity

D. In the lymph

E. In urine

25. Which of the following statements about hyperamilasemia is not correct?

A. Increase in amylasemia is less specific than lipasemia

\* B. Digestive amylases explain physiological amylazuria

C. Hyperamylazuria dissociated from hyperamylazuria

D. Shown the definition of isoenzymes to exclude extra-pancreatic creative sources of amylases

E. Hyperamilasemia can occur in cholecystitis without

involvement of the pancreas in the process

26. The development of toxemia in acute pancreatitis is due to

is all these factors:

A. Ingestion of toxic polypeptides in the blood and lymph

B. Ingestion of pancreatic enzymes in the blood and lymph and biogenic amines

C. Ingestion of toxic lipids in blood and lymph

D. Activation of kallikrein-kinin systems and systems enzymatic fibrolysis in the blood

\* E. all answers are correct

27. In the pathogenesis of acute pancreatitis, the main significance is not interdependence of pathobiochemical and morphofunctional processes:

A. Lipolysis

\* B. Amyloidosis

C. Proteolysis

D. Demarcation inflammation with severe disorders microcirculation of blood and lymph

E. Pancreatic toxemia

28. Infection of foci of pancreatic necrosis

in acute pancreatitis occurs as a result of:

A. Bacterial translocation of colon bacteria

B. Lymphatic dissemination

C. Throwing the contents of the duodenum

D. Intestinal fistula

\* E. A and D

29. Acute pancreatitis is clinically manifested:

A. Sensitivity and muscle tension in the epigastric areas

B. Inflammatory, well-defined formation in the epiga-

country area

C. Shock manifests itself simultaneously with volemic disorders

nii

D. Shock is the initial manifestation of the disease

\* E. A and C

30. Tenderness to palpation in the left costal-vertebral column

n angle in acute pancreatitis is called a symptom:

A. Voskresensky

\* B. Mayo-Robson

C. Grunwald

D. Mondora

E. Gray-Turner

31. Soreness and muscle resistance in the projection of the sub-

gastric gland in acute pancreatitis is called symptom:

A. Mayo-Robson

\* B. Kerte

C. Gray-Turner

D. Mondora

E. Voskresensky

32. Which of the following symptoms appear with acute pancreatitis:

A. Joseph's symptom

B. Cullen's symptom

C. Fox's symptom

D. Gray-Turner symptom

\* E. B and D

33. Pain in acute pancreatitis can:

A. Localize in the epigastric region

B. Combine with pain in the epigastric region and in the hypochondrium

ryah

C. Irradiate to the back

D. Have a shingles

\* E. All answers are correct

34. Vomiting in acute pancreatitis:

A. Single

B. Stagnant

\* C. Multiple

D. Fecal

E. Late

35. Acute pancreatitis is characterized by:

A. Bradycardia

\* B. Tachycardia

C. Arrhythmia

D. Asystole

E. All of the above is true

36. The edematous form of acute pancreatitis is characterized by:

A. Significant increase in body temperature

\* B. Severe abdominal pain

C. Frequent loose stools

D. Yellowness of the skin and sclera

E. Urinary incontinence

37. In acute pancreatitis, development is possible:

A. Abscess omental bursa

B. Pancreatic abscess

C. Phlegmon of retroperitoneal tissue

D. Purulent peritonitis

\* E. All of the above is true

38. Severe development of acute pancreatitis is indicated by the following blowing:

A. Signs of mono- or multiple organ failure

B. Early appearance of hemorrhagic peritoneal ex-sudata

C. Violation of carbohydrate metabolism (hypoglycemia)

D. Hypocalcemia, hemolysis or in vitro lipoglycemia with hypercalcemia and hypokalemia

\* E. all answers are correct

39. Jaundice in acute pancreatitis can be caused by:

A. Compression of the choledochus tissue of the pancreas

B. Pancreatogenic hepatitis

C. Injured calculus of the greater duodenal papilla

D. Tumor of the greater duodenal papilla

\* E. All of the above is true

40. The course of fatty pancreatic necrosis is characterized by everything

Listed except

A. Formation of post-necrotic infiltrate in the epiga-

stratal region and left hypochondrium

B. Isolated pneumatosis of the transverse colon

\* C. The presence of a large amount of hemorrhagic fluid in abdominal cavity

D. Positive symptom of Voskresensky

E. Involvement in the inflammatory process of large mesenteric ny and stuffing vessels

41. For acute destructive pancreatitis (pancreatic necro-

for) is characteristic:

A. Occurs in 5-27% of patients

B. An increase in the intensity of pain, the appearance of symptoms dragging of the peritoneum, despite the conservative new treatment

C. Strengthening the signs of endotoxemia with the occurrence of lapsa, shock, hallucinations, oliguria, an increase in the number leukocyte count (15 - 25) -109

D. Decrease in amylase activity in blood and urine, hypoglycemia, hypocalcemia

\* E. all answers are correct

42. Variants of development of peripancreatic infiltrate:

A. Resorption more often with small focal pancreatic necrosis

B. Aseptic sequestration with pseudocyst formation

C. Septic sequestration or suppuration of necrotic foci

D. Choices A and B are correct

\* E. Choices A, B and C are correct

43. The form of acute pancreatitis can be established when:

A. Gastroduodenoscopy

B. Plain X-ray of the abdominal organs

\* C. Laparoscopy

D. Irrigoscopy

E. All of the above is true

44. Evolution of local changes in acute pancreatitis best to follow up with:

A. Plain radiography of the abdomen

B. Contrast studies of the gastrointestinal tract

C. Ultrasonography

\* D. Computer tomography

E. Laparoscopy

45. Which of the following surgical methods, used in the early period after an acute attack of pancreatitis, reduces the likelihood of septic complications further?

A. Operative or percutaneous peritoneal lavage

B. Surgical treatment with removal of devitalized tissues, drainage of peripancreatic accumulations of fluid

C. Extended resection of the gland in combination with biliary decompression and gastro- or jejunostomy

D. Cholecystectomy, gastrostomy, jejunostomy, drainage small omentum cavity with constant aspiration

\* E. None of them

46. Which of the following is not suitable as a medium to reduce the secretory activity of the pancreas glands in acute pancreatitis?

A. Fasting

B. Continuous nasogastric aspiration

\* C. Anticholinesterase drugs

D. Anticholinergic medicines

E. Antimetabolites

47. Indications for early surgery in acute pancreatitis are:

A. Worsening of the condition despite vigorous medication therapy

B. The diagnosis of pancreatitis is uncertain

C. Biliary peritonitis

D. Obstruction of the biliary tract

\* E. All answers are correct

48. In what situation is a general X-ray of the abdomen obligatory?

A. If acute pancreatitis is suspected

B. In cases of cholecystopancreatitis

C. When there is a history of pancreatitis attacks

D. If in the epigastric region there is an infiltration

\* E. In all of the above cases

49. The radiological signs of acute pancreatitis are not related:

A. "Expanded horseshoe" of the duodenum

B. Edema of the mucous membrane of the duodenum and Vater's nipple

\* C. Multiple fluid levels in extended hinges the small intestine in the absence of gas in the large intestine

D. One- or two-way high standing of the dome of the diaphragm and pleural effusion

E. Frosted images on plain abdominal radiographs

50. Of the signs detected by X-ray research

abdominal swelling, pathognomonic for acute pancreatitis

is an:

- A. Small intestine watchdog loop
- B. Intestinal paresis
- C. Pancreatic cyst with calcified walls
- D. Choledocholithiasis

\* E. None of them

51. The following laboratory data confirm the etiology

gical diagnosis of acute pancreatitis:

A. Pancreatic enzymes in serum are less in alcohol

personal pancreatitis except

\* B. The ratio of clearance of amylase and creatine and on in acute

pancreatitis is 6-8.9

C. The lipase / amylase ratio is higher in acute pancreatitis.

those

D. Aspartate aminotransferase > 60 in 80% of patients with acute

biliary pancreatitis

E. Bilirubinemia > 3 mg / dl in acute biliary pancreatitis

52. Esophagogastroduodenoscopy in patients with acute pancreatic atit allows:

A. Diagnose acute pancreatitis

B. To clarify the localization of necrosis in the pancreas

C. To clarify the prevalence of pancreatic necrosis

D. Determine the form of acute pancreatitis

\* E. Assess the condition of the large duodenal papilla

53. Ultrasound examination in acute pancreatitis

allows:

A. Identify the localization of necrosis

B. To identify pathological masses of the pancreas

mammary gland

C. Diagnose gallstone disease

D. To diagnose concomitant inflammation of the gallbladder

blaze

\* E. All of the above is true

54. To direct ultrasound signs of acute pancreatitis

those include:

A. Increase in the size of the pancreas

B. Disruption of the contours and changes in the structure of the parenchyma

C. Signs of hemostasis and intestinal paresis

D. Changes in the main pancreatic duct

\* E. A B D

55. During laparoscopy for the diagnosis of acute pancreatitis

apply:

A. Examination of the abdominal organs

B. Collection of exudate from the abdominal cavity for the purpose of its examination

C. Instrumental "palpation" of the pancreas

D. Comparative thermometry of the pancreatic area

\* E. All of the above is true

56. Direct signs of laparoscopic diagnosis are:

A. Plaques of steatonecrosis on the peritoneum and omentum, hemorrhagic effusion

B. Swelling of the omentum, mesentery, intestines

C Hyperemia and imbibition of the peritoneum

D. Paresis of the stomach and transverse colon

\* E. A B C

57. In acute pancreatitis, the following statements about com-

puter tomography are correct:

A. Determines the final diagnosis of acute pancreatitis and

its complications

B. The patient is not exposed to radiation

C. Can accurately distinguish between gland and local complications

D. Without using contrast agents, you can accurately differentiate

to render a mild form of acute pancreatitis from a severe

\* E. A and C

58. In acute pancreatitis, the following statements are true

about endoscopic retrograde cholangiopancreatography (ERPHG):

A. Used in the first 48-72 hours

B. Provides data for the etiological diagnosis of acute

go pancreatitis with gallstone disease

C. ERPCG in cholelithiasis does not improve the course

acute biliary pancreatitis

D. ERPCH is important for biliary drainage in cholan-

gite in combination with acute biliary pancreatitis

\* E . A B D

59. To assess the severity of the condition of patients with acute pancreatitis uses the following outcome prediction systems diseases:

\* A. Ranson system

B. APACHE system

C. Child system

D. Bormann system

E. Glasgow system

60. Choose the correct answers of the Ronson system, which characterize the severity of acute pancreatitis:

A. In acute benign pancreatitis (<3)

B. In acute pancreatitis with risk of complications (3-5)

C. In severe acute pancreatitis (> 5)

D. In acute pancreatitis with a mortality rate of 100% (> 7)

\* E. All answers are correct

61. A closed method of treatment of enzymatic pancreatogen-peritonitis is preferable because:

A. The primary asepticity of the process is not violated

B. Evacuation of exudate does not meet any difficulties

C. You can create a high concentration of inhibitors of proteases in the tissues of the pancreas, retroperitoneal tissue and liver

D. Prevents the occurrence of late complications in the form of septic foci in the pancreas and para-pancreatic tissue

\* E . A B C

62. It is generally accepted that the anterior transperitoneal approach best suited for dissection of pancreatic abscesses. What arguments in its favor can be considered justified bathrooms?

A. Access is technically easy

B. Allows to perform a wide revision of the abdominal cavity

C. Allows selection of optimal drainage methods

D. Facilitates the placement of jejunostomy for enteral feeding

\* E . A B C

63. In addition to breaking through and spreading beyond the primary localization of pancreatic abscesses can lead and to other complications, of which the most common:

A. Complications from the heart

B. Vascular

\* C. Respiratory

D. from the gastrointestinal tract

E. Renal

64. Of the following methods of early surgical treatment of acute pancreatitis, proposed with the expectation of

reducing the number of complications and improving the outcome of the disease, which is suitable to achieve these goals?

A. Interventions on the biliary tract

B. Peritoneal lavage

C. Laparotomy with drainage of the bed of the gland

D. Pancreas resection

\* E. None of them

65. Differential diagnosis between acute and chronic pseudocyst is important for timing the operation. Through

what is the time after the formation of a false pancreatic cyst is surgery considered acceptable?

A. After 3 weeks

\* B. After 4-6 weeks

C. After 3 months

D. After 6 months

E. After 9 months

66. Emergency medical complex for acute pancreatitis must provide all of the above, except:

A. Relief of pain syndrome

B. Relief of spasm of the sphincter of Oddi

\* C. Acceleration of pancreatic tissue sequestration

D. Reduction of secretory activity and edema of the pancreas - noah gland

E. Inactivation of blood proteases and detoxification

67. Decrease in the secretion of exoenzymes of the pancreas PS contributes to:

A. Antibiotic therapy

B. Infusion therapy

C. Replenishment of circulating blood volume

\* D. Appointment of cytostatics

E. All of the above is true

68. Protease inhibitors:

A. They inhibit the proteolytic activity of enzymes

breast

B. Block autocatalytic activation of trypsinogen in pancreas

C. They inhibit the processes of kininogenesis and fibrinolysis in the blood

D. Stop kinin formation processes

\* E. All of the above

69. Urgent surgical treatment for acute pancreatitis

it is shown:

A. With an abscess of the omental bursa

B. With purulent peritonitis

C. With the development of retroperitoneal phlegmon

D. With the ineffectiveness of conservative therapy

\* E. All of the above is true

70. Depending on the period and phase of development of pathological process in the pancreas, features of its course

and developing local complications, surgical interventions

The bodies are divided into:

A. Early interventions (first hours and days of illness)

B. Operations in the phase of melting and sequestration of necrotic pancreatic foci - 7-10-14 days and later

C. Late (delayed) operations, after 2-3 weeks from the beginning

la disease

D. A and B

\* E. All answers are correct

71. Pancreatitis in some cases under the influence of conservative

treatment is not completely allowed and attempts to resume

eating naturally leads to a relapse of pain, or

fever and amylasemia. The reasons for this phenomenon can be

live:

A. Gallstone

B. False cyst

C. Obstruction of the pancreatic duct

D. Infection

\* E . A B C

72. The principles of treatment of acute pancreatitis do not include:

A. Application of means providing functional

dormant gland

B. Antienzyme therapy and detoxification

C. Analgesia

D. Maintaining circulation and kidney function

\* E. Immediate surgery after removal the phenomenon of pancreatic shock

73. Complications after surgical drainage of pancreatic

atic abscess reaches 93% and more. Among them, special

benno dangerous:

A. Continuing sepsis

B. Pancreatic and intestinal fistulas

C. Bleeding

D. Pleural effusion and pneumonitis

\* E . A C

74. Which of the following is suitable for the treatment of acute

go pancreatitis, complicated by enzymatic peritonitis:

A. Antibiotics

B. Naso-gastric aspiration and extracorporeal detoxification

cation

C. Antienzymes and cytotoxic drugs

D. Surgical intervention

\* E . A B C

75. From the following principles of treatment of acute pancreatic

titanium, the use of inhibitors of pro

theaz:

\* A. Decreased functional activity of the gland

B. Detoxification

C. Restoration of water and electrolyte balance

D. Early identification and treatment of complications

76. Among the early complications of acute pancreatitis, the most

frequent is:

A. Shock

\* B. Pulmonary complications

C. Pancreatogenic peritonitis

D. Bleeding from acute stomach ulcers

E. Biliary obstruction

77. The following are a number of statements concerning purulent

complications



of acute pancreatitis. Which one is wrong?

A. The first clinical signs appear after 1-4 weeks from the onset of the disease

B. Accompanied by pronounced purulent-resorptive feverish happy

C. Local symptoms are often meager or scarce general symptoms of intoxication

D. The blood picture in most patients is characteristic of sepsis technical process

\* E. Timely drainage of septic foci guarantees guides recovery in most cases

78. When asked about possible directions of breakthrough of pancreatic the most accurate answer is:

A. Outward

B. Into the free abdominal cavity

C. Into the digestive system

D. Into the structure of the breathing apparatus

\* E. Any of the following breakout options is possible

79. What sources of infection are least likely when acute pancreatitis?

\* A. Distant purulent foci

B. Duodenum

C. Small intestine

D. Large intestine

E. Biliary tract

80. Which of the following anatomical areas purulent streaks with complicated pancreatic necrosis less often it huddle?

A. Subphrenic space on the left

B. Perirenal tissue

C. Fiber paracolon

D. Root of the mesentery of the small and large intestine and sigma

\* E. Iliac region

81. In the surgical treatment of acute pancreatitis, the following are used:

A. Drainage of the stuffing box

B. Abdomenization of the pancreas

C. Omentopancreatopexy

D. Necrsequestrectomy

\* E. All of the above is true

82. Abdomenization of the pancreas, performed at

acute pancreatitis, contributes to all of the above

A. Limitations of the pathological process of the abdominal cavity

B. Stopping the supply of enzymes and degradation products into the retroperitoneal space

C. Stopping the flow of enzymes and degradation products into the mesentery of the colon and small intestine

D. Improving the blood supply to the gland

\* E. Decreased activity of proteolytic enzymes

83. The most common complications of acute pancreatitis does not apply:

A. Abscess of the pancreas or omental bursa

B. Abscess of retroperitoneal cell spaces and abdominal cavities

C. Cellulitis of the retroperitoneal tissue, greater omentum and mediastinum

D. Peritonitis

\* E. Septic endocarditis

84. The following statements about pancreatic sequestration ver-us:

A. Formed by distinguishing between pancreas and pancreatic foci of necrosis

B. Is a fluid formation

C. Diagnosis by radiological methods

D. Diagnosis is based on tomodensitometry

\* E. A and D

85. Acute pancreatitis can be accompanied by the development of:

A. Internal fistulas of the pancreas

B. External fistulas of the pancreas

C. Erosive bleeding

D. Splenic or portal vein thrombosis

\* E. All of the above is true

86. About pancreatic abscess in acute pancreatitis are true the following expressions:

A. Manifested by a general septic syndrome

B. Palpation is determined by the formation with clear contours

C. Under the control of ultrasonography and computed tomography fii produce puncture-aspiration

D. Clinic confirmed by ultrasound and computed tomography

\* E. A and C

87. Development of retroperitoneal cellulitis in acute pancreatitis is accompanied by:

A. Onset of vomiting

B. Increased blood and urine amylase numbers

\* C. Swelling of the subcutaneous tissue in the lumbar region

D. Normalization of the temperature response

E. All of the above is true

88. Which of the following should be used for the diagnosis of pancreatic abscess?

A. Monitoring the development of the disease

B. Blood cultures

C. Plain radiography of the abdomen

D. Computed tomography

\* E. All options are correct

89. How is the formation of pseudocysts manifested in acute pancreatitis?

A. Pain syndrome

B. Thermal reaction

C. Local symptoms

D. Toxicosis

\* E. A B C

90. What explains the formation of a false cyst in acute pancreatitis?

A. The accumulation of inflammatory exudate in the cavity of the small omentum

B. Involution of pancreatic phlegmon

C. Occlusion of the pancreatic ducts with protein particles - mucus and fibrous tissue

\* D. Ductal destruction

91. In the long-term period of the disease, acute pancreatitis can be all of the above except:

A. Formation of a false cyst, fistula

B. Development of chronic pancreatitis

C. The appearance of diabetes

D. Development of a fibrous cyst of the gland

\* E. Insulinoma occurrence

92. Pain in acute pancreatitis is characterized by:

A. Sudden onset

B. Localization in the epigastric region

C. Irradiation to the lower back

D. Cramping character

\* E. All answers are correct

93. The phenomena characteristic of hemorrhagic pancreatic

Crohn's disease do not apply:

A. Rapid progressive course

B. Toxicosis

\* C. Normovolemia

D. Aseptic peritonitis

E. Retroperitoneal phlegmon

94. The principles of treatment of acute pancreatitis do not include:

A. The use of tools that provide functional support of the gland

B. Antienzyme therapy and detoxification

C. Analgesia

D. Maintaining circulation and kidney function

\* E. Immediate surgery after removal of the phenomenon of pancreatic shock

95. Injury of the pancreas with damage to the main

pancreatic duct is recognized before surgery:

A. Repeated measurements of the level of amylase in the blood

B. Scanning the pancreas

C. Computed tomography

\* D. Retrograde cholangiopancreatography

E. Ultrasonography

96. The following findings during laparotomy force

think about a possible injury to the pancreas, for

Including:

A. Retroperitoneal hematomas in the upper abdomen

B. Peripancreatic hematoma

C. Areas of the gland with a doughy consistency

\* D. Hemorrhagic effusion containing pancreatic ferments

97. Complete revision of the pancreas the following points, except:

A. Mobilization of the duodenum according to Kocher

B. Dissection of the gastocolic ligament

C. Mobilization of the spleen along with the tail of the gland

D. Sections of the hepato-gastric ligament

\* E. Intersection of the round ligament of the liver

98. For injuries of the pancreas with rupture of the capsule and parenchyma, but not affecting the main pancreatic duct, it is necessary to carry out the following measures, for exception:

- A. Wound treatment
- B. Stopping bleeding
- C. Stitches on the capsule
- \* D. Decompression of the biliary tract
- E. Drainage of the abdominal cavity

99. In case of damage to the pancreas involving main ductal system, distal resection is considered method of choice, except:

- A. Damage to the neck
- B. Damage to the body
- C. Tail injuries
- \* D. Damage to the right superior mesenteric vessels
- E. Injury to body and tail

100. In a patient with blunt abdominal trauma during revision found a complete transverse rupture of the pancreas to the right of the mesenteric vessels. Selection operation in such case is:

- A. Distal pancreatectomy
- \* B. Closing the proximal end of the gland tightly, distal pancreato-jejunostomy
- C. Double pancreato-jejunostomy
- \* D. Anterior pancreato-jejunostomy
- E. Restoration of the pancreatic duct by anastomosis

101. Of the complications possible after surgical intervention actions taken for injuries to the pancreas noah gland, the most common is:

- A. Abscess
- B. Pseudocyst
- \* C. Duodenal fistula
- D. Pancreatic fistula
- E. Bleeding

102. Indicate the most informative diagnostic method damage to the pancreas in the first hours after trauma:

- A. Angiography
- B. General X-ray examination

\* C. CT scan

D. Ultrasound examination

E. Laparoscopy

103. What is the most important goal in the treatment of a patient with acute edematous pancreatitis?

- A. Pain relief
- B. Detoxification of the body
- C. Removal of spasm of the Vater papilla
- D. Improving the rheological properties of blood

\* E. Suppression of secretory activity of the pancreas

PS, inactivation of circulating enzymes and correction volemic violations

104. Specify the clinical sign observed in the first

day of development of acute pancreatitis, which is the most reliably indicates an unfavorable outcome diseases:

- A. Unrestrained pain radiating to the back
- B. Increase in body temperature over 38 ° C

C. Pulse over 100 beats per minute

D. Decrease in blood pressure less than 100/60 mm Hg.

\* E. Respiratory rate more than 25 per minute

105. What is the clinical sign noted on the 7th day

development of acute pancreatitis, which is most reliably

indicates the destruction of the pancreas:

- A. Unrestrained pain radiating to the back
- \* B. Increase in body temperature over 38 ° C

C. Stomach congestion, decreased peristalsis

D. Presence of pancreatogenic infiltrate in the epigastric areas with blood pressure less than 100/60 mm. rt. Art.

E. Decrease in daily urine output below 100 ml

106. What is the most optimal operation should be performed

to be lazy when identifying an edematous form during surgery acute pancreatitis?

\*AND. Laparotomy, drainage of the omental bursa

B. Laparotomy, omentopancreatopexy

C. Laparotomy, abdominal pancreas

- D. Laparotomy, cholecystectomy, external drainage
- ice, necro- and sequestrectomy
- E. Resection of the pancreas

**Topic: Chronic pancreatitis. Pancreatic cysts.**

1. Which of the following is the main pathomorphologic sign of chronic pancreatitis?
  - A. Calcifications in the Wirsung duct
  - B. Necrosis
  - \* C. Fibrosclerosis
  - D. Suppuration
  - E. Pseudocysts
2. Which of the following on plain radiography is a characteristic feature of chronic pancreatitis?
  - A. Duodenal loop
  - \* B. Calcifications in the projection of the pancreas
  - C. Aerobilia
  - D. Liquid levels
  - E. Stenosis of the Wirsung duct
3. Which of the following dietary measures has a particular combat value in the treatment of chronic pancreatitis?
  - A. Increasing vitamin intake
  - B. Increased protein intake
  - C. Increasing the proportion of carbohydrates in the diet
  - \* D. Avoiding alcohol
  - E. Increasing consumption of vegetables
4. Which of the following medications can improve symptoms of chronic pancreatitis?
  - A. Vasodilators
  - B. Vitamins
  - \* C. Pancreatic replacement enzymes
  - D. Choleretic
  - E. Propranolol
5. Which of the following is the main indication to surgical treatment for chronic pancreatitis?
  - A. Slimming
  - B. Portal hypertension
  - C. Pseudocysts
  - \* D. Pain syndrome
  - E. Calcifications in the pancreas
6. Which of the following situations is an indication

- to operation Puestov (Wirsungojejunostomy)?
  - A. Multiple pseudocysts
  - B. Infected pseudocysts
  - \* C. Wirsung duct widened
  - D. Wirsung's duct is not enlarged
  - E. None of the above
7. The etiological factors of chronic pancreatitis are not:
    - A. Presence of an obstacle in the Wirsung duct
    - B. Alcoholism
    - \* C. Portal hypertension
    - D. Fasting
    - E. Cholelithiasis
  8. Which of the following clinical symptoms are not encountered? are there in chronic pancreatitis?
    - A. Pain
    - B. Jaundice
    - C. Steatorrhea
    - \* D. Anemia
    - E. Slimming
  9. Which of the following signs of chronic pancreatitis can be detected on a computed tomography?
    - A. Pseudocysts
    - B. Narrowing of the terminal part of the common bile duct
    - C. Extended Wirsung duct
    - D. Spasm of the sphincter of Oddi
    - \* E. A C
  10. Which of the following cannot be a complication of pancreatic pseudocyst?
    - A. Breakthrough into the abdominal cavity
    - B. Bleeding into the cyst cavity
    - \* C. Aortic erosion
    - D. Stenosis of the digestive tract
    - E. Abscess formation
  11. What methods of surgical treatment are used for a formed pseudocyst of the pancreas?
    - A. Alcoholization
    - B. Excision
    - C. Internal drainage
    - D. Laser destruction
    - \* E. B C D
  12. Which of the following techniques can be applied in the treatment of pancreatic ascites?
    - A. Parenteral nutrition

- B. Laparocentesis
  - C. Diuretic drugs
  - D. Surgical treatment
  - \* E. A B D
13. Which of the following complications of chronic pancreatitis may not require surgical treatment?
- A. Blockage of bile ducts
  - B. Calcification of the Wirsung duct with its expansion and severe pain syndrome
  - C. Stenosis of the digestive tract
  - \* D. Repeated attacks of acute pancreatitis
  - E. Portal hypertension
14. The method of choice in the treatment of postnecrotic cysts of the pancreas in the period up to 3 months is:
- \* A. External drainage
  - B. Cystic-digestive anastomoses
  - C. Drainage of the Wirsung duct
  - D. Left-sided pancreato-splenectomy
  - E. Total pancreatectomy
15. Cancer of the head of the pancreas manifests itself as follows -
- shim, except for:
  - A. Increasing jaundice
  - B. Enlarged palpable gallbladder
  - C. Skin itching
  - D. Losing weight
  - \* E. Liver atrophy
16. For pancreatic pseudocyst, not complicated by suppuration it is not typical:
- A. Pain syndrome
  - B. Fever
  - C. Local symptoms
  - D. Toxicosis
  - \* E. B D
17. What is the method of treating a false cyst of the pancreas PS is preferable?
- A. Extirpation
  - B. Marsupialization
  - C. External drainage
  - \* D. Internal drainage
  - E. None of them
18. A complete revision of the pancreas the following points, except:
- A. Mobilization of the duodenum according to Kocher
  - B. Dissection of the gastroduodenal ligament
  - C. Mobilization of the spleen along with the tail of the gland
  - D. Sections of the hepato-gastric ligament
  - \* E. Intersection of the round ligament of the liver
19. Specify the optimal volume of the operation when the pancreatic cyst without signs of abscess niya:
- A. External cyst drainage
  - \* B. Imposition of a cystojejunal anastomosis
  - C. Resection of the pancreas with removal of the cyst
  - D. Excision of the cyst walls
  - E. Marsupialization of the cyst
20. Specify the optimal time for performing the operation on do pseudocysts of the pancreas:
- A. Immediately upon diagnosis
  - B. After relief of signs of acute pancreatitis
  - C. 1-2 months after an attack of acute pancreatitis
  - D. 2-3 months after an attack of acute pancreatitis
  - \* E. 3-4 months after an attack of acute pancreatitis
21. Indicate the characteristic morphological sign of true pancreatic cyst:
- A. Gelatinous contents of the cyst
  - B. Presence of septa inside the cyst
  - C. Spherical cyst
  - D. Absence of signs of inflammation in the part of the pancreas a gland not affected by a cyst
  - \* E. The presence of an epithelial lining on the inner surface of cyst walls
22. What is the operation for chronic inductive pancreatitis with impaired patency of the main pancreatic duct accompanied by the best therapeutic effect?
- A. Correction of patency of the greater duodenal papilla
  - B. Surgery on the autonomic nervous system
  - C. Pancreas resection
  - \* D. Longitudinal pancreatojejunostomy
  - E. Pancreatectomy
23. Indicate the factor that determines the timing of the urgent surgical intervention for pancreatic cyst mammary gland:

A. Presence of a cyst  
 B. Compression by a cyst of the stomach  
 \* C. The threat of rupture of the cyst, suppuration of the contents of the cyst, blood flow into the cyst  
 D. Compression by intestinal cysts  
 E. Increase of retrogastric space on X-ray stomach scopes

24. What is the optimal time for fistula surgery?  
 pancreas:  
 A. 2 weeks after its formation  
 B. 1-2 months after its formation  
 C. 2-3 months after its formation  
 \* D. 3-4 months after its formation  
 E. 6 months after its formation

25. Specify the pressure in the main duct of the pancreas  
 PS is normal:  
 \* A. 300-500 mm water column  
 B. 250-450 mm water column  
 C. 100-150 mm water column  
 D. 50-100 mm water column  
 E. 700-800 mm water column

26. All statements regarding the pathogenesis of chronic pancreatitis are correct, except for:  
 A. There is a direct relationship between the risk of developing chronic pancreatitis and daily use alcohol  
 \* B. Alcoholic pancreatitis is common in people eating a diet low in fat and proteins  
 C. Acute calcemia is a potential enzyme secretion stimulant  
 D. Foods with reduced zinc, copper content and selenium, used in developing countries, are contribute to the development of tropical pancreatitis  
 E. Alcoholic pancreatitis is characteristic of people who use eating foods high in fat and protein

27. All statements regarding the pseudocyst of the pancreas noah glands are true, except for:  
 A. In the absence of complications, drainage of the cyst is occurs if the size of the cyst is more than 6 cm and persists over 6 weeks

B. Pseudocyst in normal size pancreatic the duct can be drained percutaneously  
 \* C. A pseudocyst located proximal to the pan- of the creatine duct, needs percutaneous drainage  
 nii  
 D. Pseudocyst located in the head of the pancreas lesions can be drained endoscopically through pain shoy or small duodenal papilla  
 E. In case of purulent complications of a pseudocyst, caved her external drain

28. Despite the prescribed 4 pills of pancreatolipase (4 500IU lipase in 1 tablet) for each meal, in a patient, at age those 42 years old, with chronic pancreatitis complicated by steatorrhea, diarrhea continues. Select the possible causes of steatorrhea:  
 A. Insufficient lipase activity at a given dose  
 B. Inactivation of lipase in the stomach  
 C. Undiagnosed bacterial contamination  
 D. Use of cimetidine  
 \* E. A B C

29. Choose the correct statements about congenital pancreatic cysts:  
 A. They differ from pseudocysts by the presence of epithelial stiletos  
 B. If they are solitary, then they appear as intra-abdominal tumor  
 C. Multiple cysts are rarely associated with others congenital anomalies  
 D. The method of choice in diagnosis is ultrasound abdominal follow  
 \* E. A B D

30. The patient, at the age of 55, has been suffering for 1 year watery diarrhea, which at the beginning of the disease was intermittent character and for several days scribbled independently. Bacterial culture results and the test for helminths is negative. Colonoscopy with biopsy of various parts of the intestine

did not identify a pathological cause of diarrhea. Was diagnosed with irritable bowel syndrome. The patient complains of constant and large volume of dull diarrhea, no blood impurities, significant loss in weight. Diarrhea is not food-related and is more severe at night. The objective status is unremarkable. Laboratory data: Hb: 120 g / L; K<sup>+</sup>: 2.8 mEq / L; Na<sup>+</sup>: 134 mEq / L; urea: 12 mmol / L; CO<sub>2</sub>: 30 mEq / L; Le: 8,600 / cm<sup>3</sup>; glucose: 11.5 mmol / L; SG: 95 mEq / l; Ht: 36%; creatinin: 100 mmol / L. What research is needed in this case?

- A. Determination of the level of vasoactive intestinal polypeptide
- B. Level of gastrinemia
- C. Blood somatostatin level
- \* D. Qualitative examination of stool and electrolytes during fasting the patient
- E. Ultrasound of the abdominal organs

31. The patient, at the age of 55, has been suffering for 1 year watery diarrhea, which at the beginning of the disease was intermittent character and for several days scribbled independently. The results of bacterial cultures and tests for helminths are negative. Colonoscopy with biopsy of various parts of the intestine did not reveal for the pathological cause of diarrhea. Was delivered diagnosis of irritable bowel syndrome. complains of persistent and large amounts of watery diarrhea, without bleeding, for significant weight loss. Diarrhea is not associated with food intake and is more pronounced at night. The objective status is unremarkable. Laboratory data: Hb: 120 g / L; K<sup>+</sup>: 2.8 mEq / L; Na<sup>+</sup>: 134 mEq / L; urea: 12 mmol / L; CO<sub>2</sub>: 30 mEq / L; Le: 8,600 / cm<sup>3</sup>; glucose: 11.5 mmol / L; Ch 95 mEq / l; Ht: 36%; creatinin -

tinin: 100 mmol / L. If the patient was made pH measurement of the stomach, what result would you expect?

- A. pH 1-2
- B. pH 3-4
- \* C. pH 5-6
- D. pH 7-8
- E. pH 6-7

32. Patient, aged 46, with a history of alcohol and chronic pancreatitis, for 1 month complains of progressive abdominal pain. What research need to be produced first?

- \* A. ultrasound
- B. Endoscopic retrograde cholangiopancreatography
- C. Pancreatic function tests
- D. Computed tomography
- E. Determination of CA 19-9 in serum

33. Internally, pancreatic neural inflammation plays an important role in the genesis of pain in chronic pancreatitis. Choose the correct statement:

- A. Histologically, the pancreatic nerves become more numerous in number and increase in size measures
- B. Chronic inflammation leads to a break in the perineurium with replacement of nerve tissue with connective tissue
- C. The organization of intraneural organelles is interrupted, as well as and microtubules
- D. In patients with chronic pancreatitis, substance P in afferent pancreatic nerves paradoxically decrease
- \* E. A B C

34. Regarding the pain syndrome in chronic pancreatitis. The following statements are true:

- A. The development of pain syndrome coincides with the development of exocrine pancreatic insufficiency
- B. Reduction of intraductal pressure by the method of surgical decompression can reduce pain
- C. Histological examination reveals in patients

there is damage to the peripancreatic nerves

D. Blockage of the celiac plexus leads only to temporary improvement in patients with chronic pancreatitis

\* E. B C D

35. Which of the following statements are true

for pancreatic abscesses?

A. Associated with the development of respiratory distress-syn-

droma in adults

B. Can be prevented by preventive

values of broad-spectrum antibiotics

C. Urgently indicated surgical treatment with remote

necrotic tissue

D. Diagnosis can be made by percutaneous peripan-

creative fluid

\* E. A C D

36. Which of the following statements are not true-

about pancreatic pseudocyst?

A. In the absence of complications, drainage of the pseudocyst

should be limited only to cases where the pseudocyst

measures over 6 cm and persists for over 6 weeks

B. Pseudocyst associated with normal pancreatic

duct, can be treated by percutaneous

drainage

\* C. Pseudocyst located proximal to the stricture

pancreatic duct, must be drained through

skin

D. Pseudocyst located in the head of the pancreas

lesions can be drained endoscopically

through pain

shoy or small duodenal papilla

E. In the case of the development of purulent complications of a pseudocyst,

its external drainage is found

37. For differential diagnosis of pancreatic and

cirrhotic ascites, the most important test is:

\* A. Abdominal paracentesis

B. Ultrasound of the abdominal cavity

C. Computed tomography

D. Endoscopic retrograde cholangio-

pancreatography

E. Percutaneous transhepatic

cholangiography

38. The development of pancreatic

hypertension can lead

sti:

A. Gallbladder stones

B. Common bile duct stones

C. Cystic duct stones

\* D. Injured stone of the greater duodenal

papilla

E. All of the above

39. Choose incorrect statements about

development

tia of alcoholic pancreatitis:

A. An increase in the concentration of

proteolytic enzymes in the pancreatic

juice

\* B. Increased pancreatic blood flow

C. Increased permeability of pancreatic

ducts

D. Calcium precipitation in pancreatic

ducts

E. Spasm of the sphincter of Oddi

40. A patient with Zollinger-Ellison

syndrome has

multiple endocrine neoplasia type I (MEN

I syndrome),

Adequate treatment for ulcerative

symptoms consists of:

A. Prescribing cimetidine

\* B. Prescribing omeprazole

C. Resection of the pancreas

D. Prescribing streptazocin

E. Total gastrectomy

41. All of the following surgical methods

are used

for the treatment of pancreatic pseudocyst

in the head of the pancreatic

gland, except for:

A. Cystoduodenoanastomosis

B. Cytogastroanastomosis

C. Cytojejunostomy

\* D. Removal of pancreatic damaged

segment

E. External drainage

42. With exocrine pancreatic insufficiency

the most important effect is to reduce

absorption:

A. Calcium

B. Carbohydrates

\* C. Fats

D. Vitamins

E. Proteins

43. Pancreatography performed on a

patient aged 54



years old and suffering from chronic alcoholism, shows symptom of a chain of lakes. Adequate surgical treatment is goes to:

- A. Cholecystectomy with revision of the common bile duct
- B. Cholecystectomy with sphincteroplasty
- \* C. Longitudinal opening of the pancreatic duct and imposing longitudinal (lateral-lateral) pancreatojejuno-stomosis
- D. Caudal pancreatic resection and overlay pancreatojejunoanastomosis
- E. Total pancreatectomy

44. All statements regarding secretin are correct

mi, except for:

- A. Secretin is a stimulant of pancreatic secretion liquids and bicarbonates
- B. Decrease in pH of the duodenum to 4.5 and below leads to stimulation of secretin release
- \* C. Secretin stimulates the secretion of pancreatic enzymes
- to v
- D. Secretin-producing cells are localized in the proxy small intestine
- E. Cholecystokinin potentiates the stimulating effect of secretin for bicarbonate secretion

45. Choose the correct statements regarding the anatomic pancreatic cancer:

- A. The isthmus of the pancreas is located in front and intimately associated with the confluence of the superior mesenteric and splenic veins, which form the caudal part of the common vein
- B. The body of the pancreas is located retroperitoneally and behind the aorta
- C. The antrum and body of the stomach are in contact with the anterior surface of the pancreas
- D. The middle part of the body of the pancreas is located on level L<sub>1</sub> - L<sub>2</sub>
- \* E. A C D

46. All statements regarding the islets of Langerhans are

are correct, except:

- A. 75% -80% of islet cells are beta cells, which produce insulin
- B. 10-20% are alpha cells that secrete glucagon
- \* C. 5% are delta cells that secrete pancreatic polypeptide
- D. Enterochromaffin cells that secrete 5-hydroxytryptamin
- E. PP cells that produce pancreatic polypeptide

47. Indicate markers that help differentiate benign pathology of the pancreas from adenocarcinomas:

- A. SA 19-9
- V. SA 125
- C. Carcinoembryonic antigen
- D. Leukocyte adhesion inhibition test
- \* E. A C D

48. All statements regarding the development of alcoholic pancreatitis are true, except:

- A. An increase in the concentration of proteolytic enzymes in the pancreatic juice
- \* B. Increased pancreatic blood flow
- C. Increased permeability of pancreatic ducts
- D. Calcium precipitation in the pancreatic ducts
- E. Spasm of the sphincter of Oddi

49. Jaundice in patients with acute pancreatitis can be caused by caught:

- \* A. Compression of the choledochus tissue of the pancreas
- B. Duodenostasis
- C. Choledocholithiasis
- D. Pancreatogenic hepatitis
- E. All of the above is true

50. A patient with pronounced weight loss and deeply located female abdominal pain, but no jaundice is suspected there is adenocarcinoma of the pancreas. Diagnostically informative method for initial research is:

- A. Angiography
- \* B. CT scan
- C. Laparoscopy

- D. Nuclear magnetic resonance
- E. UZI

**Topic: COLOR DISEASE.**  
**GIRSHPRUNGA, CROWN, NON-SPECIFIC ULTRA-KOLIT.**

1. The length of the large intestine is:
  - A. 50 cm
  - B. 80 cm
  - \* C. 150 cm
  - D. 200 cm
  - E. 300 cm
2. The right half of the large intestine is supplied with blood:
  - A. Inferior mesenteric artery
  - \* B. Superior mesenteric artery
  - C. Right renal artery
  - D. Right external iliac artery
  - E. Right internal iliac artery
3. Sympathetic innervation of the right half of the thick cyan the cervix is carried out:
  - A. Hypogastric plexus
  - \* B. Lower mesenteric nerve plexus
  - C. Wandering nerves
  - D. Lumbar sympathetic nerve
  - E. None of the above
4. Risk factors for colon cancer are not:
  - A. Diffuse adenomatous familial polyposis
  - B. Chronic inflammatory diseases
  - \* C. Colon diverticulosis
  - D. History of cholecystectomy
  - E. Ureterosigmoidostomy
5. Dissipation of a malignant tumor of the large intestine nickname occurs in the following ways:
  - A. Germination into adjacent organs
  - B. Through the lymphatic tract
  - C. Hematogenous route
  - D. Intraluminal
  - \* E. All answers are correct
6. Which of the following paraclinical studies most helpful in diagnosing colon cancer?
  - A. Anoscopy
  - B. Irrigography
  - C. Passage of barium suspension through the digestive tract
  - D. Fibrocolonoscopy
  - \* E. B and D
7. Which of the following paraclinical studies most contraindicated in staging a malignant tumor large intestine?

- A. Ultrasound of the abdominal cavity
  - B. Computed tomography
  - C. Nuclear magnetic resonance
  - \* D. Electrocardiography
  - E. Radiography of the lungs
8. The most common complications of colon cancer are not:
    - A. Intestinal obstruction
    - B. Malabsorption syndrome
    - C. Bowel perforation
    - D. Colonic bleeding
    - \* E. Septicemia
  9. What methods of treatment are not used for colorectal cancer intestines?
    - A. Surgery
    - B. Radiotherapy
    - C. Chemotherapy
    - D. Immunotherapy
    - \* E. Immunosuppression
  10. The main tasks of surgical intervention in colon cancers are:
    - A. Removal of the tumor
    - B. Restoration of the anatomical continuity of the intestinal tube
    - C. Treatment of complications (stenosis, perforation)
    - D. Prevention of hepatic complications
    - \* E. A and C
  11. Which of the following cancer treatments are bowel movements have been introduced in recent years?
    - A. Dissection and lymphadenectomy
    - B. Mechanical seams
    - C. Extracorporeal circulation
    - D. Laparoscopic resections
    - \* E. B and D
  12. What antibiotics are most effective in preparation large intestine to surgery?
    - A. Cephalosporins
    - B. Gentamicin
    - C. Metronidazole
    - D. Ampicillin
    - \* E. A and C
  13. What are the principles underlying radical surgery surgical intervention for cancer of the right half large intestine?

A. Completely resected the right half of the large intestine  
 nick (right-sided hemicolectomy)  
 B. Restoring the continuity of the intestinal tube is carried out  
 is caused by the imposition of ileotransversoanastomosis  
 C. At the same time, the resection of vascular  
 fishing and regional lymphadenectomy  
 D. Restoration of the continuity of the intestinal tube is carried out  
 appears in the second stage of the operation  
 \* E. A B C

14. Which of the following medicines are used -  
 Xia as immunomodulators in patients with colorectal cancer  
 intestines?  
 A. Levamisole  
 B. 5-fluorouracil  
 S. BCG  
 D. Corynebacterium parvum  
 \* E. ACD

15. What clinical symptoms are most typical for  
 cancer of the right half of the large intestine?  
 A. Anemia  
 B. Temperature  
 C. Signs of intestinal obstruction  
 D. Palpable tumor  
 \* E. A B D

16. Acute toxic enlargement of the colon  
 can be  
 complication of the following disease:  
 A. Diverticulosis of the large intestine  
 B. Familial adenomatous polyposis  
 \* C. Ulcerative colitis  
 D. Ischemic colitis  
 E. Spastic colitis

17. Which of the following complications  
 is uncommon  
 for ulcerative colitis?  
 \* A. Internal intestinal fistulas  
 B. Perforation of the large intestine  
 C. Colon bleeding  
 D. Malignancy  
 E. Acute toxic enlargement of the colon

18. Conservative treatment of non-specific  
 ulcerative co-  
 litis includes all elements except:  
 A. Preparations of the salazopyrin group  
 B. Corticosteroid hormones

C. Antidiarrheal drugs  
 D. Parenteral nutrition  
 \* E. Antibiotic therapy

19. During the course of Crohn's disease,  
 all complications can develop,  
 with the exception of:  
 A. Colon bleeding  
 B. Internal intestinal fistula  
 C. Intraperitoneal infiltrate  
 D. Intestinal strictures  
 \* E. Colon polyposis

20. X-ray changes in the mucous  
 membrane thick  
 intestines in the form of "cobblestone  
 pavement" are characteristic  
 for:  
 A. Nonspecific ulcerative colitis  
 B. Familial adenomatous polyposis  
 \* C. Crohn's disease  
 D. Ischemic colitis  
 E. Hirschsprung's disease

21. The presence of Langhans giant cells in  
 biopsies  
 the mucous membrane of the large  
 intestine is typical for:  
 A. Hirschsprung's disease  
 B. Irritable colon  
 C. Ulcerative colitis  
 \* D. Crohn's disease  
 E. Ischemic colitis

22. The method of choice in the treatment  
 of colon polyposis  
 is an:  
 A. Hemlock Juice Treatment  
 \* B. Endoscopic polypectomy  
 C. Bypass anastomosis  
 D. Large intestine resection  
 E. Chemotherapy

23. The method of choice in the diagnosis  
 of large intestinal polyposis  
 nick is:  
 A. Ultrasound examination  
 B. Laparoscopy  
 \* C. Fibrocolonoscopy with biopsy  
 D. Angiography  
 E. Computed tomography

24. For familial adenomatous polyposis, all  
 symptoms, except for:  
 A. Colon bleeding  
 B. Mucous discharge with feces  
 C. Anemia  
 D. Hypoproteinemia  
 \* E. Gastric achilia

25. The most accurate description for a  
 villous tumor

the large intestine is:

- A. Located on the leg
- B. Often localized at the level of the cecum
- \* C. May degenerate into adenocarcinoma
- D. More common in children
- E. Has little potential for malignancy

26. Diverticulosis of the sigmoid colon may be accompanied by the following clinical signs:

- A. Temperature
- B. Severe weight loss
- C. Elasticity in the right iliac region
- D. Anemia
- \* E. A and D

27. Possible complications of sigmoid diverticulosis intestines are:

- A. Bleeding
- B. Perforation
- C. Formation of bladder fistula
- D. Pericolic abscess
- \* E. all of the above are correct

28. In the clinical course of nonspecific ulcerative colitis:

- A. Purulent-hemorrhagic discharge occurs
- B. Long periods of remission are present
- C. Colonoscopy should be performed systematically at every house aggravation
- D. Severe relapses are always treated only with intensive rapia
- \* E. A B C

29. What symptoms are not typical for intestinal obstruction due to torsion of the sigmoid colon?

- A. Complete absence of passage for formed feces masses and gases
- B. Temperature
- C. Presence of fresh blood on digital examination straight pussies
- D. History of blockage
- \* E. B and C

30. Typical complications of nonspecific ulcers colitis are:

- A. Rheumatoid arthritis
- B. Posterior uveitis
- C. Endocarditis
- D. Perforation of the large intestine
- \* E. all options are correct

31. In case of diverticulosis of the large intestine, irrigography mo- can detect the following symptoms:

- A. Lack of gaustration of the left half of the large intestine with spike-like growths against the background of the sigmoid colon
- B. Complete obstruction of the intestinal lumen
- C. Colon as a "stack of plates"
- D. Colon shaped like "golf pants"
- \* E. A and C

32. Indications for colectomy in case of colonic diverticulosis the cervix are as follows:

- A. Fistula formation
- B. Bleeding
- C. Perforation
- D. No significant complications
- \* E. A B C

33. Crohn's disease and ulcerative colitis are inflammatory bowel diseases and have common characteristics. Which one is false?

- A. Occur in young patients
- B. Affects the colon
- C. May be accompanied by erythema nodosum and uveitis
- \* D. May recur after total colectomy
- E. May be associated with anal fissures

34. Characteristic X-ray signs of the disease Crohn's are:

- A. Follicular ileitis
- B. Ulcers
- C. Aerobilia
- D. Stenosis of the lumen
- \* E. all answers are correct

35. What symptoms are characteristic of complications of diverticulum a small intestine?

- A. Fecaluria
- B. Rectorial office
- C. Contract
- D. Constipation
- \* E. A B C

36. The main characteristic features of a family adenoma are polyposis of the large intestine are:

- A. Transmitted autosomal dominantly
- B. Stable malignancy
- C. Resolved by total colectomy
- D. Careful endoscopic observation of co-standing rectum after colectomy

\* E. A B C

37. Prevention of colon cancer can be achieved by periodic observations of the state of the

intestinal stasis in people at risk. These are:

A. Children of relatives operated on for colorectal cancer

th intestine

B. Patients undergoing polypectomy on the large intestine

C. Patients with ulcerative colitis from childhood

age, over

D. Patients with chronic constipation

\* E. A B C

38. Pets-Jaegers syndrome:

A. Is the most common clinical form malignant tumors of the small intestine

\* B. May be expressed through episodes of intestinal obstruction

C. Very often malignant

D. NOT accompanied by lentiginosis around natural openings

stiy

E. Tumors are desmoid

39. Under what diseases can lymphogranu-

lematosis?

A. Crohn's disease

B. Malabsorption syndrome

C. Colonic diverticulosis

D. Ischemic colitis

\* E. A and C

40. Complications of colon polyposis are not:

A. Secondary anemia

B. Cachexia

C. Intussusception intestinal obstruction

D. Malignancy

\* E. Colon perforation

41. The most common operations in the

treatment of colon liposis are not:

A. Endoscopic polypectomy

B. Total colectomy with ileostomy

C. Subtotal colectomy with ileorectal anastomosis

D. Colotomy with excision of polypoid areas of the mucosa

shell

\* E. Imposition of an unnatural anus

42. The intraluminal gas of the large intestine consists of the following chemical compounds:

A. Nitrogen

B. Oxygen

C. Carbon dioxide

D. Hydrogen

\* E. all options are correct

43. Factors regulating motor activity of the intestinal stasis include:

A. glucagon

B. Somatostatin

C. Cholecystokinin

D. Intraorgan nervous system

\* E. All answers are correct

44. What operations are practiced in the treatment of Hy-rshprung?

A. Operation Duhammel

B. Operation Soave

C. Operation Svenson

D. Operation Kummel

\* E. A B C

45. List the most important diagnostic methods

with Hirschsprung's disease:

A. Ultrasound of the abdominal cavity

B. Irrigography

C. Sigmoidoscopy with biopsy of the rectal mucosa according to

Swenson

D. Nuclear magnetic tomography

\* E. B and C

46. The earliest histomorphological signs ulcerative colitis are:

A. Eosinophilic infiltration at the level of Lieber's crypts

kuhn

B. The mucous membrane of the large intestine is covered with deep ulceration.

nii

C. The mucous membrane of the large intestine is diffusely thickened

D. The mucous membrane of the large intestine is atrophied with avascular

new sites

\* E. The mucous membrane of the large intestine is covered with superficial

granulating ulcers, thinned and easily vulnerable, with

severe vascular reaction

47. The most frequent clinical symptom of debut is

ulcerative colitis is:

A. Weight loss

\* B. Hemorrhagic diarrhea

C. Abdominal pain

D. Constipation

E. Dermatological lesions

48. Ulcerative colitis always begins with

by anger:

A. Large intestine

\* B. Rectum

C. Terminal ileum

D. Cecum

E. Jejunum

49. The drug of choice for the induction of remission in severe

exacerbations of ulcerative colitis are:

A. Derivatives of 5-aminosalicylic acid

\* B. Corticosteroids

C. Broad-spectrum antibiotics

D. Immunosuppressants

E. Beta-interferon

50. What antibodies are detected in the blood serum of patients ulcerative colitis?

A. Against mucin-producing mucosal cells small intestine

B. Against cells without mucin of the rectal mucosa

C. Against cells without mucin of the colon mucosa

\* D. Against mucin-producing mucosal cells large intestine

E. Against mucin-free cells of the small intestine mucosa

51. Malignant degeneration in nonspecific ulcerative colitis can be detected based on the following data:

A. Definition of latent bleeding

B. Immunological studies

C. Computed tomography

D. Ultrasound and endoscopic examinations

\* E. Irrigography and fibrocolonoscopy

52. Among chronic nonspecific inflammatory diseases

colon diseases, differential diagnosis

ulcerative colitis is produced with:

A. Viral colitis

B. Parasitic colitis

C. Colon neoplasms

\* D. Crohn's disease

E. Polyposis of the large intestine

53. The most reliable and specific diagnostic method

ki of ulcerative colitis is:

A. Irrigography

B. Immunological studies

C. Biological research

\* D. Rectosigmoidoscopy with flexible rectosigmoidoscope and bi-

opsia of coprological research

54 Synonyms for ulcerative colitis are:

A. Crohn's disease

B. Ulcerative hemorrhagic rectocolitis

C. Idiopathic ulcerative colitis

D. Terminal ileitis

\* E. A and D

55. The etiological factor of nonspecific ulcerative colitis is:

A. Bacterial

\* B. Unknown

C. Viral

D. Parasitic

E. Medication

56. The pathogenesis of ulcerative colitis is determined

by the following factors:

A. Infectious

B. Psycho-somatic

C. Alimentary

D. Genetic

\* E. all answers are correct

57. Macroscopic picture of nonspecific ulcerative

colitis is not characterized by:

A. Segmental lesions of the mucous membrane of the thick intestines

B. Diffuse lesions of the mucous membrane of the thick intestines

C. Only the rectal mucosa is affected

D. Lesion, only the mucous membrane of the ileum - ki

\* E. A and D

58. Variants of the clinical course of nonspecific ulcer-venous colitis are not:

A. Latent colitis

B. Primary acute attack

C. Chronic recurrent colitis

D. Chronic indurative colitis

\* E. A and D

59. Local manifestations of nonspecific ulcerative

colitis are all of the following except:

A. Rectorial government

B. Abdominal pain

\* C. Temperatures

D. Diarrhea

E. Constipation

60. Systemic manifestations of nonspecific ulcerative

colitis are all of the following except:

- A. Anemia
- B. Temperatures
- C. Asthenia
- D. Weight loss
- \* E. Hypervolemia

61. Extraintestinal (systemic) manifestations of nonspecific of ulcerative colitis are:

- A. Iridocyclitis
- B. Arthritis
- C. Uveitis
- D. Nodular erythema
- \* E. all answers are correct

62. Endoscopic signs of nonspecific ulcer colitis are not:

- A. Granular mucous membrane
- B. Erosion and ulceration of irregular shape
- \* C. Segmented lesion
- D. Intestinal pseudopolypoidosis
- E. Contact bleeding

63. X-ray signs of nonspecific ulcer-venous colitis are:

- A. Grainy and uneven contour of the mucous membrane
- B. Diffuse erosion and ulceration of various shapes and depths
- C. Pseudopolypoidosis
- D. Lack of haustra
- \* E. all answers are correct

64. Local complications of nonspecific ulcerative colitis are:

- A. Profuse bleeding
- B. Toxic megacolon
- C. Bowel perforation
- D. Internal fistulas
- \* E. A B C

65. Systemic complications of nonspecific ulcerative colitis are not:

- A. Intestinal obstruction
- B. Intra-abdominal abscesses
- C. Tuberculosis of the large intestine
- D. Sepsis
- \* E. ABC

66. According to modern epidemiological studies, namely, ulcerative colitis is characterized by the following indicators:

- A. 400-600 new cases are detected annually per 100,000 people

B. The incidence of the disease ranges from 40 to 100 cases

per 100,000 people

C. Ulcerative colitis affects predominantly but black people

D. Nonspecific ulcerative colitis occurs 2 times more often for pale-faced people

\* E. B and D

67. According to modern concepts, what complications are not specific ulcerative colitis are not subject to surgical treatment?

- A. Suspected or diagnosed colon cancer
- B. Toxic megacolon with colon perforation
- \* C. Acute fulminant form resistant to glucocorticoid
- D. Colonic bleeding, where conservative therapy ineffective
- E. Colonic obstruction due to stricture

light gut

68. The main groups of pharmacological drugs,

proven to be effective in the treatment of non-specific ulcerative colitis are:

- A. Immunostimulants
- B. Immunosuppressants (cytostatics)
- C. Corticosteroids
- D. Derivatives of 5-aminosalicylic acid (5-ASA)
- \* E. B C D

69. About the role of the immunological factor in the development of nonspecific physical ulcerative colitis is suggested by the following arguments:

A. Antibodies against mucin-producing cells are detected in the blood serum of patients with nonspecific ulcerative colitis

B. Antibodies against mucin-producing cells are specific

C. Antibodies against mucin-producing cells are very constant

D. In patients with nonspecific ulcerative colitis, deficiency in the synthesis of immunoglobulins, especially the IgG class

\* E. A and D

70. Nonspecific ulcerative colitis is characterized by the following the following pathological signs, except for:

- A. The disease involves the mucous membrane and submucosa of the colon
- B. The rectum is primarily affected, then the disease spreads penetrates the entire large intestine
- C. The ileum is moderately inflamed and dilated.

by  
\* D. Lesions in ulcerative colitis are similar to those in Crohn's disease  
E. The mucous membrane of the colon is thinned, loose, with pronounced vascular reaction

71. Total colectomy with the imposition of terminal ileo-Brook ostomas are one of the most commonly used walkie-talkies for nonspecific ulcerative colitis. Which is the most a frequent complication in ileostomized patients:

- A. Adductor syndrome
- B. Subsequent bleeding
- \* C. Peristomal inflammation with obstruction of the lumen (cyclo-intestinal obstruction)
- D. Syndrome of malabsorption with water-electrolyte disorders
- nii
- E. Astheno-vegetative syndrome

72. With nonspecific ulcerative colitis, in crops of thick intestinal contents revealed:

- A. Lack of specific flora changes
- B. Presence of nonspecific changes in flora
- C. Increase in the detection rate of *Staphylococcus aureus*

\* D. Absence of any changes in flora  
E. Presence of changes in the flora only with long-term current forms of the disease

73. Which of the following complications is nonspecific ulcerative colitis does not require urgent surgical treatment?

- A. Toxic megacolon
- B. The fulminant form of the disease resistant to corticosteroids

steroids

C. Intestinal strictures with symptoms of intestinal obstruction

D. Malignancy

\* E. Colon pseudopolypoidosis

74. When make a differential diagnosis between non-specific ulcerative colitis and Crohn's disease, characterized by thorny pathomorphological sign for Crohn's disease and always absent in ulcerative colitis is:

- A. Transmural inflammation
- B. Thickening of the submucosal layer
- C. Cracks
- D. Increased lymphoplasmacytic infiltration of submucosal stagnant layer

\* E. Granulomas Pirogov-Langhans

75. In favor of an infectious factor, as an etiological ulcerative colitis, say the following statements calls:

- A. Aerobic-anaerobic cultures of the contents of the large intestine nickname with ulcerative colitis reveal the growth of the entire flora of thick intestine
- B. An increase in the titer of antibodies to *E. coli* in patients with nonspecific physical ulcerative colitis
- C. Bacterial growth in these cases is determined by the intended cured antibiotics
- D. The identified microflora is specific for nonspecific ulcerative colitis

\* E. B and C

76. Operations of choice for nonspecific ulcerative colitis are:

- A. Total colectomy with ileostomy
- B. Subtotal colectomy with ileorectal anastomosis
- C. Total colectomy with intrapelvic tone formation cointestinal storage
- D. Colostomy
- \* E. A B C

### Topic: Diseases of the rectum

1. The main precancerous diseases in direct cancer



intestines are:

A. Melanoma of the rectum

\* B. Polyps of rectum and colon, villous tumors, non-specific ulcerative colitis

C. Hemorrhoids and chronic pararectal fistulas

D. Nonspecific anorectitis, pectinosis

E. Rectal prolapse

2. Staging a rectal tumor means:

\* A. Classification depending on the degree of histopathological differentiation

B. Clinical classification of rectal cancer

C. Determination of the degree of tumor invasion of the straight wall intestines

D. Determination of biological markers of rectal cancer

E. Complementary treatment for rectal cancer

3. The most common pathologist and ical form of cancer is direct the intestine is:

\* A. Adenocarcinoma

B. Osteosarcoma

C. Melanoma

D. Carcinoid

E. Rhabdomyosarcoma

4. Specific studies to detect cancer directly my guts are:

A. Computed tomography, exfoliative cytology

\* B. Digital rectal examination, sigmoidoscopy and fibrocolonoscopy, irrigography

C. Ultrasound of the small pelvis, determination of carcinoembryonic anti-gene

D. Intraluminal ultrasound of the rectum, lymphography, arteries riography

E. Chromolymfscopy, transabdominal ultrasound of the small pelvis, exfoliative cytology

5. Radical surgery for cancer directly my gut suggests:

A. Extirpation of the tumor-bearing segment of the rectum

B. Extirpation of the rectum and lower mesenteric lymphatic iCal nodes

\* C. Extirpation of the rectum or tumor-bearing segment

that rectum together with regional lymphatic

nodes and surrounding fatty tissue

D. Extended lymphadenectomy and extirpation of tumor existing rectal segment

E. Resection of a tumor of the rectum or rectum together

with sigmoid and descending intestines

6. The main surgical method for treating cancer is direct the intestine is:

A. Cryosurgery

B. Electrosurgery

\* C. Rectum resection and amputation

D. Extended left-sided hemicolectomy and resection rectum

E. Tumor resection with laser

7. An inhibitory factor in colorectal carcinogenesis cancer is:

A. Vegetarian diet, vitamin A, prostaglandins

B. Antitrypsin, folic acid

C. Secretory immunoglobulin A, heparinase, vitamin E

\* D. Selenium, retinoids, herbal steroids

E. Tissue thromboplastin, vitamin B complex, lipoproteinlipase

8. Rectal cancer can be localized on the following levels:

A. Ampullary department

B. Rectosigmoidal region

C. Perineum

D. In the ischiorectal space

\* E. A B C

9. For the initial stage of development of rectal cancer, thorns the following symptoms:

A. Pathological discharge from the rectum

B. Pain syndrome

C. Disorders of defecation

D. Neurological disorders

\* E. A B C

10. The reasons for the late diagnosis of rectal cancer are:

A. Prolonged asymptomatic course of the disease

B. Late Seeking Medical Care

C. Superficial examination of the patient

D. Low incidence of rectal cancer

\* E . A B C

11. The main parameters underlying the surgical

treatment for rectal cancer are:

A. Localization of the tumor

B. Concentration of carcinoembryonic antigen in blood

sick

The C . Stage of the disease

D. The result of histological examination of biopsies

\* E. A and C

12. The main surgical interventions for cancer

rectum are:

A. Amputation of the rectum

B. Cryotherapy

C. Resection of the rectum

D. Endoscopic extirpation of the tumor

\* E. A and C

13. Precancerous diseases in rectal cancer are:

A. Diverticulosis of the large intestine

B. Colorectal polyps

C. Vascular dysplasias

D. Ulcerative colitis

\* E. B and D

14. Digital examination of the rectum allows you to

show the following parameters:

A. Histological variant of the tumor

B. Localization of the tumor

C. Stage of the tumor

D. Tumor invasion into adjacent organs

\* E. B and C

15. Radical operations for rectal cancer are not

are:

A. Amputation of the rectum

B. Rectal resection

C. Hartmann's operation

D. Mechanical low resection of rectum with tumor

\* E. Double-barreled colostomy

16. Etiopathogenetic factors of rectal cancer

not considered:

A. Hereditary factors

B. Precancerous diseases of the rectum

C. Nutritional and environmental factors

D. Iatrogenic factors

\* E. Hepatopancreatic factors

17. Modern methods of diagnosing rectal cancer

ki are not:

A. Computed tomography

B. Intraluminal ultrasound of the rectum

C. Exfoliative cytology

D. Determination of carcinoembryonic antigen in blood

\* E. Anoscopy with lateral optics

18. The main symptoms of rectal cancer are:

A. Rectorial government

B. Tenesmus

C. Mucous discharge

D. Foreign body sensation in the rectum

\* E. all answers are correct

19. The most important predictors of cancer

rectum are:

A. Clinical factors

B. Tumor factors

C. Clinical stage of the tumor

D. Presence of distant metastases

\* E. all answers are correct

20. The most informative diagnostic method for

acute paraproctitis is:

A. Irrigography

B. Angiography

C. Sigmoidoscopy

\* D. Puncture of an abscess

E. Laparoscopy

21. The method of choice in the treatment of smallpox paraproctitis is

Xia:

A. Chemotherapy

B. Radiotherapy

\* C. Lancing and drainage of paraproctitis

D. Vitamin therapy

E. Sulfanilamide preparations

22. Of the following diagnostic methods for chronic

th paraproctitis the most informative is:

A. Ultrasound examination

B. Fibrocolonoscopy

C. Angiography

\* D. Fistulography

E. Computed tomography

23. The method of choice in the treatment of pararectal fistula is

is:

A. Radiotherapy

B. Vitamin therapy

C. Antibiotic therapy

D. Chemotherapy

\* E. Fistula excision

24. The most common cause of the development of pararectal

which is:

\* A. Acute paraproctitis

B. Hemorrhoids

C. Anal fissure

D. Coccygodynia

E. Anal itching

25. Of the following symptoms, the most characteristic

for anal fissure is:

A. Increased anal temperature

B. Leukocytosis

C. Anal incontinence

\* D. Sharp pain during and after bowel movements

E. Diarrhea

26. The method of choice in the treatment of chronic anal fissure

is:

A. Antibiotic therapy

B. Fissure excision with dosed sphincterotomy

C. Radiotherapy

\* D. Hyperbaric oxygenation

E. Antispasmodics

27. In 85% of patients, anal fissure is localized:

A. At 12 o'clock

B. For 3 hours

C. At 9 o'clock

D. At 6 and 12 o'clock

\* E. 6 hours

28. The operation of choice for mixed hemorrhoids is:

A. Applying a ligature

B. Operation Whitehead

\* C. Operation Milligan-Morgan

D. Electrocoagulation of hemorrhoids

E. Photocoagulation

29. The most rare complication of hemorrhoids is:

A. Rectorial government

B. Anorectal thrombosis

C. Loss of knots

D. Infringement of nodes with necrosis

\* E. Malignant nodes

30. What clinical symptoms can not indicate the existence villous tumor of the rectosigmoid region?

A. Rectorial government

B. Presence of purulent bloody stools

C. Purulent discharge from the rectum

D. Pain during bowel movements

\* E. B and C

31. Crohn's disease is defined by the following uncommon

signs:

A. Diarrhea

B. Bloody stools

C. More common in young people

D. The presence of lesions of the mucous membrane of the type "bushy pavement"

\* E. The rectal mucosa is diffusely affected,

naya bleeds easily

32. What statements about anorectal fistula should be considered incorrect?

A. Are acute suppurative processes

B. May recur after surgery

C. Often malignant

D. Fistulography is necessary to detect them

\* E. A and C

33. A 42-year-old man with fibrocolonoscopy ob-

a rectal polyp with a pedicle with a diameter of 1.0 cm is exposed.

The subsequent treatment tactics are as follows:

A. Irrigography with double contrast

B. Anterior rectal resection

C. Endoscopic polypectomy

D. Occult blood test

\* E. A and C

34. In what cases is surgical treatment of gemmo-

swarm of II and III degrees?

A. Complicated cases

B. Pregnancy

C. Severe anemization of the patient

D. Portal hypertension

\* E. A and C

35. What symptom complex is typical for anal shin?

A. Burning pain during and after stool

B. Anal sphincter spasm

C. Expression of the posterior anal commissure with sentinel

linden trees

D. Melena

\* E. A B C

36. The Queniu-Miilles operation is indicated and practiced for:

A. Malignant tumor of the anal canal

B. Inferior ampullar cancer of the rectum

C. Mid-ampullar cancer of the rectum

D. Superior ampullar cancer of the rectum

\* E. A B C

37. The main reasons for the development of internal hemorrhoids

are:

A. Pregnancy

B. Constipation

C. Portal hypertension

D. Massive tumors of the small pelvis

\* E. all answers are correct

38. Intestinal obstruction against the background of late diagnosis

bathroom operable cancer of the rectosigmoid section of the thick

the intestines are best healed by resorting to:

A. Abdominal perineal amputation of the rectum

B. Imposition of a decompression double-barreled sigmoidostomy

C. Anterior rectal resection

\* D. Hartmann's operations

E. Cecostomy imposition

39. Polyp of rectum and colon is characterized by the following with distinctive features:

A. More often localized at the level of the rectosigmoid region

B. Histologically reproduces the glands of Lieberkuhn

C. May be a source of recurrent bleeding

D. Structurally more tubular than villous

\* E. all answers are correct

40. What benign colorectal tumors are hamartomas?

A. Gardner's syndrome

B. Peutz-Jaegers syndrome

C. Diffuse familial polyposis

D. Juvenile polyps

\* E. B and D

41. What clinical symptoms can indicate the development

complications of hemorrhoids?

A. Leakage of scarlet blood after a bowel movement

B. Acute anal pains immediately after stool and prolonging

a few hours after her

C. The appearance of a cyanotic-purple elastic tumor in the anal

noah area

D. Melena

\* E. A B C

42. Mandatory diagnostic methods for procto-logical patient are:

A. visual inspection of the anal area

B. Digital rectal examination

C. Passage of contrast barium suspension along the gastrointestinal tract

D. Anoscopy and sigmoidoscopy

\* E. A B D

43. The most frequent surgical procedures for

rectal prolapse are not:

A. Operation Hartmann

B. Operation Kummel-Zarenin

C. Operation Thirsh

D. Operation Duhamel

\* E. A and D

44. The length of the rectum from promontorium to anorectal

line is:

A. 8-10 cm

B. 11-13 cm

\* C. 15-16 cm

D. 17-19 cm

E. 20-22 cm

45. The sigmorectal transition is characterized by the following anatomical features:

A. Located at the level of the III sacral vertebra, several

below the promontory

Bed and . The mesentery of the sigmoid colon disappears

C. The rectum becomes immobile

D. Tenia coli are evenly distributed around the circumference of the

my guts

\* E. all answers are correct

46. The following segments are distinguished in the ampulla of the rectum:

A. Rectosigmoid

B. Upper

C. Medium

D. Lower

\* E. B C D

47. Acute paraproctitis is classified according to the following criteria

terium:

A. By etiological principle

B. By localization of purulent-necrotic cavities, abscesses

owls, streaks

C. In relation to the fistulous tract to the anal sphincter

D. By degree of difficulty

\* E. all options are correct

48. After opening the acute paraproctitis, the following are possible

the following options for ending the disease:

- A. Formation of a pararectal fistula
- B. Recurrent paraproctitis with exacerbations of inflammation the process
- C. Recovery
- D. Development of amyloidosis of parenchymal organs
- \* E. A B C

49. The method of choice in the treatment of pararectal fistulas is:

- \* A. Excision of the fistulous course with the elimination of the internal fistula
  - B. Sitting antiseptic tubs
  - C. Flushing the fistula with antiseptics
  - D. Instillation of the fistulous tract with antibiotics
  - E. Microclysters with sea buckthorn oil, with collargol
50. In the treatment of pararectal fistulas, the following are not practiced surgical interventions:
- \* A. Sphincterolevatoroplasty
  - B. Ligature method
  - C. Complete excision of the fistulous tract with the elimination of internal th hole
  - D. Resection of a fistula into the lumen of the rectum with partial the formation of the bottom of the wound
  - E. Opening the lumen of the fistula along the entire length with scraping fistula covering tissue

#### **Topic: SURGICAL DISEASES OF THE SMALL INTESTINE**

1. The most common complication of Meckel diverticulum is:

- \* A. Diverticulitis
- B. Intestinal obstruction
- C. Malignancy
- D. Littre hernia
- E. Bleeding

2. In thrombosis of mesenteric arteries with infarction, chechnik, the following statements are observed, with the exception of eat:

- A. Acute paraumbilical pain
- B. Vomiting
- C. Severe general condition

D. Early collapse

\* E. Accelerated peristalsis

3. The most common clinical manifestation of thin tumors the intestine is:

- A. Bleeding
- B. Perforation
- C. Palpable tumor
- \* D. Intestinal obstruction
- E. Dyspeptic disorders

4. What treatment is indicated for complications of Crohn's disease?

- A. Antibiotics
- B. Salazopyrine
- \* C. Surgery
- D. Chemotherapy
- E. Radiotherapy

5. The presence of a Meckel diverticulum in the fusion bag is called:

- \* A. Littre's hernia
- B. Richter's hernia
- C. Spigeli's hernia
- D. Morgagni's hernia
- E. Gandner's hernia

6. The most common indication for surgical treatment in case of Crohn's disease serves:

- A. Prolonged bleeding
- B. Relapse of the disease
- \* C. Intestinal obstruction
- D. External fistulas
- E. Profuse bleeding

7. The most common localization of tumors is:

- A. Small intestine
- \* B. Appendix
- C. Large intestine
- D. Rectum
- E. Stomach

8. Optimal treatment for intestinal carcinoid tumors nickname is to conduct:

- A. Radiotherapy
- B. Chemotherapy
- C. Combinations of chemotherapy with radiotherapy
- D. Surgical treatment followed by radiotherapy
- \* E. Bowel resection

9. X-ray signs characteristic of Crohn can also occur when:

- A. Nonspecific ulcerative colitis
- B. Necrotic enteritis

\* C. Ileocecal tuberculosis  
 D. Cancer of the cecum  
 E. Cecal actin and goat

10. The most common cause of intestinal obstruction in tumors of the small intestine are:  
 A. Torsion of the intestine  
 B. Adhesions  
 \* C. Intussusception  
 D. Bowel spasm  
 E. Combined mechanism

11. What symptoms include the clinical picture of intestinal noisy obstruction?  
 A. Cramping abdominal pain  
 B. Vomiting  
 C. No gas evolution  
 D. Severe bloating  
 \* E. A B C D

12. With mechanical intestinal obstruction x-rays fasting abdominal scans can determine.  
 A. Bloating of the small intestine  
 B. Liquid and Gas Levels (Kleiberg Cups)  
 C. Pneumoperitoneum  
 D. Aerobilia  
 \* E. A B D

13. Dehydration of the patient with mechanical small intestinal obstruction is determined by the following factors:  
 A. Accumulation of fluid in the intestine  
 B. Loss of sodium ions  
 C. Vomiting  
 D. Extravasation of fluid in the abdominal cavity  
 \* E. all answers are correct

14. Embolism of the superior mesenteric artery is expressed as follows giving signs:  
 A. Functional intestinal obstruction  
 B. Internal bleeding  
 C. Recurrent vomiting  
 D. Bloating  
 \* E. A and B

15. Which of the following reasons can cause a twist of paralytic intestinal obstruction?  
 A. Phytobezoars  
 B. Renal colic  
 C. Peritonitis  
 D. Intestinal volvulus  
 \* E. B and C

16. What are the main radiological signs of small intestine

noisy obstruction?  
 A. Single paraumbilical gas-liquid level  
 B. Peripheral air accumulations  
 C. Multiple gas-liquid levels  
 D. Blurred, jagged contour of the small intestine  
 \* E. A and C

17. What statements regarding enteromesenteric heart attack should be considered correct?  
 \* A. Pain syndrome dominates in the clinical picture  
 B. Pain emanating from the lumbar region  
 C. Pulse fast and high blood pressure  
 D. Abdomen is soft, percussion - dullness along the flanks  
 E. Auscultatory - the presence of peristaltic noise

18. Meckel's diverticulum can:  
 A. Contain ectopic gastric tissue  
 B. Be a source of bleeding  
 C. Contain carcinoid tumor  
 D. Determine the development of intestinal obstruction  
 \* E. All answers are correct

19. In Crohn's disease with damage to the small intestine more often resort to the following operations:  
 A. Imposition of ileo or jejunostomy  
 B. Bypass anastomosis with complete disconnection of the affected plots  
 C. Limited resection of the small intestine  
 D. Extensive small bowel resections  
 \* E. A B C

20. Which of the following symptoms are not typical for mechanical small bowel obstruction?  
 A. Early onset of vomiting  
 B. No bloating  
 C. Deterioration of general condition  
 \* D. Koning's syndrome  
 E. lack of appetite

21. What radiological signs cannot be detected in a patient with small bowel obstruction in position standing on a plain abdominal x-ray?  
 A. Multiple central gas-liquid levels  
 \* B. Pneumoperitoneum  
 C. Severe distension of one isolated loop of intestine  
 ka

D. Gas-liquid levels in the form of a "ladder"

E. Gas-liquid level in the form of the letter "omega", occupying lower abdomen

22. What clinical signs are not expressed by

berculous enteritis?

A. Partial intestinal obstruction

B. Tumor formation of the abdominal cavity

C. Diarrhea

\* D. Profuse bleeding of the gastrointestinal tract

E. May simulate acute appendicitis

23. The positive aspects of decompression of an extended

intestines with mechanical obstruction are:

A. Reduction of intestinal ischemia

B. Elimination of intraluminal toxic substances

C. Promotes rapid scarring of the surgical wound

\* D. A D E

E. Prevents the development of Mendelssohn's syndrome

24. The main clinical symptoms of acute mechanical

small bowel obstruction are:

A. Increased peristaltic noise

B. Complete absence of peristaltic noise

C. Noise of liquid transfusion, rumbling

D. Bloating

\* E. A C D

**Topic:** Acute peritonitis

1. The boundary between the levels of the abdominal cavity is:

A. A horizontal plane drawn through the upper sub-spine

B. Horizontal plane drawn through the bottom edge costal arches

\* C. The transverse colon and its mesentery

D. Mesentery of the terminal ileum

E. Aperture of the small pelvis

2. The right lateral canal is:

A. The entire right half of the abdominal cavity

B. Lumen of the ascending colon

\* C. The space between the ascending colon and the lateral howling abdominal wall

D. Space between the mesentery of the ascending and transverse colon

E. All parts of the abdominal cavity to the right of the descending rim noah gut

3. The front wall of the stuffing box is:

A. Large oil seal

B. Mesentery of the transverse colon

C. Anterior abdominal wall

\* D. The back wall of the stomach

E. Lower surface of the liver

4. According to Stokes' law, inflammation of the peritoneum determines:

A. Paralysis of the abdominal muscles

B. Vasodilation of mesenteric vessels

C. Spasm of intestinal smooth muscles

D. Vasoconstriction of mesenteric vessels

\* E. Paralysis of intestinal smooth muscles

5. Drainage of peritoneal fluid through "stomata"

the serous membrane of the diaphragm does not depend on:

A. Changes in the caliber of these holes

B. Respiratory movements

\* C. Patient positions

D. Intra-abdominal pressure

E. Inflammation of the serous membrane of the abdominal cavity

6. Functional signs of acute peritonitis are not are:

A. Pain

B. Vomiting

\* C. Dyspnea

D. Stopping intestinal transit

E. Hiccups

7. Visceral pain in acute peritonitis, which is

are in case of damage to internal organs:

A. Are dull and aching

B. Have non-point localization

C. are felt mainly in the upper abdomen

D. More often accompanied by secondary effects: hyperhy-

thrasts, nausea, vomiting, pallor of the skin

\* E . all answers are correct

8. Transport of substances from the peritoneal cavity to the lymphatic iCal nodes are provided by:

A. Crypts of the diaphragm mesothelium

B. The absence of a basement membrane in the area of the mesothelial crypts and terminal lymphatic vessels of the diaphragm

C. Respiratory excursions of the diaphragm  
 D. Intestinal peristalsis  
 \* E . all answers are correct

9. Processes of regeneration of the peritoneum after injury during acute peritonitis:  
 A. Developing rapidly  
 B. Occur with the help of stem cells and cells located on the surface of the intact peritoneum  
 C. Occur simultaneously in many places in the area of rushes  
 D. End with the formation of adhesions  
 \* E . A B C

10. What phenomena occur in the abdominal cavity after microbial invasion?  
 A. Release of chemical inflammatory mediators  
 B. Vascular response  
 C. Exudation  
 D. Stimulation of fluid transport to the diaphragmatic abdomen  
 bus  
 \* E . A B C D

11. Dissemination of the infection into the abdominal cavity contributes to The following factors are:  
 A. Respiratory excursions of the diaphragm  
 B. Gravity  
 C. Physiological movements of the abdomen  
 \* D. A B C

12. The emergence of secondary effects affecting internal organs are indisputable in peritonitis. it the statement also applies to:  
 A. Heart  
 B. Lung  
 C. Kidney  
 \* D. all answers are correct

13. When peritonitis has a negative effect on the activity heart:  
 A. Hypovolemia  
 B. Metabolic acidosis  
 C. Endotoxemia  
 D. Dystrophic changes in the myocardium  
 \* E . all answers are correct

14. What changes take place in the microcirculatory system tion against the background of peritonitis?

A. Dilation of arterioles and capillaries  
 B. Violation of the rheological properties of blood  
 C. Perivascular edema and bleeding  
 D. Blood shunting through arteriovenous anastomosis  
 \* E . all options are correct

15. What are the consequences of tissue hypoperfusion in conditions peritonitis?  
 A. Energy deficit  
 B. Violation of cellular functions  
 C. Damage to mesosomal membranes  
 D. Acid-base imbalance  
 \* E . all options are correct

16. Which of the following factors are involved in damage kidney disease in acute peritonitis?  
 A. Change in circulating blood volume  
 B. Cardiac activity  
 C. Blood pressure indicators  
 D. Toxic metabolites  
 \* E . all answers are correct

17. Pathological phenomena affecting the intestines nickname and appearing on the basis of peritonitis are:  
 A. Local hypoxia  
 B. Intestinal paresis  
 C. Dysbacteriosis  
 D. Bacterial translocation  
 \* E . all answers are correct

18. What is the explanation for respiratory disorders in peritonitis?  
 A. Microcirculatory disorders  
 B. The effect of proteolytic enzymes, endotoxins and pro lipid peroxidation products  
 C. Infection  
 D. Hypoventilation  
 \* E . all options are correct

19. Endotoxemia in peritonitis appears to be listed factors here, with the exception of:  
 \* A. Neurovegetative  
 B. Microbial  
 C. Inflammatory  
 D. Intestinal  
 E. Metabolic

20. Among the agents responsible for the onset of endotoxemia with peritonitis, the main role in establishing septic shock have:



\* A. Toxins formed from cell membranes disintegrate  
 gram-negative aerobes  
 B. Toxins released from live gram-positive bacteria  
 C. Substances with an average molecular weight  
 D. Lysosomal enzymes  
 E. Bioactive substances  
 21. The hypovolemic state is manifested through all re-signs numerical here, excluding:  
 \* A. Hyperthermia  
 B. Tachycardia  
 C. Xeroderma  
 D. Hypotension  
 E. Oliguria  
 22. Peritonitis is considered primitive (primary) in case  
 tea:  
 A. Establishments based on acute intra-abdominal inflammation  
 organs  
 \* B. Infectious contamination with hematogenous or lymphogenous by way  
 C. Perforation of the cavity organs  
 D. Damage to the biliary tract  
 E. Enteromesenteric infarction  
 23. It is not true that painful sensations when  
 ritonitis:  
 A. Are permanent  
 \* B. Do not irradiate  
 C. Aggravated by movement and coughing  
 D. Increased when taking a sharp decompression during palpation  
 E. Are more pronounced at the source of infections  
 24. The intensity of pain during peritonitis is  
 depends on the influence of the following conditions listed here,  
 excluding:  
 A. Causes of peritonitis  
 B. Duration of pathology  
 C. Patient's age  
 \* D. Microbial spectrum  
 E. Severity of endotoxemia  
 25. Of the local regional symptoms of peritonitis, the most characteristic are:  
 A. Abdominal pain

\* B. Muscle protection  
 C. Dullness in the sloping areas of the abdomen  
 D. Abdominal distensibility  
 E. Pain provoked by digital rectal examination  
 by  
 26. Of the symptoms listed below, peritonitis is not  
 are characteristic:  
 A. Pain provoked by palpation or abdominal percussion  
 B. Abdominal distensibility  
 C. Muscle protection  
 \* D. Increased bowel sounds  
 E. Pain with digital rectal or vaginal examination  
 nii  
 27. What symptom is not detected in the initial period of peritonitis?  
 A. Abdominal pain  
 \* B. Feces vomiting  
 C. Tachycardia  
 D. Muscle protection  
 E. Muffling bowel sounds  
 28. Of the symptoms of neglected peritonitis, the most pathogenic personal is:  
 A. Tachycardia  
 \* B. Hypotension  
 C. Shortness of breath  
 D. Blumberg's symptom  
 E. Dullness in sloping places of the abdomen  
 29. Among the factors listed below, does not affect the evolution peritonitis:  
 A. The degree of microbial contamination of the abdominal cavity and steadiness of infectious agents  
 B. Duration of contact of the peritoneum with infectious factors  
 C. Presence of mucus, blood and other enterogenic components abdominal cavity  
 \* D. Bacteremia  
 E. The number of neutrophils and their phagocytic activity  
 30. In the diagnosis of peritonitis, the main role is played by:  
 \* A. Clinical picture  
 B. Radiological examinations  
 C. Laboratory tests

D. Laparocentesis  
 E. Peritoneal puncture - lavage  
 31. The patient was urgently hospitalized 2 hours after the appearance of sharp, severe and persistent abdominal pain. Studies show pain all over the abdomen, muscle contracture, Shchetkin-Blumberg symptom zesty. For a complete diagnosis you need:  
 A. Simple abdominal radiography  
 B. Radiological examination using water-solution rinse contrast fluids  
 C. Computed tomography  
 D. Laparoscopy  
 \* E. None of the above  
 32. What symptom can indicate the cause of peritonitis?  
 A. Abdominal distensibility  
 B. Tenderness to palpation of the abdomen  
 C. Muscle protection  
 D. Positive symptom of Shchetkin-Blumberg  
 \* E. Disappearance of hepatic dullness  
 33. Peritonitis may occur in combination with the following radiological signs, excluding:  
 A. Discoidal atelectasias in the basal segments of the lungs  
 B. Pleural effusion  
 C. Elevated stance and reduced mobility of the cou-diaphragm fishing  
 \* D. Enhancing the transit of contrast agent through the thin shechnik  
 E. Darkening of the abdominal cavity in sloping places during X-ray scientific research  
 34. The clinical signs of peritonitis are as follows other, except for:  
 A. The main element is abdominal muscle spasm  
 B. Initially, vomiting consists of ingested food, bile  
 C. Some peritonitis may present with diarrhea  
 \* D. Pain is an intermittent sign  
 E. No temperature rise does not exclude the presence of peritonitis  
 35. With an objective examination of the abdomen, with peritonitis,

you can identify:  
 A. The abdomen is motionless, rigid, regardless of the cause of the ritonitis and disease onset  
 B. Positive symptom of Shchetkin-Blumberg  
 C. Bloating in chronic peritonitis  
 D. Maximum muscle rigidity (waxy abdomen "), characterized by an uncollapsing, constant tonic pain  
 \* E. B C D  
 36. To use the laparoscopic method in the treatment peritonitis, the following statements are not true:  
 A. Decrease in the frequency of suppurative processes of the abdominal walls  
 \* B. It is used for perforation of internal organs of large sizes  
 C. Can be used for perforated appendicitis and perforated ulcer  
 D. Potential risk of spreading infections caused by pneumoperitoneum  
 E. Aspiration drainage is often ineffective.  
 tive  
 37. Treatment of periodic peritonitis (familial middle Nomorsky fever) includes:  
 A. Medication  
 B. Antibiotics  
 C. Surgical treatment  
 D. Prescribing colchicine  
 \* E. A D  
 38. In the protection of the peritoneal membrane, the main role is played by:  
 A. Lymphocytes  
 B. Cytokines  
 \* C. Macrophages  
 D. Fibrinogen  
 E. Eosinophils  
 39. To the principles of surgical treatment proposed by Kirshnerom, do not include:  
 A. Treatment of residual infection  
 B. Reduction of peritoneal contamination  
 \* C. Antibiotic therapy  
 D. Prevention of recurrent infection  
 E. Removing the source of contamination  
 40. Granulomatous peritonitis occurs with infections, caused by :

A. Mycobacterium

B. Actinomyces

C. Chlamydia

D. Strongiloides

\* E. A D

41. Among the endotoxic mediators of inflammation in acute peritonitis can be distinguished:

A. Tumor necrosis factor

B. Interleukin 1

C. Interleukin 2

D. Interleukin 6

\* E. A B C D

42. When crops of peritoneal exudate (secondary peritonitis), growth is most often noted:

A. Associative microflora

B. In monoinfections - E. Coli in the foreground, staphylococcus - on second

C. Tendency to replace gram-positive microflora gram negative

D. Increase in the value of saprophytic and opportunistic flora (non-clostridial anaerobic infection)

\* E. A B C D

43. Specific peritonitis includes:

A. Mycotic peritonitis

B. Tuberculous peritonitis

C. Gonococcal peritonitis

\* D. All answers are correct

E. There are no right answers

44. Components of endotoxemia in peritonitis are:

A. Source of intoxication (abdominal cavity, purulent-infection, altered intestine)

B. Microbial circulating in biological fluids

bodies and their toxins, breakdown products of proteins and their effects effect on cellular and tissue structures

C. Activation of the body's enzyme systems and accumulation in blood biologically active substances

D. Formation of secondary toxic products as a result

activation of catabolic processes and inactivation of freedoms

no-radical lipid peroxidation

\* E. A B C D

45. The clinical course distinguishes:

\* A. Acute, subacute and chronic peritonitis

B. Acute, recurrent and asymptomatic peritonitis

C. Acute, undulating and subacute peritonitis

D. Subacute and chronic peritonitis

E. Only acute peritonitis

46. Chronic course is typical for:

A. Purulent peritonitis

B. Biliary peritonitis

\* C. Tuberculous peritonitis

D. Fecal peritonitis

E. Enzymatic peritonitis

47. Etiopathological classification of peritonitis (Hamburg, 1989) does not include the following categories:

A. Primary peritonitis

B. Secondary peritonitis

\* C. Acute diffuse peritonitis

D. Tertiary peritonitis

E. Intra-abdominal abscesses

48. Characteristic of muscle tension in peritonitis are:

A. Appears only with deep palpation

B. Appears! Xia painful

C. is permanent

D. Irresistible on palpation

\* E. B C D

49. The primary peritonitis includes:

A. Peritonitis due to perforation of a hollow organ

B. Peritonitis due to penetrating wounds of the abdomen

\* C. Peritonitis with lymph and hematogenous infection of the tissues

D. Peritonitis with intestinal obstruction

E. Gonococcal pelvic-peritonitis

50. Secondary peritonitis includes:

A. Peritonitis due to perforation of a hollow organ

B. Peritonitis due to penetrating wounds of the abdomen

C. Enzymatic peritonitis

D. Gonococcal pelvic-peritonitis

\* E. All answers are correct

51. The following stages (phases) of peritonitis:

\* A. Reactive, toxic, terminal

B. Latent, intoxication, convalescence

C. Acute, subacute, chronic

D. Prodromal, acute, terminal  
 E. Acute, chronic

52. Peritonitis shock period lasts on average:  
 A. 1-3 hours  
 \* B. Up to 24 hours  
 C. 24-48 hours  
 D. More than 2 days  
 E. From several days to one week

53. The initial stage (phase) of peritonitis includes all re-numerical symptoms, except:  
 A. Soreness of the pelvic peritoneum during rectal examination  
 Vania  
 B. Tachycardia  
 \* C. Abrupt electrolytic shifts  
 D. Tension of the muscles of the abdominal wall  
 E. Tendencies to an increase in leukocytosis

54. Toxic stage (phase) with peritonitis on average lasts  
 Xia:  
 \* A. Up to 72 hours  
 B. Up to 24 hours  
 C. Up to 12 hours  
 D. Up to 6 hours  
 E. Less than 6 hours

55. The terminal stage (phase) of peritonitis occurs:  
 A. After 24 hours from the onset of the disease  
 \* B. 72 hours after the onset of the disease  
 C. One week after the onset of the disease  
 D. One month after the onset of the disease  
 E. There are no right answers

56. The phases of the clinical course of biliary peritonitis follow the following:  
 A. Initial shock phase, short in time  
 B. Phase of imaginary well-being  
 C. The phase of hepatic renal failure and paralytic  
 skysky obstruction with an increase in general and local symptoms  
 ptoms  
 D. Phase of irreversible purulent complications, progressive hepatic renal and cardiovascular failure  
 \* E. A B C D

57. Name the clinical forms of biliary peritonitis:  
 A. Perforated biliary peritonitis  
 B. Sweaty biliary peritonitis

C. Anaerobic biliary peritonitis  
 D. Posttraumatic biliary peritonitis  
 \* E. A B

58. The severity of the course of peritonitis is largely independent of sieve from the following factors:  
 \* A. Patient body weight  
 B. The nature of microflora  
 C. The severity of intoxication  
 D. Hypovolemia  
 E. The degree of violation of protein, electrolyte metabolism and acid-base balance

59. Drainage of the abdominal cavity with peritonitis is  
 The following statements apply, except:  
 A. Drainage inhibits functional protective function  
 peritoneum  
 B. After 48 hours, a fibrous cord is formed, undergoing obstruction  
 C. Potential bowel irritation due to contact with drainage  
 \* D. In children with acute appendicitis, the introduction of drainage is compulsory  
 E. Drainage is a way of contaminating the body

60. Research and laboratory data in acute dif-fusny peritonitis:  
 A. Presence of leukocytosis with a shift in the leukocyte formula to the left  
 Bed and . Computed tomography is not used in the current mode  
 me  
 C. Echography can establish the etiology of peritonitis  
 D. Puncture and lavage of the abdominal cavity are contraindicated.  
 \* E. Radiophaphy of the abdominal cavity - disappearance of the shadow of m.psoas

61. Hemoleukogram in acute peritonitis can give the following following results:  
 A. Indicators at the normal level  
 B. Leukocytosis with a shift of the leukocyte count to the left  
 C. Leukopenia  
 D. In acute peritonitis, leukocytosis always corresponds to the severity  
 yellow septic syndrome  
 \* E. A B C

62. Which of the following statements concerning

intra-abdominal abscesses are not true?

A. Classified as intraperitoneal, retroperitoneal

tonal and visceral abscesses

B. More often monomicrobial

C. Often develop secondary after injury, after surgery

intervention or after local pathological process

D. May develop regardless of the presence of visceral

or local changes

\* E. A B

63. Radiography of the abdominal cavity in acute diffuse

peritonitis:

A. Not used for diagnostics

B. Reveals pneumoperitoneum between the liver and the diaphragm,

which usually indicates the presence of perforation of a hollow organ

C. Shows the disappearance of the shadow m.psoas

D. The liquid and gas levels located in the central part

abdominal

\* E. B C

64. Irradiation of pain in the right shoulder girdle with peritonitis ob-

agreed:

A. Edema of the intestinal wall

B. The presence of an interintestinal abscess

\* C. Free gas or effusion under the right dome

diaphragm

D. High-standing diaphragm dome

E. Respiratory failure

65. X-ray signs of subphrenic

abscess are all except:

\* A. Courvoisier's symptom

B. Darkening between the liver and the diaphragm with horizontal

liquid level

C. High standing diaphragm

D. Limited excursion of the right diaphragm dome

E. Concomitant right-sided pleurisy

66. Spizharsky's symptom is:

A. Conducting respiratory and heart murmurs into the abdominal

cavity

B. Lack of intestinal murmurs

\* C. Absence of hepatic dullness with percussion

D. Tenderness to palpation in the umbilical region

E. Irradiation of pain in the right shoulder girdle during peritonitis

67. The terminal stage of peritonitis is characterized by:

\* A. Reduced pain syndrome

B. Increased pain

C. Bradycardia

D. Frequent stools and urination

E. Hyperperistalsis

68. Symptom "Vanka-vstanka" is characteristic for:

A. Peritonitis of appendicular origin

B. Enzymatic peritonitis

\* C. Ruptured spleen

D. All answers are correct

E. There is no right answer

69. Peritonitis in children is characterized by:

\* A. The prevalence of general symptoms over local

B. Severe local pain

C. Hypothermia

D. Absence of pronounced changes in clinical analysis

blood

E. Subacute course

70. For peritonitis in elderly and senile persons

characteristic:

\* A. The predominance of local symptoms over general

B. Normo- and bradycardia

C. Severe hyperthermia

D. Lightning current

E. All answers are correct

71. Preoperative preparation for peritonitis includes

the actions listed below, excluding:

A. Transfusion of fluids and electrolytes

B. Oxygen therapy

C. Use of beta-adrenergic agonists

\* D. Antibiotic use

E. Nasogastric intubation

72. Refusal of laparotomy by means of a midline incision

with peritonitis there may be:

A. In the presence of a scar after a midline laparotomy

B. In children under 1 year of age

C. In elderly patients

D. In localized peritonitis

\* E . B D

73. Removing the source of infection seems to be the main task whose operation. Schedule a few routines (methods) operations. Which one is the most preferable?

- A. Sewing
- B. Resection
- C. Removal
- D. Exteriorization

\* E. None of the above

74. Of the recommended methods for the treatment of septicemia in the abdomen cavity after elimination of the source of controversial peritonitis is an:

- \* A. Careful separation of fibrin accumulations from the visceral noah and parietal peritoneum
- B. Abundant lavage of the peritoneal cavity
- C. Use of antibiotics
- D. Treatment of the peritoneum with ultrasound
- E. Laser irradiation

75. When open method of treatment of peritonitis is used all of the situations listed below, except:

- \* A. Age over 50
- B. Septic sources sensitive to radical le-chenie
- C. Ischemia of intestinal loops
- D. Cases in which it is not excluded obligatory surgery intervention

76. If during the laparotomy it is determined that the liquid the cause of peritonitis and lavage of the abdominal cavity is not sufficient to ensure that the subsequent evolution of pathological processes in postoperative period, vigorous measures in the fight against infection are necessary. Which methods are preferred?

- A. Antibiotic therapy
- B. Drainage of the abdominal cavity with continuous aspiration
- C. Peritoneal lavage
- D. Relaparotomy
- \* E. Open belly method

77. One of the statements of the relative advantage of indoor treatment for peritonitis is unjustified. Names

but which one?

- A. Reduction of intra-abdominal hypertension
- B. Elimination of septic foci from the abdominal cavity is more effective
- C. Early detection of complications
- D. Maintaining flexible treatment strategies

\* E. Least formation of ventral hernias

78. Among the indicators of treatment of postoperative rehydrate-tion has the advantage:

- A. Detoxification
- \* B. Stabilization of hemodynamics
- C. Restoring balance: electrolyte, acid-base lucid, water
- D. Restoration of protein-energy balance
- E. Decreased body defenses

79. The choice of antibiotics before the identification of pathogenic agents tov is based on:

- A. Assumptions about the likely spectrum of the microorganism
- B. Data on the level of concentration of the drug in the focus of infection
- C. The results of monitoring the side effects of antibiotics ticks
- D. Evidence of disease evolution

\* E . A B C D

80. Local use of antibiotics for peritonitis is not recommended. What arguments do you think are convincing? solid?

- A. Antibiotics can change the clinical picture
- B. Stimulates the adhesion process
- C. Promote the formation of infiltration
- \* D. Uniform concentration cannot be guaranteed antibiotics in the infectious focus

81. Which of the following methods are recommended for fight against paralytic intestinal obstruction?

- A. Gastric aspiration
- B. Restoration of water-electrolyte balance
- C. Use of cholinesterase inhibitors
- D. Peridural anesthesia

\* E . A B C D

82. For the balance of hemodynamics with a decrease in the contractile

myocardial function and circulatory insufficiency in

change:

A. Perfusion of electrolyte and colloidal solutions

B. Dopamine (dobutin)

C. Cardiac glycosides

D. Calcium antagonists

\* E . A B C

83. Of the following situations, indicate the need to

artificial ventilation bridge:

A. Negative effects of oxygen therapy

B. Cessation of breathing or various options for pathological

th breath

C. Symptoms of other organ failure

D. PaO<sub>2</sub> level <60 mm Hg

\* E . A B C D

84. With pulmonary insufficiency syndrome in adults

cents changes are revealed:

A. When ventilating the lungs

B. Lung vital capacity

C. Dead alveolar space

D. Ra O<sub>2</sub>

\* E . A B C D

85. About the evolution of renal failure in peritonitis

you can get information by researching:

A. Diuresis

B. Serum urea and creatinine levels

C. Potassium level

D. Indicators of acid-base balance

\* E. Urine / plasma osmolarity ratio

86. Among the methods of detoxification for peritonitis, they give

preference:

A. Hemosorption

B. Plasma sorption

\* C. Plasmapheresis

D. Lymphosorption

E. Intrisorption

87. Correction of immunodeficiency, which invariably resists

leads to peritonitis, is produced with the best

lyami, through:

\* A. Control measures for intra-abdominal septicemia

B. Leukocyte transfusion

With ultraviolet blood irradiation

D. Detoxification

E. Uses of immunomodulators

88. Which of the following situations indicate an urgent

new laparotomy:

\* A. Penetration of the barium mass into the peritoneal cavity

X-ray examination

B. Tuberculous peritonitis

C. Candidal peritonitis

D. Iatrogenic granulomatous peritonitis

E. None of the above

89. Surgical intervention for aseptic peritoneal

nitach:

A. Is a contraindication

B. Does not make sense if the intensity of local regional

the number of occurrences decreased after the initial period of re-

ritonitis

C. It is necessary if the source of peritonitis is in the stomach.

intestinal tract

D. Practiced only in the case of attaching a secondary

infections

\* E. Mandatory in any case

90. Conservative treatment without surgery valid for:

A. Peritonitis due to perforation

B. Phlegmonous appendicitis

\* C. Gonococcal pelvio-peritonitis

D. Douglas space abscess

E. All of the above diseases

91. The best rational treatment option for subdiaphragm

a minor abscess is:

A. Conservative treatment

B. Extra-abdominal dissection and drainage

C. Laparotomy, opening and packing of the cavity

\* D. Puncture of an abscess with a thick needle under ultrasound control

E. All of the above is true

92. Technique of percutaneous drainage of intra-abdominal

abscesses do not add up from the following stages:

A. Clarification of the localization of the abscess using a computer

thorny tomography, echography or radiography

B. Puncture of the cavity under the control of computed tomography,

echography by means of a needle, in the lumen of which there is

thin typhlon catheter

\* C. Puncture of the cavity with a trocar followed by drainage  
silicone catheter

D. Determining the size and configuration of the cavity using  
contrast medium using the established catheter

E. Installation of adequate lavage of the abscess cavity

93. It is inappropriate to wash the abdominal cavity when  
the next form of peritonitis:

A. Common fibrinous-purulent peritonitis

B. Fecal peritonitis

C. Peritonitis on the background of traumatic rupture of the small intestine

D. Peritonitis due to perforation of gastric ulcer

\* E. Local peritonitis with phlegmonous appendicitis

94. Hemorrhagic exudate in the abdominal cavity observes

Xia always, except for:

\* A. Tuberculous peritonitis

B. Disrupted ectopic pregnancy

C. Mesenteric thrombosis

D. Acute pancreatitis

E. Twisted ovarian cyst

95. Tertiary peritonitis proceeds:

A. Without pronounced clinical manifestations

B. With impaired immunogenesis of various nature

C. With a predominance of opportunistic multidrug-resistant microflora, fungi

D. Corresponds to the initial manifestations of multiple organ under-sufficiency

\* E. all answers are correct

96. Local packing of the abdominal cavity in patients with  
peritonitis is shown:

A. If it is impossible to completely remove necrotic tissue

B. With the threat of development of erosive bleeding

C. In case of insufficient hemostasis

\* D. All answers are correct

E. There are no right answers

97. Absolute indicators for decompression of the small intestine

ki in conditions of diffuse peritonitis are:

A. Paresis of the small intestine with pronounced edema of the intestinal wall with

with a lumen diameter exceeding 5 cm

B. Diffuse fibrous-purulent or purulent peritonitis in the current  
sic phase of development

C. Extensive adhesions of the abdominal cavity

D. Multiple wounds of the small intestine in combination with

damage to parenchymal organs, surgery for closure of intestinal fistulas

\* E. all options are correct

98. The main tasks solved by drainage of fine  
intestines:

A. Decompression

B. Decompression-detoxification

C. Preventive

D. Wireframe

\* E. A B C D

99. For differential diagnosis of peritonitis used  
are called:

A. Emergency colonoscopy

B. X-ray examination of the passage of barium

C. Celiacography

\* D. Laparoscopy

E. All methods listed

100. Maximum efficacy in the treatment of disseminated

nenny forms of peritonitis has:

\* A. Combined antibiotic therapy in combination with pre-  
paratha metronidazole

B. Long-term use of one strong antibiotic wide range

C. Topical use of semi-synthetic antibiotics penicillin series

D. Topical use of cephalosporins

E. Topical use of sulfa drugs

101. For decompression of the gastrointestinal tract during peritonite has the greatest efficiency:

A. Introduction of 0.25% solution of novocaine into the root

jakes

B. Use of maximum permissible doses of anticholineste

different drugs

\* C. Nasointestinal bowel intubation

D. Jejunostomy



E. Enterosorption

102. With intestinal obstruction, a sign of the development of peritonitis is:

A. Edema of the parietal and visceral peritoneum

B. Appearance of effusion

\* C. Fibrin overlays on bowel loops and peritoneum

D. Swelling of intestinal loops

E. High aperture setting

103. Restoration of intestinal peristalsis in the early post-

the operating period does not include:

A. Intravenous administration of Laborin solution

B. External electrical stimulation of the gastrointestinal tract

C. Introduction of cerucal, proserin, uretid with repeated

hypertensive enemas

D. Prolonged epidural anesthesia for 2-3 days

\* E. Gastric decompression

104. Indications for carrying out a programmed relaparotomies are as follows:

A. Progressive clinical and paraclinical manifestations of endogenous intoxication

B. Eventration, evisceration or phlegmon

of the anterior abdominal

walls

C. Incompletely formed intestinal fistula, open

eventual wound

D. Anaerobic peritonitis

\* E. all answers are correct

105. Methods of prolonged sanitation of the abdominal cavity in

patients with diffuse peritonitis does not include

A. Peritoneal fractional lavage

B. Peritoneal flow lavage

C. Programmed relaparotomies

D. Laparostomy

\* E. Laparotomy, plugging the source of peritonitis

106. In the pathogenesis of general visceral disorders with purulent

peritonitis, enteral insufficiency does not appear:

A. Intestinal paresis

B. Impaired resorptive and barrier function of fine

intestines

C. Disorder of cavity and parietal digestion

D. Translocation of intestinal infection

\* E. Nephropathy

107. The transition of peritonitis to the second stage (phase) is accompanied by

is given:

A. Increasing tachycardia

B. Reduction of pain intensity

C. Decreased tension in the muscles of the anterior abdominal wall

D. Oliguria

\* E. All answers are correct

108. Signs of the terminal stage (phase) of peritonitis after

blowing:

A. Adinamia

B. Pointed facial features

C. Lowering blood pressure

D. Tachycardia

\* E. All answers are correct

109. Normo- and bradycardia is possible with peritonitis as follows

origin:

\* A. Peritonitis with a perforated gastric ulcer in the shock stage

B. Peritonitis in the terminal phase of intestinal obstruction

bridges

C. With pelvioperitonitis

D. With tuberculous peritonitis

E. There is no right answer

110. In patients with peritonitis, among the listed complications

which most often occurs:

A. Event

B. Formation of intestinal fistulas

C. Pulmonary embolism

\* D. Formation of abdominal abscesses

E. Pneumonia

111. Convulsions in patients with peritonitis are recognized

com:

A. Hypertonicity of the sympathetic division of the central nervous system

B. Toxic brain damage

C. Toxic damage to the spinal cord

\* D. Dehydration and electrolyte imbalance

E. Capillary toxicosis

112. Leading in the treatment of peritonitis is:

\* A. Surgical intervention

B. Detoxification therapy

C. Rational antibiotic therapy

- D. Fight against intestinal paresis
- E. Novocaine blockade of the mesentery of the small intestine
- 113. The advantages of an open method of treatment (laparostomy) peritonitis:
  - A. The ability to objectively and comprehensively assess the pathological process at any time
  - B. Early detection of complications
  - C. Adequate monitoring of the effectiveness of treatment
  - D. Overcoming the psychological barrier
  - \* E. All of the above is true
- 114. Methods for assessing the severity of the condition and predicting the outcome Treatment of patients with acute peritonitis is as follows:
  - A. SAPS
  - B. Monheim
  - C. Apache III
  - D. Ranson
  - \* E. A B C D
- 115. Atypical forms of the course of acute diffuse peritonitis are as follows:
  - A. Acute, fulminant or septic peritonitis Mikulich
  - B. Asthenic Broca's form - sluggishly flowing peritonitis with an erased clinical picture
  - C. Tuberculous peritonitis
  - D. Fibroplastic peritonitis
  - \* E. A B

#### Topic: Intestinal Fistula

- 1. For intestinal fistulas it is not typical:
  - A. Presence of a defect in the intestinal wall
  - B. The presence of an opening on the anterior abdominal wall with intestinal nym detachable
  - C. The presence of pathological communication between intestinal loops
  - \* D. Diffuse peritonitis is always characteristic
  - E. This is a purulent-inflammatory process
- 2. For the formed intestinal fistulas it is not typical:
  - A. Isolated communication of the intestine with the external environment
  - B. Isolated communication between different intestinal loops
  - Nika

- C. Communication of the intestine with a purulent cavity, which, in its turn, red, communicates with the external environment
- D. Isolated communication with purulent flow
- \* E. Free abdominal communication
- 3. With an unformed intestinal fistula, it is not typical:
  - A. Isolated communication of the intestine with the external environment a thin canal lined with epithelium
  - B. Communication of the intestine with the external environment through the purulent cavity
  - C. Communication between the intestine and other cavity organ-nom through a thin channel
  - D. Communication between the intestine and other cavity organ-nom through the purulent cavity
  - \* E. A and C
- 4. High intestinal fistulas are usually characterized by the following statements:
  - A. Intestinal losses are significant and quickly lead to decompression pensions
  - B. Homeostatic disturbances are not characteristic (water-salt-th, acid-base and protein metabolism)
  - C. The volume of losses is significant
  - D. The skin around the fistula is significantly irritated.
  - \* E. A D
- 5. Low intestinal fistulas are not characterized by:
  - A. Severe disorders of water-electrolyte metabolism
  - B. Severe hypoproteinemia is characteristic
  - C. Generally, intestinal loss is negligible.
  - D. The skin around the fistula, as a rule, is slightly changed
  - \* E. A B
- 6. Morphologically distinguish the following fistulas:
  - A. Tubular
  - B. Cylindrical
  - C. Lipoid
  - D. Mixed
  - \* E. A C D
- 7. The most unfavorable prognosis is typical for fistula, located at the level:
  - \* A. Jejunum

B. ileum  
 C. Cecum  
 D. Transverse colon  
 E. Rectum  
 8. In the distal part of the intestine (below the fistula) the following next changes:  
 A. Hypertrophy of the epithelium  
 B. Mucosal atrophy  
 C. Atrophy of the muscular layer of the intestine  
 D. Compensatory hypertrophy of the muscle layer  
 \* E. B C  
 9. The causes of unformed fistulas can be:  
 A. Surgical interventions with the imposition of intestinal anastomoses are not used  
 B. Crohn's disease  
 C. Trauma  
 \* D. Chronic calculous cholecystitis  
 E. Diverticulitis  
 10. Unformed intestinal fistulas can be complicated:  
 A. Diffuse peritonitis  
 B. Pylephlebitis  
 C. Septicemia  
 D. Phlegmon of the anterior abdominal wall  
 \* E. A B C D  
 11. The prognosis of intestinal fistula does not depend on:  
 A. Duration of presence of the latter  
 B. Location level  
 C. Amount of losses  
 D. Presence of concomitant diseases  
 \* E. Does not depend on the above factors  
 12. It can spontaneously close:  
 A. Lipoid fistula  
 B. Lipoid fistula with minor loss  
 C. Unformed fistula with large losses  
 \* D. Low loss tubular fistula  
 E. All fistulas spontaneously close over time.  
 13. Indications for stoma placement can be:  
 A. Catarrhal appendicitis  
 B. Tumor of the large intestine, complicated by obstruction  
 C. Ulcerative colitis  
 D. Adnexitis  
 \* E. B C  
 14. In operated patients, intestinal fistula cannot occur.

whip as a consequence:  
 A. Leakage of anastomotic sutures  
 B. Intraoperative bowel injury  
 C. As a consequence of the fixed event  
 D. As a consequence of excessive bowel devascularization  
 \* E. Prolonged postoperative bed rest  
 15. Indications for stoma placement can be:  
 A. Colon cancer  
 B. Acute intestinal obstruction on the background of intestinal volvulus  
 Nika  
 C. Penetrating injury with bowel injury  
 D. Acute cholecystitis  
 \* E. A B C  
 16. For which disease, of the following, is typical fistula formation?  
 A. Peptic ulcer  
 B. Duodenostasis  
 \* C. Crohn's disease  
 D. Irritable bowel syndrome  
 E. Familial polyposis  
 17. Specific signs for the external intestinal fistulas are:  
 A. Fecal discharge  
 B. Gassing  
 C. Bile discharge  
 D. Temperature  
 \* E. A B C  
 18. For internal fistulas, specific features are  
 naki:  
 A. Diarrhea  
 B. Vomiting  
 C. Fecal discharge from the vagina  
 D. Intestinal discharge during urination  
 \* E. C D  
 19. Cachexia is typical in patients:  
 A. With a fistula of the jejunum  
 B. With ileal fistula  
 C. With low tubular fistulas  
 D. With pararectal fistulas  
 \* E. A B  
 20. To determine the level of the fistula (localization) it is necessary:  
 A. ultrasound  
 B. Fistulography  
 C. Using a dye sample (brilliant green)  
 D. BaSCX Passage  
 \* E. B C D  
 21. One of the main conditions for conservative closure intestinal tubular fistula is:

A. Diet  
 B. Antibiotic therapy  
 C. Permanent debridement of the fistula  
 \* D. Maximum reduction in the volume of discharge  
 E. Glucocorticoids

22. A decrease in the volume of secreted fluid through the fistula can but achieve:  
 A. Prescribing octreotide  
 B. Digestible food  
 C. Antispasmodics  
 D. Using rubber obturators  
 \* E. A B D

23. In the preoperative period, patients are shown:  
 A. Correction of water-electrolyte disturbances  
 B. Correction of hypoproteinemia  
 C. Treatment of comorbidities  
 D. Bed rest  
 \* E. A B C

24. Fistulas of the descending part of the large intestine are called:  
 A. Severe water-electrolyte disturbances  
 B. Cachexia is usually uncommon  
 C. Disorders of acid-base balance are uncommon  
 D. General condition, as a rule, satisfactory  
 \* E. B C D

25. Prevention of dermatitis (around the fistula) is achieved:  
 A. Hormones  
 B. Using zinc ointment  
 C. Ultraviolet radiation of the fistula area  
 D. Decrease in production  
 \* E. B D

26. To determine the surgical tactics of eliminating the cervical fistula requires the following research methods:  
 A. Fistulography  
 B. Irrigoscopy  
 C. Sigmoidoscopy  
 D. Nuclear magnetic resonance  
 \* E. A B C

27. The greatest spread of surgical rehabilitation The number of patients treated is characterized by the following method:  
 A. Extraperitoneal method  
 \* B. Intraperitoneal method  
 C. Mixed method

D. Extra - and intraperitoneal methods are used one  
 nakovo  
 E. None of the above methods are used

28. Postoperative mortality is higher with use the following technique:  
 \* A. Intraoperative technique  
 B. Extraperitoneal technique  
 C. Odinakova  
 D. Not registered  
 E. Statistics not known

29. Extraperitoneal method of elimination of intestinal shcha consists in:  
 A. Suturing the external opening of the fistula  
 B. Resection of the section of the intestine bearing the fistula with anastomosis  
 C. Replacing the outer hole using the nearest skin  
 D. Bypass anastomosis  
 \* E. A C

30. The intraperitoneal method is characterized by:  
 A. Resection of the section of the bowel carrying the fistula with anastomosis  
 B. Imposition of anastomosis 3A  
 Melnikov  
 C. Suturing the fistula  
 D. Bypass anastomosis  
 \* E. A B D

31. For patients with an unformed fistula, with a pronounced purulent intoxication is advisable:  
 A. Resection of the intestine, laying fistula with anastomosis  
 B. Anastomosis% Melnikov  
 C. Exclusion of fistula and purulent cavity with the imposition of ileo-stoma  
 D. Sanitation of a purulent focus  
 \* E. C D

32. The main negative phenomenon of the extra-abdominal method elimination of intestinal fistula is:  
 A. Technically difficult to implement  
 \* B. High relapse rate  
 C. Long duration of intervention  
 D. Very often associated with severe complications  
 E. No negative aspects

33. Intra-abdominal fistula elimination method is shown:

A. For all patients with formed fistulas  
 B. For elderly patients  
 C. For patients with serious cardiovascular disease  
 D. With an unformed fistula  
 \* E. D C

34. CS. Which of the complications most often occurs when using the use of an extra-abdominal fistula elimination method?  
 A. Hemoperitoneum  
 B. Postoperative peritonitis  
 \* C. Fistula recurrence  
 D. Thromboembolism  
 E. Acute hepato-renal insufficiency

35. CS. The optimal time to close a colostomy is:  
 A. 2-8 weeks from imposition  
 \* B. 2-8 months from imposition  
 C. 9-15 months from imposition  
 D. 16-24 months from imposition  
 E. Timing doesn't matter

36. Intra-abdominal treatment of intestinal fistulas showed  
 zan:  
 A. Patients undergoing Hartmann's operation  
 B. For patients with double-barreled colostomy only  
 C. Patients with internal colic-vesicular pigs  
 cabbage soup  
 D. Patients with internal ilio-vaginal cabbage soup  
 \* E. A C D

37. Technique of lateral enterorrhaphy by the type of anastomosis% Melnikov is feasible:  
 A. With tubular fistula  
 B. With a double-barreled colostomy  
 C. With terminal ileo- or colostomy  
 D. In case of an unformed fistula  
 \* E. A B

38. Resection of the bowel carrying the fistula with anastomosis can be applied:  
 A. Patients undergoing Hartmann's operation  
 B. After the Quenu-Miiller operation  
 C. For hemicolectomy with colostomy  
 D. With Crohn's disease  
 \* E. A C D

39. The most common complication of the intra-abdominal method elimination of the fistula is:

A. Anastomotic leak  
 B. Recurrent fistula  
 \* C. Suppuration of the wound  
 D. Pulmonary embolism  
 E. Intestinal obstruction

40. The cause of fistula formation after bowel resection is not:  
 A. Excessive immobilization of the intestine  
 B. Deserosis and bowel injury  
 C. Defects in technology  
 D. Infection and inadequate antibiotic therapy  
 \* E. Prolonged postoperative bed rest

41. In patients with an unformed fistula, if purulent cavity, can occur:  
 A. Breakthrough of the abscess into the abdominal cavity  
 B. The onset of pyelophlebitis  
 C. Septicemia  
 D. Formation of tubular fistula  
 \* E. all answers are correct

42. Surgical rehabilitation of a patient with a colostomy and a short distal loop (5-6 cm) can be achieved:  
 A. End-to-end anastomosis  
 B. Anastomosis end to side  
 C. Mechanical anastomosis  
 D. Duhamel-type anastomosis  
 \* E. all answers are correct

43. In the surgical rehabilitation of a patient who underwent extirpation of the rectum, preference is given to the following the following method:  
 A. Transperineal descent of the colon  
 B. Transperineal descent of the colon with formiro-  
 the creation of an artificial reservoir of the "G-reservoir" type  
 \* C. Transperineal descent of the colon with the sphincte  
 roplasty from m.grafilis  
 D. Transperineal descent of the colon with the sphincte  
 roplasty from m.gluteus  
 E. Rehabilitation is not possible

44. To perform an irrigoscopy in case of a fistula colon use:  
 A. Verografin  
 B. Iodlipol  
 C. Cardiotrust  
 \* D. BaSO4 solution

E. Thrombovar

45. Local treatment of fistula provides for:

- A. Treatment of a purulent wound
- B. Protection of surrounding tissue from its detachable
- C. Decreased amount of discharge
- D. Ultraviolet rays
- \* E. A B C

46. The most common cause of internal fistulas can be:

- A. Crohn's disease
- B. Acute appendicitis
- C. Chronic cholecystitis
- \* D. Peptic ulcer complicated by penetration into the thick cheek
- E. Ulcerative colitis

47. In the case of a gastrointestinal fistula, it is not typical:

- A. Diarrhea
- B. Cachexia
- C. Edema
- \* D. Pneumonia
- E. Fetid belching

48. As a consequence of significant losses through the fistula,

the following changes occur:

- A. Decreased BCC
- B. Hypotension
- C. Decreased urine output
- D. Catabolic changes
- \* E. all answers are correct

49. Colon fistula is most often characterized by:

- A. Changes in water-electrolyte metabolism
- B. Changes in acid-base metabolism
- C. Cachexia
- \* D. Purulent-inflammatory changes
- E. Cardiovascular changes

50. The optimal method of rehabilitation of the patient, coloproctomy for nonspecific ulcers colitis is:

- A. Transperineal ileostomy
- B. Transanal ileostomy
- \* C. Transanal ileostomy with the formation of an artificial tank type "G"
- D. Operation Swenson
- E. Impossible

# **General control questions on Faculty surgery**

1. Anatomical and topographic data of the groin area.
2. Clinic, recognition, treatment of inguinal hernias.
3. Anatomical and topographic data of the femoral triangle.
4. Clinic, recognition, treatment of femoral hernias.
5. Anatomical and topographic data of the umbilical ring.
6. Clinic, recognition, treatment of umbilical hernias.
7. Anatomical and topographic data of the white line of the abdomen.
8. Clinic, recognition, treatment of hernias of the white line of the abdomen.
9. Diastases of the rectus abdominis muscles.
10. Types of complications of hernias and .
11. Infringement of hernias.
12. Changes in the body with strangulated hernias
13. Coprostasis
14. Hernia irreversibility
15. Hernia inflammation
16. Definition of acute appendicitis, the frequency etiopatogenez, clinical features, diagnosis, and le chenie.
17. Principles of diagnosis of acute appendicitis.
18. Teach diff. the diagnosis of acute appendicitis, preoperative Getting on Preparations
19. The indications for surgical treatment of pancreatic diseases des e PS.
20. Types of complications of acute appendicitis
21. Appendicular infiltration
22. Appendicular infiltrate, treatment
23. Appendicular abscess
24. Pylephlebitis
25. **Peritonitis, retroperitoneal phlegmon**
26. What percentage does the incidence of complications of gastric ulcer and duodenal ulcer reach ?
27. The reasons for the development of gastric ulcer and duodenal ulcer.
28. The most common localization of chronic duodenal ulcers.
29. The main disorders arising from gastric ulcer and dvenadtsatipers so Noah intestine.
30. Indications for urgent surgical treatment for stomach ulcers and dven and dtsatiperstnoy intestine.
31. The purpose of the surgical treatment of patients with duodenal ulcer.
32. Recovery Methods continuity of the gastrointestinal tract after resection w e ludka, their advantages and disadvantages.
33. What percentage reaches the frequency of acute complications of peptic ulcer disease of the blood flow f cheniem?
34. The reasons for the development of bleeding.
35. Major bleeding disorders.



36. The main objective of assisting in severe hypotension, vsle etc. Corollary bleeding from the gastrointestinal tract.
37. Indications for urgent surgical treatment for bleeding ulcers.
38. Causes of pyloroduodenal stenosis.
39. Clinical stages of the course of stenosis.
40. How many percent does the frequency of complications of peptic ulcer disease and her reach ?
41. How many percent does the frequency of complications of peptic ulcer disease by penetration reach?
42. What percentage reaches the frequency of complications of peptic ulcer disease maligniz a tion?
43. The reasons for the development of perforation, malignancy.
44. The main disorders arising from perforations.
45. Types of urgent surgical treatment for ulcer perforation.
46. Stages of ulcer penetration.
47. Determination of the crop, frequency, etiopatoganez, clinical features, diagnosis, and l e chenie.
48. Principles of conservative therapy
49. Teach the diagnosis of goiter, preoperative preparation
50. Indications for surgical treatment of thyroid diseases.
51. Determination cholelithiasis, frequency, etiopathogenesis, clinical, diagnosis and L e cheniya.
52. The principles of conservative therapy for cholelithiasis.
53. To teach the diagnosis of gallstone disease, preoperative preparation.
54. Indications for surgical treatment for diseases of the gallbladder and biliary tract .
55. give a definition of cholecystitis
56. The main reason for the development of acute cholecystitis.
57. Basic diagnostic methods of OX.
58. Classification of AC and chronic cholecystitis.
59. Indications for conservative treatment of OX.
60. Indications for surgical treatment of OH.
61. General principle of surgical treatment for OX.
62. The reasons for the development of bleeding and veins of the esophagus.
63. The main disorders arising from cirrhosis of the liver.
64. The main task of providing assistance with severe arterial hypotension due to bleeding
65. Indications for urgent surgical treatment for bleeding from varicose veins of the esophagus.
66. Determination of acute pancreatitis, frequency, etiopathogenesis, clinical, diagnosis and leche e set.
67. Principles of conservative therapy for acute pancreatitis
68. Teach the diagnosis of acute pancreatitis, preoperative Getting on Preparations
69. Indications for surgical treatment of pancreatic disease.

70. Diseases of the colon, incidence, etiology and pathogenesis, clinical manifestations, diagnosis and lech e Nia.
71. Colon diseases, principles of conservative therapy.
72. To teach the diagnosis of colon disease, preoperative preparation.
73. Indications for surgical treatment of at abolevaniyah thick ki w ki.
74. Diseases of the colon, incidence, etiology and pathogenesis, clinical manifestations, diagnosis and lech e Nia.
75. Colon diseases, principles of conservative therapy.
76. To teach the diagnosis of colon disease, preoperative preparation.
77. Indications for surgical treatment of at abolevaniyah thick ki w ki.
78. Anatomical and functional features of the rectum.
79. Blood supply and lymph drainage from various parts of the rectum.
80. Methodology for preparing a patient for endoscopy of the rectum and colon.
81. Classification of the most common diseases of the rectum.
82. Methods of examination of proctological patients.
83. Etiology, pathogenesis, clinical picture and complications of various diseases of the rectum.
84. Classification of pararectal fistulas.
85. Methods of conservative and surgical treatment of proctological patients.
86. Features of preoperative preparation and management of the postoperative period during surgical intervention on the rectum.
87. The reasons for the development of AIO.
88. OKN classification
89. The main complications of AIO.
90. Indications for urgent surgical treatment in AIO
91. The goal of surgical treatment of patients with AIO.
- 92. *The concept of peritonitis, etiopathogenesis, classification, clinical picture, diagnosis, diff. diagnostics, treatment. The causes of death.***
93. Preoperative preparation.
94. Symptoms of peritonitis.
95. The specific course of peritonitis in the elderly and pregnant women.
96. Principles of postoperative management of patients with peritonitis.
97. Reasons for the development of intestinal fistulas
98. The main disorders arising from intestinal fistulas.
99. Indications for surgical treatment of intestinal fistulas.
100. The goal of surgical treatment of patients with intestinal fistulas
101. Methods of restoring the continuity of the gastrointestinal tract in Kish h GOVERNMENTAL fistula.

# **GLOSSARY**

Symptom Bondarenko.

Bondarenko s. - a sign of adhesions: with sliding palpation, the displacement of the palpable organ perpendicular to its axis causes pain in the presence of adhesions.

**Vasilenko's symptom.**

Vasilenkos. - an early sign of gastric expansion: with percussion palpation according to Obraztsov, a splash noise occurs to the right of the midline of the abdomen.

**Dumbadze's symptom, peritoneal-umbilical.**

Dumbadze s. - a sign of irritation of the peritoneum: the appearance of pain when examining the peritoneum with a fingertip through the navel.

**Krestovsky symptom.**

Krestovsky s. - indicates the need to revise the wound and suture the development of subcutaneous emphysema in the circumference of the sutured postoperative wound of the anterior abdominal wall as a result of suture divergence and subcutaneous eventration.

**Krymov's symptom, groin-scrotal.**

Krymova s. - a sign of irritation of the peritoneum: the appearance of pain after the introduction of the fingertip and palpation of the peritoneum through the external opening of the inguinal canal.

**Symptom Blumberg, symptom-Blumberg Shchetkina.**

Blumberg S. - a sign of inflammation or irritation of the peritoneum: with slow hand pressure on the abdomen, the patient experiences almost no pain; sharp pain appears when the hand is quickly removed.

**Symptom of Moscow.**

Moskovsky s. - a possible sign of an acute abdomen: unilateral dilation of the pupil.

**Carnot symptom .**

Carnot S. - a sign of adhesive disease: pain in the epigastric region, which occurs with a sharp extension of the trunk.

**Brando's symptom.**

Brendo S. - Observed for appendicitis during pregnancy: pain on the right when pressing on the left edge of the pregnant uterus.

**Bulynin's symptom.**

Bulynina S. - determine in acute appendicitis: pain arising from pressure at points located 3-4 cm to the right of the spinous processes of the I and II lumbar vertebrae.

**Volkovich's symptom (I).**

Volkovich S. - a possible sign of chronic appendicitis: hypotrophy or atrophy of the muscles of the anterior abdominal wall in the ileocecal region.

**Volkovich's symptom (II).**

Volkovich S. - a sign of chronic appendicitis: increased pain when the cecum is abducted outward.

**Volkovich's symptom (III).**

Volkovich S. - Observed in chronic appendicitis: increased pain when the trunk is tilted to the left.

**Volkovich's symptom - Kocher.**

Volkovich - Kochera s. - a sign of acute appendicitis: pain that initially occurs in the epigastric region (sometimes directly under the xiphoid process), after a few hours is localized in the right iliac region.

**Voskresensky's symptom (shirt symptom).**

Voskresensky s. - a sign of acute appendicitis: when the palm is quickly held along the anterior abdominal wall (over the shirt) from the right costal edge down, the patient experiences pain.

**Gabay's symptom.**

Gabaya s. - a sign of retrocecal appendicitis: in the area of the petiotov triangle, a finger is pressed on the right, then it is quickly taken away - at the moment of taking the finger away, pain appears as with the Blumberg-Shchetkin symptom.

**Symptom Gubergritsa.**

Gubergritsa s. - with the pelvic location of the inflamed vermiform appendix: pain arising from pressure under the inguinal ligament in the Scarp triangle.

**Gusev's symptom (trunk deviation symptom).**

Guseva s. - indicates chronic appendicitis: when you try to raise your arms up and tilt the trunk back and to the left in a standing position, pain occurs.

**Dolinov's symptom.**

Dolinova s. - occurs with chronic appendicitis: pain in the right lateral region during straining and retraction of the abdomen.

**Zhendrinsky's symptom.**

Zhendrinsky s. - differential diagnosis between acute appendicitis and acute salpingo-oovoritis: in the supine position, press on the abdominal wall at the Kummel point (2 cm to the right and below the navel), with a finger and, without taking it away, offer the patient to stand up. An increase in pain indicates appendicitis, a decrease in acute salpingo-talk.

**Zakharzhevsky's symptom.**

Zakharzhevsky s. - is determined in chronic appendicitis: pain arising from grasping a fold of skin over the ridge of the right iliac bone and massaging this fold towards the right hypochondrium.

**Zakharovich's symptom.**

Zakharovich s. - determine in chronic appendicitis: pain that occurs in the right lateral region in the patient's prone position, - the examiner raises the patient's hips with his right hand (for the lower third), and presses on the thoracic spine with his left hand.

**Ikramov's symptom.**

Ikramova s. - a sign of acute appendicitis: increased pain in the right iliac region when pressing the right femoral artery.

**Michelson's symptom.**

Mikhelson S. - a sign of acute appendicitis in pregnant women: increased pain in the right half of the abdomen in the position of the patient on the right side (due to the pressure of the uterus on the inflamed focus).

**Obraztsov's symptom.**

Obraztsova S. - a sign of chronic appendicitis: increased pain during palpation in the ileocecal region, while the right leg is raised.

**Olshanetsky's symptom.**

Olshanetsky s. - used for the differential diagnosis of acute appendicitis and renal colic: on palpation of the anterior abdominal wall, in the patient's standing position, with the body bent at an angle of 90 ° in relation to the lower extremities, the anterior abdominal wall relaxes and the organs located in the abdominal cavity are easily palpated ... At the same time, the organs located retroperitoneally (ureter, kidney) do not experience pressure. In cases where the appendix is inflamed, pain occurs on palpation - the symptom is positive. If the organs located retroperitoneally are interested, palpation is painless - the symptom is negative.

**Ostrovsky's symptom.**

Ostrovsky s. - observed in acute appendicitis: the patient is offered to lift up (up to an angle of 130-140 °) the right leg straightened in the knee joint and keep it in this position. The doctor quickly unbends it, laying it horizontally.

**Pevsner's symptom.**

Pevzner S. - observed in chronic appendicitis: increased pain when the cecum is removed upward.

**Petrov's symptom.**

Petrova S. - determined with appendicitis: a sharp pain that occurs in the right lateral region at the time of pressing on the abdominal wall while transferring the patient from a lying position to a sitting position.

**Podonenko's symptom - Bogdanova.**

Podonenko - Bogdanova s. - indicates acute appendicitis of pelvic localization: with pressure on the area of the ascending colon and cecum, the patient experiences pain in the depth of the pelvis, more intense than when the cervix is lifted upward or displaced to the sides during the previous vaginal examination.

**Przewalski's symptom.**

Przhevalsky s. - determine in chronic appendicitis: palpation of the right lateral region determines the flattening of the muscles (compared to the left). The patient is not able to hold the right limb for a long time, straightened at the knee joint and raised in weight. Determined in chronic appendicitis.

**Punin's symptom.**

Punina S. - Observe for appendicitis: pain arising from pressure at the end of the transverse process of the II lumbar vertebra on the right.

**Razdolsky's symptom.**

Razdolsky s. - a possible sign of acute appendicitis: with percussion of the abdominal wall with a hammer or a finger, pain in the right iliac region is revealed.

**Rutkevich's symptom.**

Rutkevich s. - observed with appendicitis: increased pain when the cecum is withdrawn inside.

**Symptom Sitkovsky - Ortner.**

Sitkovsky - Ortner s. - a sign of acute appendicitis: when the patient is positioned on the left side, pain appears in the ileocecal region.

**Filatov's symptom.**

Filatova s. - indicates acute appendicitis (a symptom of local pain): increased pain in a certain area in the right lateral region on palpation of the abdomen in children.

**Fomin's symptom.**

Fomina S. - a sign of acute appendicitis: a decrease or absence of abdominal reflexes.

**Cheremsky's symptom - Kushnirenko, "cough symptom".**

Cheremsky - Kushnirenko s. - a sign of acute appendicitis: deep forced breathing and coughing cause increased pain in the right iliac region.

**Chugaev's symptom, "appendicitis strings".**

Chugaeva s. - a sign of acute appendicitis: on palpation, it is possible to palpate the contracted bundles of the external oblique abdominal muscle, resembling stretched strings.

**Shilovtsev's symptom.**

Shilovtseva S. - differential diagnosis of adhesive disease and acute appendicitis: in the supine position, a painful point in the right lateral region is detected and, without taking away the hand, the patient is offered to turn on his left side. If there is no adhesion process and the cecum is displaced, then at the found point the pain decreases and moves lower and to the left. In this case, the symptom is assessed as positive for acute appendicitis.

**Yaure's symptom - Rozanov.**

Yaure S. - a sign of retrocecal appendicitis: soreness in the right lumbar region, in the area of the Petit triangle.

**Yaure's symptom (II).**

Yaure S. - a sign of chronic appendicitis: pain when pressing over the iliac crest.

**Aagop symptom.**

Aaron s. - a sign of appendicitis: pain or a feeling of stretching in the epigastric or pericardial region when pressing at the McBurney point (S. McBurney).

**Baron symptom .**

Barona s. - a sign of chronic appendicitis: hypersensitivity to the pressure of the right psoas muscle (m. psoas).

**Symptom Bartomier - Michelson.**

Bartomier - Michelson s. - a sign of acute appendicitis: pain on palpation of the cecum, aggravated in the position of the patient on the left side.

**Bassler symptom .**

Bassler S. - a sign of appendicitis: when pressing on the abdominal wall at a point located in the middle between the navel and the anterior superior iliac spine, and when the pressure is directed more to the right, the patient experiences sharp pain.

**Bastedo symptom .**

Bastedo S. - a sign of appendicitis: when air is introduced through the rectum, pain and a feeling of tension appear in the ileocecal region due to the stretching of the colon.

**Ben-Asher symptom .**

Ben-Ashera S. - a sign of acute appendicitis: during deep breathing or coughing of the patient, the doctor presses with the tips of two fingers on the left hypochondrium; in the case of appendicitis, pain appears in the ileocecal region.

**Brittain symptom .**

Britten S. - a sign of acute appendicitis: palpation of the lower part of the right half of the abdomen causes retraction of the right testicle.

**Symptom Brown.**

Brown s. - a sign of acute appendicitis: an area of soreness is marked on the skin of the abdomen, after which the patient is placed on a healthy side; within 15-30 minutes, the site of pain moves by 2.5-5 cm, or the pain and muscle rigidity increase significantly.

**Chase symptom .**

Chase s. - a sign of appendicitis, typhlitis and perityphlitis: pain in the caecum with fast and deep palpation along the transverse colon from left to right (when clamping the descending part of the colon with the other hand).

**Soret's symptom (I).**

Cope S. - a sign of appendicitis: pain in the ileocecal region during rotational movements in the hip joint.

**Soret's symptom (II).**

Cope S. - a sign of appendicitis: pain when squeezing the femoral artery in the femoral (scarp) triangle.

**Dieulafoy symptom , triad.**

Dieulafoy triad is characteristic of acute appendicitis: pain, muscle tension and hyperesthesia of the skin in the right lateral region.

**Donnelly symptom .**

Psoas symptom.

Donnelly S. - a sign of retrocecal appendicitis: if the patient in the supine position unbends the right leg and the doctor palpates the abdomen simultaneously above and below the McBurney point, then the patient feels pain.

**Dubard symptom .**

Dubart s. - Observed for appendicitis: pain when pressing on the occipital points of the vagus nerve.

**Symptom Gray (I).**

Gray s. - a sign of appendicitis: hypersensitivity 2.5 cm down and to the right of the navel.

**Symptom Gray (II).**

Gray s. - A possible sign of appendicitis: pain in the right shoulder.

**Horn symptom .**

Horn s. - a sign of acute appendicitis: when stretching the elements of the right seminal

**Babuk symptom.**

Babuka S. - a possible sign of intestinal intussusception: if after the enema there is no blood in the washings, the abdomen is palpated for 5 minutes. In case of intussusception, often after a repeated siphon enema, the water looks like meat slops.

**Karevsky's syndrome.**

Karevsky s. - observed with gallstone intestinal obstruction: sluggish current alternation of partial and complete obstructive intestinal obstruction.

**Obukhov hospital, symptom of Hochenegg.**

Obukhov hospital with. - sign of volvulus of the sigmoid colon: dilated and empty ampulla of the rectum during rectal examination.

**Rush symptom.**

Rusha s. - observed in case of intussusception of the large intestine: the occurrence of pain and tenesmus on palpation of a sausage tumor on the abdomen ..

**Spasokukotsky's symptom.**

Spasokukotsky s. - a possible sign of intestinal obstruction: the sound of a falling drop is determined by auscultation.

**Sklyarov's symptom**

Sklyarova S. - a sign of obstruction of the large intestine: a splash noise is determined in the stretched and swollen sigmoid colon.

**Titov's symptom.**

Titova S. - a sign of adhesive obstruction: the skin-subcutaneous fold along the line of the laparotomic postoperative scar is grasped with fingers, sharply raised up and then gently lowered. Localization of pain indicates the place of adhesive intestinal obstruction. With a mild reaction, several sharp folds are produced.

**Alapy symptom .**

Alapi s. - Absence or slight tension of the abdominal wall with intussusception.

**Anschotz symptom .**

Anshuttsa s. - Bloating of the cecum with obstruction of the lower parts of the colon.

**Symptom Vayuep**

Bayer S. - asymmetry of bloating. Observed during volvulus of the sigmoid colon.

**Bailey symptom .**

Bailey S. - a sign of intestinal obstruction: the transmission of heart sounds to the abdominal wall. The value of the symptom increases when listening to heart sounds in the lower abdomen.

**Bouveret symptom .**

Bouvere S. - a possible sign of obstruction of the large intestine: protrusion in the ileocecal region (if the cecum is swollen, obstruction has arisen in the transverse colon, if the cecum is in a collapsed state, then the obstacle is in good shape).

**Cruveillhier symptom .**

Cruvelier with. - characteristic of intestinal intussusception: blood in the stool or blood-stained mucus in combination with cramping abdominal pain and tenesmus.

**Dance symptom .**

Dansa s. - a sign of ileocecal intussusception: due to the movement of the invaginated segment of the intestine, the right iliac fossa is empty on palpation.

**Delbet symptom .**

Delbet triad.

Delbe s. - observed during volvulus of the small intestine: rapidly growing effusion in the abdominal cavity, abdominal distention and non-tecaloid vomiting.

**Durant symptom .**

Duran S. - observe at the beginning of intussusception: a sharp tension of the abdominal wall according to the site of introduction.

**Frimann symptom - Dahl.**

Freeman - Dahl s. - with intestinal obstruction: in the loops of the small intestine stretched with gas, the transverse striation is radiologically determined (corresponds to kerkring folds).

**Gangolphe symptom .**

Gangolf s. - observed with intestinal obstruction: dullness of sound in the sloping places of the abdomen, indicating the accumulation of free fluid.

**Hintze symptom .**

Gintze S. - X-ray sign indicates acute intestinal obstruction: the accumulation of gas in the large intestine is determined corresponds to Valya's symptom.

**Hirschsprung symptom .**

Girshsprunga s. - Observe with intussusception of the intestine: relaxation of the sphincters of the anus.

**Hofer symptom .**

Gefer s. - with intestinal obstruction, the pulsation of the aorta is best heard above the level of narrowing.

**Kiwull symptom .**

Kivulya s. - a sign of obstruction of the large intestine (with volvulus of the sigmoid and cecum): a metallic sonority is determined in the stretched and swollen sigmoid colon.

**Kocher symptom .**



Kochera S. - Observe with intestinal obstruction: pressure on the anterior abdominal wall and its rapid termination does not cause pain.

**Kloiber symptom .**

Kloyber S. - X-ray sign of intestinal obstruction: with an overview fluoroscopy of the abdominal cavity, horizontal fluid levels and gas bubbles above them are found.

**Lehmann symptom .**

Lehmann s. - X-ray sign of intestinal intussusception: a filling defect flowing around the invaginate head has a characteristic appearance: two lateral stripes of contrast agent between the receptive and invaginated intestinal casts.

**Mathieu symptom .**

Mathieu S. - a sign of complete intestinal obstruction: with rapid percussion of the supra-umbilical region, a splash noise is heard.

**Payr symptom .**

Payra S. - "double-barreled" caused by the bend of the mobile (due to excessive length) transverse colon at the place of transition to the descending colon with the formation of an acute angle and spurs, inhibiting the passage of intestinal contents. Clinical signs; pain in the abdomen that radiates to the heart and the left lumbar region, burning and swelling in the left hypochondrium, shortness of breath, chest pain.

**Schiman symptom .**

Shimana S. - a sign of intestinal obstruction (volvulus of the caecum): on palpation, a sharp pain in the right ileum and a feeling of "emptiness" in the place of the cecum are determined

**Schlange's symptom (I).**

Hose with. - a sign of intestinal paralysis: when listening to the abdomen, complete silence is noted; usually seen with ileus.

**Schlange symptom (II).**

Hose with. - visible peristalsis of the intestine with intestinal obstruction.

**Stierlin symptom .**

Stirlina S. - X-ray sign of intestinal obstruction: a stretched and tense intestinal loop corresponds to a zone of gas accumulation in the form of an arch

**Taevaenar symptom .**

Tevenara s. - a sign of small bowel obstruction: the abdomen is soft, palpation reveals soreness around the navel and especially below it two fingers of the transverse fingers along the midline. The point of tenderness corresponds to the projection of the mesenteric root.

**Tilijaks symptom .**

Tiliaksa S. - Observe with nvagination of the intestine abdominal pain, vomiting, tenesmus and stool retention, non-discharge of gases.

**Symptom Treves.**

Trevesa S. - a sign of colonic obstruction: at the time of the introduction of fluid into the large intestine, rumbling at the site of obstruction is auscultated.

**Watil symptom .**

Valya S. - a sign of intestinal obstruction: local flatulence or protrusion of the intestine above the level of the obstacle (visible asymmetry of the abdomen, palpable intestinal bulge, visible peristalsis with the eye, tympanitis audible during percussion).

**Konig syndrome .**

Koeniga s. - observed with narrowing of the small intestine of various origins, including a tumor, as well as with incomplete obstructive intestinal obstruction: increased peristalsis during an attack of pain in the abdomen, "musical" noises (gurgling, rumbling), diarrhea or increased gas discharge.

**Koss Syndrome .**

Kussa s. - chronic recurrent partial intestinal obstruction, flatulence, constipation, tenesmus. The pericolic adhesive process is noted. Radiographically determine the normal relief of the mucous membrane, narrowing of the sigmoid or rectum without pronounced suprastenotic expansion.

**Ladd syndrome .**

Ledda s. - high intestinal obstruction, which develops as a result of volvulus of the small intestine in combination with clamping of the duodenum with strands extending from the parietal peritoneum on the right to the cecum and stretching during volvulus. The cause of this pathology is an incomplete twist of the midgut, as a result of which the small and cecum have a common mesentery, which attaches to the posterior abdominal wall at the exit site of the mesenteric vessels, which contributes to volvulus. Loops of the small intestine with incomplete rotation of the middle are in the abdominal cavity to the right of the midline, and the cecum to the left, under the stomach.

**Lane disease .**

Lane s. (Lane's bend) - intestinal obstruction caused by tight cords that fix the terminal jejunum to the posterior abdominal wall in the region of the unnamed pelvic line. The strands cause the bowel to bend (Lane's bend) and narrow. Cords are believed to be due to Crohn's disease.

**Ogilvie Syndrome .**

Pseudoobstructio coli.

Ogilvy S. - a picture of a false blockage of the large intestine as a result of disorders of sympathetic innervation: an enlarged abdomen, enlarged colon, emaciation, constipation. Pathological changes in the large intestine are not found; usually observed in malignant tumors of various other localization, giving metastases to the sympathetic ganglia.

**Payr Syndrome .**

Morbus Payr, syndromus flexurae lienalis.

Payra S. - paroxysmal abdominal symptom complex due to stagnation of gases or feces in the area of the splenic flexure; feeling of pressure or fullness in the left upper quadrant of the abdomen; pressure or burning pain in the region of the heart, palpitations, shortness of breath, sub-chest and precordial pain with a feeling of fear; unilateral or bilateral shoulder pain radiating to the arm; pain between the shoulder blades.

**Syndrome Hederich - Piulachs.**

Dilatatio coli acuta.

Piulaxa - Ederika s. - acute paralytic expansion of the large intestine without mechanical blockage of it: flatulence dominates, pain up to a picture of an acute abdomen. X-ray examination reveals dolicho and megacolon. It is possible that the direct cause of this condition is the accumulation of gas in the large intestine.

**Rapunzel syndrome .**

Rapunzel S. - a kind of intestinal obstruction: it is observed mainly in children (with psychopathy, oligophrenia, etc.) in connection with the systematic ingestion of hair, as a result of which a conglomerate consisting of hair (trichobezoar) is formed in the small intestine; if it reaches a certain value, then a picture of intestinal obstruction develops. Treatment is only operative.

**Eisenberg's symptom.**

Eisenberg S. - irradiation of pain to the gallbladder area when tapping at an angle of the right scapula. Observed for diseases of the gallbladder.

**Bereznegovsky's symptom - Ohlecker.**

Bereznegovsky - Eleker s. - a sign of acute cholecystitis: irradiation of pain in the right forearm.

**Botkin's symptom.**

Synonym: cholecystocoronary syndrome.

Botkin S. - cardialgia observed with cholecystitis. Manifested by stabbing, cramping pain in the region of the heart, left shoulder blade and left shoulder, radiating from the upper abdomen. It often precedes or accompanies biliary colic. There may be changes in the ECG.

**Volsky's symptom.**

Volsky s. - a sign of cholecystitis: pain with a slight blow with the edge of the palm in an oblique direction from bottom to top along the right hypochondrium.

**Zakharyin's symptom.**

Zakharyina S. - a sign of cholecystitis: pain with pressure or tapping in the gallbladder.

**Symptom Karavaev - Spector.**

Karavaeva - Spektor s. - a sign of cholecystitis: asymmetry of the navel - its displacement somewhat up and to the right due to the contracture of the muscles of the right half of the abdomen.

**Symptom Karavanov, synonym: symptom of a cough impulse.**

Karavanova s. - determine with acute cholecystitis with the fingers of the right hand, carefully and gradually press down the gallbladder area (outward from the outer edge of the right rectus abdominis muscle). The resulting pain gradually subsides (fingers are not taken away), after which the patient is asked to cough. At the time of coughing, a sharp pain occurs in the right hypochondrium, forcing the patient to reflexively pull the body away from the examiner's hand.

**Lidsky's symptom.**

Lidsky s. - a sign of chronic cholecystitis: with light palpation in the right hypochondrium, a reduced resistance of the abdominal wall is determined in comparison with the left hypochondrium.

**Lyakhovitsky's symptom.**

The phenomenon of the xiphoid process.

Lyakhovitsky s. - a possible sign of cholecystitis and gallstone disease: pain that occurs with slight pressure on the right half of the xiphoid process and when it is pulled up.

**Obraztsov's symptom.**

Obraztsova S. - a sign of cholecystitis: pain with deep palpation when inhaling.

**Skvirsky's symptom.**

Skvirsky s. - a sign of cholecystitis: the appearance of pain in the right hypochondrium during percussion with the edge of the hand to the right of the spine, at the level of Th IX-XI vertebrae.

**Fedorov's symptom.**

Fedorova s. - a sign of blockage of the hepatic ducts: jaundice with naturally colored feces.

**Aschoff symptom .**

Aschoff gallbladder.

Ashoff's gallbladder is a stagnant gallbladder, manifested by biliary colic, nausea, and vomiting. Observe if there is an obstruction to the outflow of bile.

**Boas symptom .**

Boasa S. - a sign of cholecystitis: a site of hyperesthesia in the lumbar region. Soreness that occurs when pressing with a finger to the right of the VIII-X vertebrae on the back.

**Cadenat symptom .**

Kadena S. - used for the differential diagnosis of intestinal intussusception and appendicitis: frequent urge and fluid bowel movements in adults are characteristic of intestinal intussusception.

**Cburvoisier symptom .**

Courvoisier S. - a possible sign of blockage of the common bile duct: a strongly enlarged gallbladder in patients with obstructive jaundice.

**Symptom, Chauffard.**

Chauffard Zone.

Shoffara S. - observed in diseases of the gallbladder and pancreas: soreness in the Shoffard zone. It is determined by dividing the bisector of the upper right corner of the abdominal wall, which is formed by two mutually perpendicular lines drawn through the navel (one of them is the midline of the body).

**Symptom Geno de Mussy.**

Symptom Georgievsky.

Mussey S. - a sign of damage to the gallbladder (often acute cholecystitis): pain on palpation between the legs of the sternocleidomastoid muscle.

**Ortner symptom .**

Ortner S. - a sign of liver and biliary tract disease: tapping with the edge of the palm along the right costal arch causes pain.

**Riedel symptom .**

Ridel S. - a sign of an increase in the gallbladder in patients with cholelithiasis: with a slight increase in the gallbladder, a lobule of the liver located above the bladder is felt; it can be mistaken for the gallbladder.

**Riesman symptom .**

Risman S. - a sign of cholecystitis: the patient is asked to hold his breath while inhaling and beat with the edge of the palm in the area of the right hypochondrium; with an inflamed gallbladder, the patient experiences acute pain.

**Symptom Westphal - Bernhard.**

Spasmus sphincteris Oddi.

Westphal - Bernhard s. - X-ray sign of possible cholelithiasis: spastic state of the sphincter of Oddi.

**Resurrection symptom.**

Voskresensky s. - a possible sign of acute pancreatitis: the disappearance of the pulsation of the abdominal aorta in the hypogastric region.

**Symptom Gubergritsa.**

G ubergritsa dot.

Gubergritsa s. - a sign of inflammation of the tail of the pancreas: pain that occurs when pressing at a point 6 cm above the navel, on the line connecting it with the left armpit.

**Desjardins symptom.**

Desjardins S. - a sign of acute pancreatitis: painful points 10 cm above the navel along the right rectus abdominis muscle.

**Janelidze's symptom.**

Janelidze s. - a decrease in pain with deep palpation of the epigastric region is characteristic of myocardial infarction, increased pain - for acute pancreatitis.

**Zakharyin - Geda zones.**

Zakharyin - Geda zone - characteristic of pancreatitis: zones of skin hyperesthesia at the level of VIII-IX of the thoracic vertebrae behind.

**Makhov's symptom.**

Makhova S. - determine in acute pancreatitis: the area of hyperesthesia above the navel.

**Oniskiv's symptom.**

Oniskiva s. - observed in acute pancreatitis with pressure in the anterior-inner surface of the lower third of the left leg, the pain in the epigastric region sharply increases.

**Bee's symptom.**

Pchelino y s. - X-ray sign of acute pancreatitis: the clarity of the X-ray contour of the left lumbar muscle disappears due to the spread of edema from the pancreas to the retroperitoneal tissue.

**Razdolsky's symptom**

Razdolsky s. - in acute pancreatitis: pain with percussion over the pancreas

**Tuzhilin's symptom.**

Symptom of "red droplets".

Tuzhilina s. - a possible sign of chronic pancreatitis: bright red spots (aneurysms of small vessels) on the skin of the abdomen, chest and back.

**Chukhrienko's symptom.**

Chukhrienko s. - a sign of acute pancreatitis: pain arising from jerky pressure on the abdominal wall, which is produced from bottom to top and from front to back with a palm located across the abdomen below and somewhat to the left of the navel.

**Balser symptom .**

Synonyms: Balser's necrosis, fatty necrosis of the pancreas.

Balser S. - observed in acute hemorrhagic pancreatitis or injury to the gland: foci of necrosis in the adipose tissue of the pancreas, retroperitoneal tissue, omentum and subcutaneous tissue are the result of lipase activation and autolysis of adipose tissue. Fatty acids and calcium salts are found in the foci of necrosis.

**Cullen symptom .**

Kullen S. - observed in a patient with acute pancreatitis: yellowish cyanotic color in the navel

**Davis symptom .**

Davis s. - a possible sign of acute pancreatitis: petechiae on the buttocks.

**Fitz Syndrome .**

Synonym: acute hemorrhagic pancreatitis.

Fitz S. - manifested by acute paroxysmal pain in the epigastric region, radiating to the back, swelling of the upper abdomen, nausea, vomiting, fever. There may be glucosuria, hypoglycemia, bilirubinemia. The diagnosis is confirmed by an increased content of serum amylase, an increase in the level of urine diastase.

**Gobiet symptom .**

Gobier S. - Revealed by X-ray in patients with acute pancreatitis: reflex paresis and bloating of the colon, especially the transverse colon. Kloyber bowls are missing.

**Symptom Groth.**

Grotto with. - a sign of chronic pancreatitis: the presence of a "belt" of atrophy of the subcutaneous fat layer according to the topographic position of the pancreas.

**Symptom Gray — Turner.**

Gray - Turner S. - observed in acute pancreatitis, cyanosis of the skin of the abdomen.

**Grunwald symptom .**

Grunwald S. - a possible sign of acute pancreatitis: ecchymosis or petechiae around the navel, in the gluteal regions due to damage to peripheral vessels.

**Edelmann syndrome .**

Syndromus pancreohepaticus.

Edelman S. - a combination of chronic pancreatitis with skin, neurological and mental symptoms: symptoms of chronic pancreatitis, cachexia, skin atrophy, diffuse grayish pigmentation, follicular hyperkeratosis, petechial hemorrhages, paralysis of the eye muscles, vestibular disorders; often polyneuritis. Various mental disorders are frequent.

**Westphal - Bernhard Syndrome .**

Papillitis primaria icterogenes, choledochus-syndromus.

Westphal - Bernhard s. - a triad of symptoms characteristic of primary stenosing inflammation of the Vater papilla: recurrent fever, biliary colic, intermittent jaundice. Radiographically - gallstones are not detected, the diagnosis is confirmed only during surgery; later cholestatic cirrhosis of the liver develops.

**Krasnobaev's symptom.**

Krasnobaeva s. - a sign of peritonitis: tension of the rectus abdominis muscles.

**Drachter symptom .**

Drakhter S. - a sign of incipient peritonitis in children: they hold the child's foot with one hand, and the heel with the other; while the child protects against abdominal pain by bringing both hands to the lower abdomen.

**Mackenzie symptom .**

Mackenzie c. - a sign of peritonitis: hyperesthesia of the abdominal skin.

**Madelung symptom .**

Madelyunga s. - a sign of purulent peritonitis: a large temperature difference in the armpit and rectum.

**Mortola symptom .**

Mortola S. - determined in peritonitis: pressure on the anterior abdominal wall causes pain, the intensity of which indicates the degree of inflammation of the peritoneum.

**Ransohoff symptom .**

Ransogofa s. - a sign of biliary peritonitis: limited yellowness of the navel.

**Rodforcer symptom .**

Rodforzer S. - observe with peritonitis: late maximum temperature rise in the axillary fossa.

**Symptom Tnomauer.**

Thomayer S. - with peritonitis of tuberculous origin due to wrinkling of the mesentery of the small intestine, its loops are pulled to the right, where tympanitis is determined.

**Trendelenburg symptom .**

Trendelenburg s. - Observe at peritonitis: sharply tense anterior abdominal wall with testicles pulled up to the inguinal openings (due to contraction of m. cremaster).

**Somvu peritonitis.**

Combi - diffuse septic pneumococcal peritonitis. It is manifested by an early discrepancy between the pulse and temperature, vomiting of black liquid, cyanosis of the extremities, oliguria, bloating, collapse, paradoxical cessation of pain, delirium. Ends in death. More often observed in children.

**Boas symptom .**

Boasa S. - a sign of a stomach ulcer: a painful point in the back on the left next to the Th XII vertebra.

**Bouveret symptom .**

Bouvere S. - a possible sign of narrowing of the pylorus: visible through the abdominal wall of the stomach peristalsis in emaciated patients.

**Symptom De Quervaine.**

Synonym: "index finger" symptom.

De Quervain s. - during X-ray examination, due to tonic contraction of the stomach wall, a fold of the mucous membrane is formed in the form of an index finger, directed towards the "niche" on the lesser curvature of the stomach.

**Gunzburg symptom .**

Gunzburg s. - A possible sign of a duodenal ulcer: localized rumbling between the gallbladder and the pylorus.

**Haudek symptom .**

Niche symptom.

Haudek Martin (1880-1931), Austrian radiologist.

Haudeka S. - X-ray sign of a stomach ulcer: a tissue defect filled with a contrast agent injected into the stomach resembles a niche.

**Herbst symptom .**

Herbsta s. - a sign of a peptic ulcer of the pyloric part of the stomach and duodenum: pain with light pressure in the region of the transverse processes of the III lumbar vertebra.

**Kantor symptom .**

Kantor S. - X-ray sign of colitis and Crohn's disease: a fine threadlike shadow when the colon is filled with a contrast agent.

**Mendel symptom .**

Mendel s. - a possible sign of a stomach or duodenal ulcer: pain in the epigastric region with percussion with the fingertips of the anterior abdominal wall.

**Oefelein symptom .**

Efeleina S. - a sign of a stomach or duodenal ulcer: a patient lying on his stomach is subjected to percussion of the back muscles in the Th VII-XII vertebrae; with this pathology, unilateral muscle contraction is observed.

**Riegel symptom .**

Rigel S. - X-ray sign of a stomach ulcer: absence of peristalsis, mainly distal from the location of the ulcer; it is also often noted after scarring of the ulcer.

**Symptom WoShier.**

Welflera S. - a sign of stomach stenosis: liquid is evacuated from a stenotic stomach (hourglass shape) quickly, however, with subsequent gastric lavage, the washings contain residues and products of putrefactive decay of food.

**Zugsmith symptom .**

Zugsmith S. - a possible sign of stomach pathology: an unusual, different width percussion dullness, determined by percussion, at the level of the second intercostal space on both sides of the sternum (in some cases, ulcers or cancer).

**Openchowski point.**

Openchovsky point - a sign of gastric ulcer: pain when pressing on the area of spinous processes of the VIII-X thoracic vertebrae.

**Pevzner's point.**

Pevzner's point is a sign of gastric ulcer: sensitivity when pressing on the area of spinous processes of the III-IV lumbar vertebrae.

**Borchardt Syndrome .**

Volvulus gastricus, torsio ventriculi, Magenvolvulus (German).

Borchardt S. - partial or complete volvulus of the stomach:

**The acute form** (usually with full volvulus) begins with epigastric flatulence; excruciating vomiting (vomiting without the release of vomit in the presence of a full stomach); an enlarged, overflowing stomach is palpable; loss of gastric juice can lead to hypochloremic azotemia and tetany; often - necrosis of the pancreas, rupture of the spleen. X-ray - barium does not pass into the stomach, pneumatosis of the stomach. Without urgent surgical intervention - gastric necrosis, peritonitis.

**The chronic form** can be asymptomatic or with mild symptoms for years. Diagnosis is based on radiographic findings.

**Brenneman syndrome**

Brennemann S. - abdominal symptom complex in diseases of the upper respiratory tract: rhinitis or pharyngitis, often angina and maxillary sinusitis; after a few days, less often after 1 - 2 weeks, abdominal pain, muscle resistance, nausea, vomiting. It occurs mainly in childhood. The cause of abdominal symptoms is usually mesenteric and retroperitoneal lymphadenitis.

**Chilaiditi syndrome .**

Chilaiditi symptom, interpositio hepatodiaphragmatica.

Hilaiditi s. - topographic anomaly of the large intestine (often the small intestine): the right bend of the colon is located between the diaphragm and the liver; not always expressed clinical symptoms - pain in the upper abdomen, increasing during the day and stopping at night; less often - anorexia, constipation, flatulence.

**Crohn 's syndrome .**

Morbus Crohh, morbus Dalzeil, ileitis regionalis, ileitis terminals, enteritis regionalis, ileitis ulcerosa stenosans chronica.

Krona s. - chronic segmental inflammation of the distal ileum; the disease usually begins at the age of 15-35 years, is somewhat more common in men; a triad is characteristic: pain in the right half of the abdomen, repeated or persistent diarrhea, a significant deterioration in well-being. Sometimes during an exacerbation, symptoms appear that resemble acute appendicitis. In the affected part of the intestinal wall, ulceration with an inflammatory periprocess, contributing to the narrowing of the lumen. During an exacerbation - leukocytosis with a shift to the left, thrombocytosis; also common are hypochromic anemia, an increase in ESR, a decrease in prothrombin activity, a decrease in the concentration of potassium and calcium in the blood; steatorrhea. The disease can be complicated by local suppuration, fistulas with perforation, stenosis.

**Dumping-syndrome (eng.) ,**

Syndromus postgastrectomiae, jejunum-syndromus, hypersecretio nutritiva, albatross-syndrome (English).

To dump (English) - to throw out.

Dumping - c. - a complex of gastrointestinal and circulatory disorders after eating, mainly in patients with a resected stomach, especially with high resection and after gastrectomy: within 15 minutes after eating, a feeling of pressure and fullness in the epigastric region, nausea, vomiting with liquid mixed with bile, rumbling in a stomach; sweating, hot flashes, fatigue, malaise, trembling limbs, palpitations, headache; patients are forced to visit the doctor frequently ("they circle around the doctor like a wounded albatross"). These phenomena are explained by the overstretching of the food masses of the stomach and duodenal stump and the presence of a large number of hyperosmolar masses in the duodenum, which contribute to the rapid transition of fluid from the plasma, which causes the development of hypovolemia up to collapse.

**Konig syndrome .**

Koenig S. - manifestations of ileocecal stenosis: painful paroxysmal intestinal colic with alternating constipation and diarrhea; constant flatulence; rumbling in the ileocecal region. It is observed in patients with intestinal tuberculosis (ileocecal region).

**Lambling syndrome .**

Lamblaine S. - a complex of symptoms after gastrectomy due to malabsorption: emaciation, anemia, hypoproteinemia, edema, diarrhea.

**Laubry - Soule syndrome .**

Lobri - Sula s. - symptom complex in atherosclerosis of coronary and mesenteric vessels: accumulation of air in the stomach and large intestine; high standing of the right side of the diaphragm.

**McKittrick - Wheelock Syndrome .**

Mac - Kitrika - Wheelock c. - symptom complex of electrolyte metabolism disorders in patients with intestinal adenomas: usually manifests itself in old age; increasing chronic profuse mucous diarrhea; blood in the feces is not excreted; tenesmus and general dehydration are observed; tendency to circulatory disorders. Blood: hyponatremia, hypochloremia, hypokalemia. Occasionally, palpation or rectal examination (sometimes with rectoscopy) reveals an adenoma in the sigma or rectum. ECG shows signs of hypokalemia. With timely recognition and removal of the tumor, the prognosis is favorable.

**Moore Syndrome .**

Migraena abdominalis, epilepsia abdominalis.

Mura S. - paroxysmal increased intestinal motility as a result of irritation of the brain: paroxysmal, difficult to localize pain in the abdomen; in the prodromal period, nausea, vomiting, diarrhea, pallor, rumbling in the abdomen; during an attack, clonic twitching of the abdominal muscles; after an attack, malaise, drowsiness. EEG shows cerebral dysrhythmia.

**Ortner 's syndrome .**

Dyspragia intestinalis arteriosclerotica, dyspragia abdominalis angiosclerotica, angina abdominalis, pseudothrombosis mesenterica.

Ortner S. - intermittent ischemia of the abdominal organs in patients with obliterating atherosclerosis of the mesenteric vessels or (less often) - with their thrombosis: paroxysmal pain in the abdomen, mainly in the navel or in the epigastric region, appearing after eating or physical activity; feeling of fullness, belching, flatulence; constipation; paroxysmal dyspnea. The disease is observed in old age.

**Reichmann syndrome .**

Reichman s. - consists in excessive secretion of gastric juice. It is manifested by sour belching, excruciating heartburn, vomiting of large amounts of gastric juice (often occurs at night), suffocation due to reflex spasm of the vocal cords. It is one of the signs of duodenal ulcer or pyloric stenosis of ulcerative etiology.

**Schmieden syndrome .**

Schmiden S. - partial or complete prolapse of the gastric mucosa into the duodenum: paroxysmal pain and a feeling of fullness in the epigastric region; bloating, heartburn, vomiting (sometimes blood).

**Astrov's symptom.**

Astrova S. - a differential diagnostic sign of a femoral hernia and varicose veins of the saphenous vein: light pressing of the edge of the protrusion with a finger leads to its disappearance if it is formed by an enlarged vein.

**Miller's symptom.**

Melnik s. - in a standing position, the patient deviates the body posteriorly and to the side opposite to the localization of the hernia. With a strangulated hernia, pain intensifies and the patient leans towards its localization.

**Potocki's symptom (I).**

Potocki s. - determined with a sliding hernia of the colon: with very wide hernial orifices with a finger inserted into the inguinal canal, it is possible to palpate the wall of the large intestine in the form of a soft fold, increasing when the patient strains.

**Potocki's symptom (II).**



Potocki s. - is determined for sliding hernias of the bladder: the urge to urinate when examining the hernial orifice.

**Cooper symptom .**

Cooper S. - differential diagnosis between femoral and inguinal hernias: the pubic tubercle is probed with the index finger and the attitude of the hernial protrusion to it is determined. With femoral hernias, the pubic tubercle cannot be felt from the outside from protrusion; with inguinal hernias, it is palpable.

**Gangolphe symptom .**

Gangolf s. - A possible sign of a strangulated hernia: an effusion in the abdominal cavity, detected by digital rectal examination or by percussion of the abdominal cavity, giving a dullness in the lower parts of it.

**Guibal symptom .**

Guybala s. - serves for differential diagnosis of femoral hernia and varicose veins of the great saphenous vein of the thigh. If, after compressing the tumor in the upper third of the thigh, weaken the pressure without removing the hand, in the case of vein expansion, a "buzzing" is detected, but in the case of a hernia, it is absent. In the literature, it is mistakenly attributed to Astrov M.S.

**Howship symptom .**

Haushipa S. - a sign of a strangulated femoral hernia: acute pain in the corresponding leg.

**Kazda symptom**

Katsdy s. - a differential diagnostic sign of a femoral hernia and varicose vein located in the opening of the saphenous vein of the leg (hiatus saphenus): if the patient jerkily strains the abdominal muscles, then the doctor, when palpating the protrusion in case of varicose veins, perceives vortex movements, which is not the case with a femoral hernia.

**Symptom Romberg - Howship.**

Romberg - Hauschip s. - a possible sign of a strangulated hernia of the obturator foramen: pain along the obturator nerve, along the anterior and inner surfaces of the thigh, radiating to the anterior abdominal wall or limb The pain occurs when the hernia is pressed on the obturator nerve, it can increase with movement. The symptom acquires diagnostic value in the absence of a visible hernial protrusion, when it is only within the obturator

**Symptom Treves.**

Trevsa S. - with hernias of the obturator opening, abduction and rotation of the lower limb are accompanied by pain.

**Brock syndrome .**

Synonym: false infringement of Brock.

Broca S. - a number of acute diseases of the abdominal cavity in the presence of hernias of the abdominal wall is accompanied by symptoms that simulate hernia infringement. In the hernial sac, which has a communication with the free abdominal cavity, secondary changes occur associated with the entry into the cavity of the hernial sac of exudate from the abdominal cavity (with perforation of a stomach ulcer or small intestine, cholecystitis). Previously reducible hernia becomes irreducible.

**Hernia Hesselbach.**

Hesselbach gr. - a femoral hernia of the muscle lagoon extends under the inguinal ligament, descending into the sheath of the iliopsoas muscle. Above it is the sartorius muscle, which stretches the broad fascia of the thigh, in front of the neck of the hernial sac lies an artery that bends around the ilium. A feature of this hernia is its flat shape.

**Hernia Sudeck.**

Synonym: weak groin.

Zudek gr. - Moderately elastic protrusion in the groin without protruding to the root of the scrotum.

**Hernia Cloquet.**

Synonym: scallop hernia.

Cloquet gr. - a rare form of femoral hernia. It leaves the abdominal cavity through the external opening of the femoral canal, then at the pubic bone it fits under the fascia of the

scallop muscle and is localized on this muscle. Sometimes, stratifying it, it can go between the scallop and long adductor muscles.

**Lymph Node Cloquet.**

Synonym: Pirogov-Rosenmüller's lymph node.

Cloquet node - a lymph node located in the oval fossa of the thigh. Simulates an irreducible femoral hernia with magnification.

**Hernia Cooper.**

Cooper c. - femoral hernia with a two-chambered hernial sac, which consists of 2 parts: subcutaneous at the level of the subcutaneous fascia and subfascial, passing through the ethmoid fascia.

**Hernia Littre.**

Littre gr. - a hernia (usually inguinal or femoral), containing a Meckel diverticulum in the hernial sac. It can be in the hernial sac in a free state, it can be spliced with it or restrained in the hernial ring.

**Hernia Laugier.**

Synonym: hernia of the ligamentous ligament.

Lie c. - the hernia passes through the slit of the gimbernath ligament.

**Hernia Maydl.**

Synonyms: W-shaped hernia, double loop hernia.

Maydlya gr. - retrograde infringement of the mesentery, the intestine located in the abdominal cavity, and not in the hernial sac, with the development of gangrene of the intra-abdominal loop.

**Hernia Richter.**

Richter gr. - parietal infringement of the intestinal loop - in the hernial sac, only a part of the circumference of the intestinal wall is infringed, often opposite to the line of mesentery attachment.

**Rieux hernia .**

Rie c. - infringement of the loop of the small intestine in the retrocecal space.

**Hernia Treitz.**

Synonym: about a duodenal hernia.

Treitz gr. - internal (false) hernia associated with entrapment of the intestine in the trait canal. A history of persistent constipation in such patients. Distinguish between left-sided hernia (more often) and right-sided. Hernial contents include several loops or the entire small intestine. Clinically manifested by a picture of high intestinal obstruction. A hernia is more often found at an operation or section. At the height of the attack, a spherical, mobile, with clear contours formation is found in the abdomen. When palpating, the most painful place corresponds to the hernial orifice. They can be located on a line starting from the left above the navel and going down to the right to the iliac fossa. The infringement stops in the position of the patient on the right side, in the standing position the pain intensifies.

# **List of titles of independent work in Faculty Surgery**

## INDEPENDENT WORK TOPICS

- 1 . Organization of the work of the surgical department
2. Postoperative period and methods of rehabilitation of surgical patients
3. Internal hernia.
4. Diastasis of the rectus abdominis muscles.
- five. Features of the course of hernias in elderly and senile persons.
6. Intermediate and hernia of the Petit triangle.
7. Features of the course of hernias in children and the elderly.
- eight. Atypical appendicitis. Appen - ditsit in pregnant women.
- nine. Acute ulcers and erosion of the stomach. Medicinal stomach ulcers.
- ten. Pre-ulcer diseases of the stomach, diagnosis and treatment ..
- eleven. Polyp and polyposis.
12. Endemic and sporadic goiter.
13. Dyskinesia of the gallbladder.
- fourteen. Tumors of the gallbladder and extrahepatic biliary tract.
- fifteen. Liver tumors (fibroma, lipoma, hemangioma)
- sixteen. Cysts and fistulas of the pancreas
17. Colon tumors.
18. Tumors of the rectum
- nineteen. Adhesive disease and its complications
20. Adhesive intestinal obstruction
21. Gynecological peritonitis.
22. Intestinal fistulas.
- 23 . Methods of surgical treatment of internal fistulas

# **Used literature on Faculty surgery**

## LIST OF TEXTBOOKS AND TUTORIALS

### Educational literature

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2. Surgical diseases. Under the editorship of M. I. Kuzin., Medicine., 2002
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### Additional Literature

#### Main

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