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KIM VERONIKA OLEGOVNA

«TACTICS OF PREGNANT WOMEN WITH ACUTE ABDOMEN IN THE II AND III TRIMESTER OF PREGNANCY»

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Scientific leader, Head of Chair
Obstetrics and Gynecology of Pediatrics Faculty
Samarkand State Medical Institute, MD professor:
NEGMADJANOV B.B.

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CONTENT:

ABBREVIATIONS:

CFPI - chronic feto-placental insufficiency

CI – color index

ECG – electrocardiography

EGDS - esophagogastrodoudenoscopy

ESR - erythrocyte sedimentation rate

GIT – gastro-intestinal tract

ICD - International Statistical Classification of Diseases and Related Health Problems

MRI - magnetic resonance imaging

RSCEC – The Republican Scientific Center of Emergency Care

US - ultrasound

INTRODUCTION.

Actuality: The problem of "acute abdomen" during pregnancy - one of the most difficult border obstetric and surgical problems.

The term "acute abdomen" is acutely emerged abdominal disease that threatens the patient's life, in which it is necessary or may need emergency surgery. During pregnancy, the clinical picture of acute surgical diseases varies greatly, making them difficult to diagnose. Pregnancy is not only changing the topography of the abdominal cavity, but also the response of the organism to the inflammation. This can cause significant variability of clinical signs of acute surgical diseases. The difficulty of diagnosis of acute surgical diseases of the abdominal cavity increases later in pregnancy and childbirth. In addition to increased risk for the mother, acute surgical diseases adversely affect the course of pregnancy, causing premature termination of her, and often death of the fetus or newborn. Surgery for acute abdomen is performed in 0.2% of pregnant women.

Objective: To optimize the management of pregnant women with "acute abdomen" in II and III trimester of pregnancy.

Goals of the work:

1. To study the frequency of causes of acute abdomen in the II and III trimester of pregnancy.
2. Determine the optimal surgical and obstetric management of pregnant women.
3. Develop an algorithm for pregnant women with acute abdominal pain.

Subjects: We prospectively and retrospectively studied the history of childbirth and diseases 48 pregnant women with a diagnosis of acute abdomen admitted and received medical care in the maternity hospital №3 of Samarkand city, as well as in Samarkand branch of RSCEC.

Methods: a history, obstetric and gynecological examination, general clinical blood and urine tests, ultrasound, ECG, EGDS, inspection of surgery, urology and other related professionals.

Scientific novelty: an integrated approach to the study of the clinical picture of acute abdomen in pregnant women, studied questions of therapy aimed at prolongation of pregnancy in women who underwent surgery for acute abdomen.

Practical significance: The algorithm of examination of pregnant to enroll in a multidisciplinary hospital with a diagnosis of the guide - acute abdomen. Improved early diagnosis of "acute abdomen" during pregnancy with additional laboratory and instrumental methods.

CHAPTER I. THE COURSE OF THE DISEASE, CAUSING AN ACUTE HOSPITAL ABDOMEN DURING PREGNANCY (REVIEW OF LITERATURE).

1.1. EPIDEMIOLOGY.

According to ICD-10:

R10.0 Acute abdomen. Severe abdominal pain (generalized) (localized) (with the rigidity of the abdominal muscles).

Acute abdomen, as it presents with pregnancy, has many possible causes. Clearly, the case of a pregnant patient with acute abdomen is a clinical scenario that overlaps specialties. Do not hesitate to involve a surgeon, obstetrician/gynecologist, and a specialist in maternal-fetal medicine when dealing with this challenging situation.

As defined by Stedman's Medical Dictionary, 27th Edition, acute abdomen is "any serious acute intra-abdominal condition attended by pain, tenderness, and muscular rigidity, and for which emergency surgery must be considered."

Any cause for acute abdomen can occur coincident with pregnancy. Some clinical conditions are more likely to occur in pregnancy. Other conditions are specific to pregnancy. Thus, a wide range of possible differential diagnoses should be considered.

The approach to pregnant patients with severe abdominal pain is very similar to that for non-pregnant patients with acute abdomen. However, the physiologic changes associated with pregnancy must be considered when interpreting findings from the history and physical examination.

When evaluating the gravid patient with acute abdominal pain, remember that some very commonly used laboratory tests have altered reference ranges in pregnancy. These changes can make the initial evaluation process somewhat more difficult. For example, an inflammatory process such as appendicitis would be expected to produce an elevated white blood cell count. Yet, pregnancy alone can produce white blood cell counts ranging from 6000-16,000/mm3 in the second and third trimesters and from 20,000-30,000/mm3 in early labor.[1]

1.2. THE ETIOLOGY OF "ACUTE ABDOMEN".

There are 4 main groups of causes [6,9,13,15]

1. Surgical pathology (acute appendicitis, acute cholecystitis, acute pancreatitis, ileus).
2. Gynecological diseases (torsion leg cysts, fibroids malnutrition, torsion subserous node).
3. Complications of pregnancy, childbirth and the postpartum period (abruptio placentae, uterine rupture, septic complications, including obstetric peritonitis, internal bleeding due to interrupted ectopic pregnancy).
4. Diseases associated with organs that are located outside of the abdomen (kidney disease, acute pyelonephritis, renal colic, pulmonary disease - lobar pneumonia, heart disease).

There is another classification of the etiological factors of acute abdomen:

Gastrointestinal causes of acute abdomen that are incidental to pregnancy include the following:

- Acute appendicitis[2, 3]
- Acute pancreatitis[4]
- Peptic ulcer

- Gastroenteritis
- Hepatitis
- Bowel obstruction
- Bowel perforation
- Herniation
- Meckel diverticulitis
- Toxic megacolon
- Pancreatic pseudocyst

Genitourinary causes of acute abdomen that are incidental to pregnancy include the following:

- Ovarian cyst rupture
- Adnexal torsion[5]
- Ureteral calculus
- Rupture of renal pelvis
- Ureteral obstruction

Vascular causes of acute abdomen that are incidental to pregnancy include the following:

- Superior mesenteric artery syndrome
- Thrombosis/infarction - Specifically, mesenteric venous thrombosis[6]
- Ruptured visceral artery aneurysm
- Splenic artery aneurysm

Respiratory causes of acute abdomen that are incidental to pregnancy include the following:

- Pneumonia
- Pulmonary embolism

Additional causes of acute abdomen that are incidental to pregnancy include the following:

- Intraperitoneal hemorrhage
- Splenic rupture
- Abdominal trauma
- Acute intermittent porphyria
- Diabetic ketoacidosis
- Sickle cell disease

Conditions Associated With Pregnancy

Pregnancy-associated conditions that cause acute abdomen include the following:

- Acute pyelonephritis
- Acute cystitis
- Acute cholecystitis
- Acute fatty liver of pregnancy
- Rupture of rectus abdominis muscle
- Torsion of the pregnant uterus
- Due to pregnancy

Conditions resulting from pregnancy that cause acute abdomen in early pregnancy include the following:

- Ruptured ectopic pregnancy[2]
- Septic abortion with peritonitis
- Acute urinary retention due to retroverted gravid uterus

Conditions resulting from pregnancy that cause acute abdomen in later pregnancy include the following:

- Red degeneration of myoma
- Torsion of pedunculated myoma
- Placental abruption
- Placenta percreta
- HELLP (hemolysis, elevated liver function, and low platelets) syndrome – Spontaneous rupture of the liver
- Uterine rupture
- Chorioamnionitis

1.3. DIAGNOSTICS.

Patient History

Obtain as detailed a history as possible regarding the time of onset, duration, intensity, and character of the pain and any associated symptoms.[7] Establishing the gestational age early in the evaluation is essential because the likelihood of different etiologies changes with different gestational ages. Accurate knowledge of gestational age is required to make appropriate decisions regarding fetal viability and the need for fetal evaluation. Remember that nausea, vomiting, constipation, increased frequency of urination, and pelvic or abdominal discomfort are frequently experienced in normal pregnancy. Ask the patient to differentiate these normal pregnancy changes from the acute event for which she presents.[8]

Also, ascertain the time course and acuteness of onset, as follows:

- ✓ Did the pain begin suddenly or did it grow in intensity
- ✓ Is it steady or crampy, dull and aching, or sharp and stabbing
- ✓ Did it occur before or after a meal
- ✓ Did it awaken the patient from sleep
- ✓ How well is it localized, and has the location changed

- ✓ Is it associated with nausea and vomiting, and if so, did these symptoms begin before or after the pain?
- ✓ Does anything make the pain worse or better

Physical Examination

Upon physical examination, findings may be less prominent than those in non-pregnant patients with the same disorder.[9, 10] Peritoneal signs are often absent in pregnancy, because of the lifting and stretching of the anterior abdominal wall. The underlying inflammation has no direct contact with the parietal peritoneum, which precludes any muscular response or guarding that would otherwise be expected.[11] The uterus can also obstruct and inhibit the movement of the omentum to an area of inflammation, distorting the clinical picture.

To help distinguish extrauterine tenderness from uterine tenderness, performing the examination with the patient in the right or left decubitus position, thus displacing the gravid uterus to 1 side, may prove helpful.

When performing a physical examination of the gravid abdomen, it is essential to recall the changing positions of the intra-abdominal contents at different gestational ages. For example, the appendix is located at the McBurney point in patients in early pregnancy and in nonpregnant patients. After the first trimester, the appendix is progressively displaced upward and laterally until, in late pregnancy, it is closer to the gallbladder.[12] Such alterations in physical assessment can delay diagnosis, and many authorities attribute the increased morbidity and mortality of acute abdomen in gravid patients to this delay.

Fetal considerations

When evaluating the gravid patient, the clinician must evaluate 2 patients at the same time, the mother and the fetus. Before the gestational age at which independent viability (if delivery were to occur) is generally expected, evaluation of the fetus can be limited to documentation of the presence or absence of fetal heart tones by Doppler or ultrasonography. When the fetus is considered viable, a more thorough evaluation is required. The age of viability varies from institution to institution. Monitor the fetal heart rate and uterine tone continuously throughout the period of evaluation.

A nonreassuring tracing or evidence of fetal distress may suggest an obstetric etiology for the acute abdomen (eg, placental abruption, uterine rupture[13]). A reassuring tracing allows the evaluation to continue at an appropriate pace. Monitoring for uterine contractions throughout the evaluation period and even after definitive treatment is important. A strong correlation is observed between intra-abdominal infectious or inflammatory processes and preterm labor and delivery.

Ultrasonography

Ultrasonography is probably the most frequently used radiologic modality for evaluating a pregnant abdomen. Extensive experience documents the safety of ultrasonography in pregnancy. The maternal gallbladder, pancreas, and kidneys can be evaluated easily. Limitations are related to the body habitus in the later stages of gestation.

Ultrasonography is also used with graded compression as a diagnostic aid for appendicitis. The size of the gravid abdomen may limit this approach in pregnancy, but some researchers have reported success.[14, 15] In a series of 33 pregnant patients, the sensitivity of MRI for acute appendicitis was 80%, versus 20% for ultrasound. The appendix could not be identified in 29

patients, including in 3 with proven appendicitis. Pedrosa and colleagues imaged with both ultrasound and MRI, and ultrasound had a sensitivity of 36% and a normal appendix was identified on ultrasound in only 2 of 126 patients without appendicitis.[16]

In addition, the use of ultrasonography is essential for fetal evaluation. Ultrasonography helps to establish gestational age and fetal viability, to exclude congenital anomalies, and to assess amniotic fluid volume and fetal well-being. This information may become critical later in the management of a gravid patient with an acute abdomen, when decisions regarding delivery, mode of delivery, and the use of tocolytics and steroids must be made.

Magnetic Resonance Imaging

Magnetic resonance imaging (MRI) uses magnets rather than ionizing radiation to alter the energy state of hydrogen protons. This may prove useful in the evaluation of the maternal abdomen and of the fetus. In a series, MRI was found to be useful in the diagnosis of acute appendicitis when ultrasonography was inconclusive.[19, 20, 21, 22, 23, 24] MRI to date has shown high sensitivity and specificity for appendicitis.[16]

Although no adverse fetal effects have been documented, the National Radiological Protection Board advises against the use of MRI in the first trimester.[25] Based on clinical and laboratory studies for over 20 years, there have been no documented harmful effects from MRI when using 1.5 T or lower magnetic field strength.[16] Not all MRI contrast agents are approved for use in pregnancy. Intravenous gadolinium crosses the placenta, and its effects on the fetus are not understood. The FDA considers gadolinium a category C drug.[16]

1.4. THE CURE.

Timing of Surgery

Treatment of acute abdomen in pregnancy depends on the specific diagnosis.[26, 27, 28] Indications for emergency surgery are the same for patients who are pregnant as they are for any other patients. If surgery is required but is considered elective, waiting until after the pregnancy is completed is prudent. If surgery is deemed necessary during pregnancy, perform it in the second trimester if possible; the risk of preterm labor and delivery is lower in the second trimester than in the third, and the risk of spontaneous loss and risks due to medications such as anesthetic agents are lower in the second trimester than in the first.

Laparoscopy During Pregnancy

Laparoscopy has become increasingly popular in the treatment and evaluation of acute abdomen. In the past, pregnancy was considered a contraindication for laparoscopy, but multiple reports of the successful use of diagnostic and therapeutic laparoscopy have been published.[29, 30]

The Hasson technique, an open approach to entering the abdomen, has been suggested to avoid potential injury to the gravid uterus with the Veress needle or trocar. CO2 insufflation of 10-15mmHg is concerned safe. Due to the CO2 exchange in the peritoneal cavity and concerns over the effects of acidosis on the fetus, the use of capnography during laparoscopy in pregnant patients is recommended.[31, 32]

Advantages of laparoscopy over laparotomy include shortened hospital stay, less need for narcotics, easier postoperative ambulation, and earlier postoperative tolerance of oral intake. Care must be taken to minimize

manipulation of the uterus. Adjust the location of trocar based on uterine size. Monitor fetal heart tones during the surgical procedure. The surgeon must work closely with the obstetrician to maintain fetal well-being during the surgical procedure. An experienced laparoscopist is important to keep surgical times as short as possible.[33]

Although laparoscopy is generally accepted as safe, reports of fetal demise after the procedure continue to occur in the literature.[34] Several studies have indicated, however, that laparoscopic surgery can be safely performed on pregnant patients during any trimester, without an appreciably increased risk to the mother or fetus.[31, 32]

1.5. OBSTETRIC CONCERNS

Preterm labor and delivery is the most significant threat to the fetus in the management of acute maternal intra-abdominal disease. Insufficient data are available to quantitate the risk, but the severity of the disease process appears to be a major determinant of that risk.[35, 36, 37]

The prophylactic effect of tocolytics remains unproven in these patients. If used, tocolytics should be administered with care. Monitor the patient carefully, and bear in mind the potential for pulmonary complications. Magnesium sulfate, beta-mimetics (eg, ritodrine, terbutaline), and indomethacin (if the fetus is < 32 wk gestation) can be used. Whenever using tocolytic agents, make certain that no contraindications to tocolysis, such as severe placental abruption, chorioamnionitis, or lethal anomalies, are present. If preterm delivery is likely, glucocorticoids can be administered to the mother to decrease the risk of neonatal complications. Avoid glucocorticoids if the mother is at serious risk for significant infection.

1.6. DELIVERY

Base delivery decisions on obstetric indications. The mode of delivery used should also be decided based on obstetric indications. If continuation of the pregnancy is expected to lead to maternal morbidity or mortality, delivery is indicated. If improvement of the maternal condition cannot be expected with delivery, treat the patient with the fetus in utero.

1.7. SPECIFIC CAUSES OF ACUTE ABDOMEN.

1.7.1. ACUTE APPENDICITIS

Appendicitis is the most common nonobstetric cause of surgical emergency in pregnancy. The case-to-delivery ratio ranges from 1:2000 to 1:6000.[11, 38, 39, 40] . Pregnancy does not affect the overall incidence of appendicitis, but the severity may be increased in pregnancy. The incidence of perforation is 25% in pregnancy. If surgery is delayed for more than 24 hours, the incidence of perforation increases to 66%.[41] Appendicitis seems to be more common in the second trimester.[9, 2, 3]

1.7.1.1. HISTORY AND PHYSICAL EXAMINATION

Abdominal pain is almost always present. In the first trimester, pain is located in the right lower quadrant; in the second trimester, the appendix is located at the level of the umbilicus; and in the third trimester, pain is diffuse or in the right upper quadrant.

Other symptoms of appendicitis include the following:

- Nausea - Present in nearly all cases
- Vomiting - Present in two thirds of pregnant patients

- Anorexia - Present in only one third to two thirds of pregnant patients, although it is present almost universally in nonpregnant patients[9, 38, 40, 42]

The following also can be observed in appendicitis:

- Direct abdominal tenderness - Observed most commonly and only rarely absent[9, 43]
- Tenderness in the first trimester - Well localized in the right lower quadrant
- Tenderness later in pregnancy - In the right periumbilical area, in the right upper quadrant, or else the tenderness is diffuse
- Rebound tenderness - Present in 55-75% of patients[9, 38, 40, 43, 44]
- Abdominal muscle rigidity - Observed in 50-65% of patients[38, 44, 45]
- The Rovsing sign - Pain at the McBurney point when pressure is exerted over the descending colon; observed as frequently in pregnant persons with appendicitis as in nonpregnant persons with appendicitis
- Psoas irritation - Observed less frequently in pregnancy than it is in nonpregnant states[42]
- Rectal tenderness - Usually present, particularly in the first trimester[9]
- Fever and tachycardia - Variably present; they are not sensitive signs

1.7.1.2. CLASSIFICATION.

Classification of acute appendicitis in pregnant women include: simple (bluetongue) and destructive (abscess, gangrenous and perforated) clinical forms of the disease. All of these forms are the stages of development of a single process, for which the occurrence of a progressive course of the disease at a specific time for catarrhal appendicitis - 6-12 hours, for abscess - 12-24 hours for gangrenous - 24 hours and may come later, and perforation of

the appendix process [9, 37, 39, 42, 43]. The incidence of various forms of acute appendicitis, depending on the duration of pregnancy is presented in the table, which shows that pregnant women are more common destructive forms of acute appendicitis, especially in the first and third trimesters.

1.7.1.3. WORKUP

In pregnancy, the white blood cell count is often as high as 15,000/mm3. However, the wide reference range limits the usefulness of white blood cell counts during pregnancy;[40] Severe disease can occur with a normal count. Polymorphonuclear leukocytes are often greater than 80% when appendicitis is present.

Workup for appendicitis can also include the following:

- Urinalysis - Pyuria is observed in 10-20% of patients with appendicitis;[40] this may represent coincident asymptomatic bacteriuria
- Ultrasonography - In some centers, ultrasonography has been used to help diagnose appendicitis
- Upright abdominal radiograph - In severe disease, a right-sided mass or free air may be visualized
- MRI and CT scanning - These have been used in difficult cases

1.7.1.4. DIFFERENTIAL DIAGNOSIS.

The differential diagnosis of acute appendicitis should be carried out with the following diseases: acute salpingitis, rupture of the corpus luteum cyst, ovarian tumor torsion , broken ectopic pregnancy, placental abruption, preterm labor, malnutrition myoma node, acute pyelonephritis, acute cholangitis, acute disorders of mesenteric circulation.

1.7.1.5. APPENDECTOMY

Treatment of appendicitis is surgical. Perform surgery, employing either laparotomy or laparoscopy, as soon as the diagnosis is seriously considered. (Laparoscopic appendectomy is the method preferred by most surgeons.) Even if the appendix appears normal, there are 2 reasons to remove it: (1) early disease may be present despite its grossly normal appearance and (2) diagnostic confusion can be avoided if the condition recurs.[46, 47]

Tailor the surgical approach to the clinical situation. Remember to tilt the operating table 30º to the patient's left to help bring the uterus away from the surgical site and to improve maternal venous return and cardiac output.

Clinical management of pregnant and postpartum with acute appendicitis must be active. There is a statement that "death from appendicitis - a death by delay", it is necessary surgery. The best anesthesia during surgery in pregnant women consider endotracheal anesthesia using muscle relaxants or epidural anesthesia. For quick access when undoubted diagnosis in the first trimester of pregnancy can be used for the cut-Diakonoff Volkovich. In the second and third trimesters of this access is not always enough, so use a modification of the principle - the longer the duration of pregnancy, the higher the cut. In the last weeks of pregnancy incision is carried slightly above the iliac bone due to a significant displacement of the cecum and the appendix upwards. According to the setting adopted in the clinic academician V.S.Savelev, the most convenient is extended incision Mc Burney-Volkovich-Dyakonov with the notched section on the right-hand edge of the sheath of the rectus abdominis. With diffuse peritonitis shows lower-middle laparotomy, which provides an opportunity to thorough reorganization of the abdominal cavity.

In the absence of peritonitis operation complete suturing the wound of abdominal wall tightly. In the presence of peritonitis - kontrappertury discharged through drainage in the abdominal wall.

With the development of acute appendicitis in pregnant is often a threat of termination of pregnancy, which is due to several reasons:

1. uterine infection by contact - through the fimbrial end of the fallopian tubes;

2. purulent metastasis from the appendix into the placenta, membranes, in the wall of the uterus;

3. The effect of alpha-phospholipase of some bacteria, the specific activity of which is much higher than the activity of phospholipase chorion, amnion, decidual membranes;

4. The increase in intra-abdominal pressure;

5. reflex irritation of the transfer process with the peritoneum peritoneum covering the uterus;

6. The formation of adhesions that contribute to premature uterine contractions.

In order to prevent premature termination of pregnancy is necessary to conduct therapy aimed at maintaining pregnancy: the appointment of bed rest, antispasmodics (no-spa, magnesium sulfate). Tocolytic therapy is indicated for the destructive forms of acute appendicitis. At the same time prescribe magnesium sulfate or beta-mimetics (partusisten, brikanil, ginipral). With regard to antibiotic therapy, it is shown only at the destructive forms of acute appendicitis, and the prescribed penicillins, cephalosporins and macrolides that have no teratogenic effect.

If at the end of the third trimester soon after surgery developed labors, the brakes should not be. Delivery is performed vaginally using in the case of weakness of labor activity of prostaglandins and oxytocin. By cesarean section in acute appendicitis is resorted to only in case of serious obstetric complications (premature detachment of normally situated placenta, placenta previa, etc.).

Acute appendicitis in the third trimester of pregnancy triggers labor. However, the increase in size of the uterus helps local delimitation of infection. However, after delivery, when the uterus decreases sharply delineated abscess may perforate into the peritoneal cavity. In such cases, the picture of "acute abdomen" develops soon after birth.

1.7.1.6. PROGNOSIS

Perforation and abscess formation are more likely to occur in pregnant patients with appendicitis than in nonpregnant patients with appendicitis.[44] Some researchers have reported increasing severity in the third trimester,[9] while others have not.[40, 43] Any increase in severity later in pregnancy may be due to a delay in diagnosis. The rate of generalized peritonitis relates directly to the interval of time from symptom onset to diagnosis.[48] Maternal and fetal morbidity and mortality rates increase once perforation occurs.[43]

1.7.2. ACUTE CHOLECYSTITIS

Estimates of occurrence of acute cholecystitis vary widely. The case-to-delivery ratio varies between 1:1130 and 1:12,890.[49, 50] Asymptomatic gallbladder disease is more common, occurring in 3-4% of pregnant women. Gallstones are present in more than 95% of patients with acute cholecystitis. Chronic hemolytic conditions, such as sickle cell disease, increase the risk for gallstone formation.[51]

1.7.2.1. HISTORY AND PHYSICAL EXAMINATION

Patients may have a history of previous episodes. Right upper quadrant pain is the most reliable symptom; pain may radiate to the back. Vomiting occurs in approximately 50% of cases, while fever occurs in very few instances.[50]

Direct tenderness is usually present in the right upper quadrant; rebound tenderness is rare. Cholecystitis can mimic appendicitis in the third trimester.

1.7.2.2. WORKUP

Workup includes the following tests and considerations[52] :

- Ultrasonography - Diagnostic and safe
- Radionucleotide scan of the gallbladder - If needed, the radiation dose is not prohibitive
- Blood tests - Of limited value
- Leukocytosis - Observed in normal pregnancy
- Serum alkaline phosphatase levels - Normally elevated in pregnancy
- Aspartate transferase and alanine transferase levels - May help to distinguish cholecystitis from hepatitis
- Serum amylase levels - Elevated transiently in up to a third of patients;[53, 54] a markedly elevated amylase level suggests pancreatitis
- Serum electrolyte evaluations - Needed if vomiting has been persistent

1.7.2.3. DIFFERENTIAL DIAGNOSIS.

The differential diagnosis of acute cholecystitis in pregnancy is usually carried out with acute appendicitis, cholecystitis secondary to infectious (Salmonella typhi, parasites), acute pancreatitis, hepatitis and obstetrical pathology - preeclampsia, premature detachment of the placenta.

1.7.2.4. SUPPORTIVE THERAPY

Management of symptomatic cholelithiasis is controversial. Some recommend initial nonoperative treatment, while others favor early surgical treatment.[41] Initial nonoperative treatment, as follows, is supportive in nature:

- Intravenous fluids
- Nasogastric suction - This may be necessary if vomiting has been significant
- Analgesia - Demerol is preferred over morphine; morphine may produce spasm of the sphincter of Oddi.
- Antibiotics - If symptoms persist or if systemic or local signs are prominent, initiate broad-spectrum antibiotics[53, 54]

Surgery

If the patient does not tolerate supportive therapy or has recurrent bouts, surgery is indicated. The timing of surgery for acute cholecystitis is controversial. Some researchers promote the performance of surgery during pregnancy in order to avoid recurrent episodes and hospitalization.[41, 55] Others promote the delaying of surgery until the postpartum period.[56] A growing body of evidence supports the safety of laparoscopic cholecystectomy during pregnancy.[41, 57, 58]

Laparoscopy can be safely performed during any trimester of pregnancy. Studies comparing conservative and surgical management of cholecystitis revealed the incidence of preterm delivery (3.5% vs 6.0%) and fetal mortality (2.2% vs 1.2%). Fetal mortality in gallstone pancreatitis was 8.0% in a conservatively treated group of patients and 2.6% in a surgically treated group, suggesting that early surgical management is preferable.[59]

1.7.2.5. PROGNOSIS

Complications can occur, including empyema, perforation, pancreatitis, and failure to respond to medical management. Patients diagnosed with symptomatic cholelithiasis during the first trimester have a recurrence rate of 92%; during the second trimester, the recurrence rate is 64%, and during the

third trimester, the rate is 44%. Compared with patients who undergo cholecystectomy, patients in whom surgery is delayed experience increases in hospitalization, spontaneous abortion, preterm labor, and preterm delivery. Fetal loss occurs in 10-60% of pregnant patients with gallstone pancreatitis.[31, 32]

1.7.3. PANCREATITIS

Pancreatitis is an unusual and potentially devastating occurrence. The case-to-delivery ratio ranges from 1:1289 to 1:3333.[60, 61, 62, 63] The issue of whether pregnancy predisposes patients to pancreatitis is controversial.[4, 60, 62, 64, 65] Risk factors include the following:

Cholelithiasis - This is the most common risk factor in pregnant patients with pancreatitis, being observed in 90% of pregnancy-associated pancreatitis.

- Alcohol use
- Hyperlipidemia
- Hyperparathyroidism
- Abdominal trauma
- Viral infections

According V.S.Savelev et al., Cause of acute pancreatitis can be divided into three groups:

1. Mechanical (biliary-pancreatic or pancreatic-duodenally reflux intraductal hypertension et al.); neurohumoral (stressful situations, "hormonal" pancreatitis in pregnant women due to increased steroidogenesis et al.);

2. toxic-allergic (infection immunobiological violations influence of drugs).

The most common cause of acute pancreatitis in pregnant women, as well as in non-pregnant, is cholelithiasis.

3. Other causes include hypertriglyceridemia (eg, hereditary defect of lipoprotein lipase), the effects of drugs (tetracyclines, thiazides, estrogens),

genetic predisposition, structural abnormalities of the pancreas or duodenum, viral infections, alcoholism.

Contributing to the emergence of moments - of acute pancreatitis in pregnancy is stasis of bile and gall bladder atony due to the action of progesterone, a slight increase in the level of enzymes (amylase, lipase, acid protaminaz) in the second half of pregnancy is a normal function of the pancreas, increased blood lipids, increase abdominal pressure in the second half of pregnancy, leading to an increase in intra-duodenal pressure and stasis in Intraductal Wirsung duct and biliary tract. In addition, the development of acute pancreatitis during pregnancy contribute to the identity of the mechanism that causes contraction of the smooth muscle of the uterus and spasm of the sphincter of the bile ducts, as well as constantly available metabolic background due to disturbances of mineral metabolism, especially in gestosis.

1.7.3.1.HISTORY AND PHYSICAL EXAMINATION

The presentation of pancreatitis in pregnant patients is similar to that in patients who are not pregnant. Findings are as follows:

- Acute abdominal pain - Observed in 75% of cases
- Onset - Usually sudden
- Pain - Located in the epigastrium
- Nausea and vomiting - Usually present and may be severe
- Low-grade fever - May be present
- Jaundice - Observed in a few patients
- Epigastric tenderness - The most reliable physical finding
- Peritoneal signs - Are minimal or absent
- Bowel sounds - Are diminished

1.7.3.2. WORKUP

Serum amylase testing is the most useful test for diagnosis. As stated earlier, a markedly elevated amylase level suggests pancreatitis. During normal pregnancy, however, amylase levels are slightly elevated.[66, 68] View such slight elevations with caution because they can occur with other disease entities (eg, intestinal perforation, infarction[6] , intestinal obstruction).

Other lab findings may be helpful, including the following:

- Hyperglycemia
- Hyperbilirubinemia
- Hypocalcemia
- Hemoconcentration
- Electrolyte abnormalities

Ultrasonographic scanning of the upper abdomen may be helpful for confirming gallbladder disease.

1.7.3.3. DIFFERENTIAL DIAGNOSIS acute pancreatitis during pregnancy should be carried out with an early toxicosis, pre-eclampsia; interrupted ectopic pregnancy (often with higher levels of serum amylase), perforation of gastric ulcer or duodenal ulcer, acute cholecystitis, splenic rupture, acute intestinal obstruction.

1.7.3.4. SUPPORTIVE TREATMENT.

Initial treatment is supportive and includes the following:

- ✓ Provision of intravenous fluids for hypovolemia
- ✓ Correction of electrolyte imbalances
- ✓ Correction of glucose levels

- ✓ Correction of calcium disturbances
- ✓ Withholding of oral intake
- ✓ Continuous nasogastric suctioning - May be necessary with severe disease
- ✓ Total parenteral nutrition - May be needed if disease is prolonged

SURGERY

If gallbladder disease is causative, surgery can be performed when the patient's condition stabilizes.

1.7.3.5. PROGNOSIS

Acute symptoms last for approximately 6 days. The maternal mortality rate ranges from 0-37%, while the perinatal mortality rate is approximately 11% or less. The risk of perinatal death increases with the severity of disease.

1.7.4. INTESTINAL OBSTRUCTION

The case-to-delivery ratio ranges from 1:3600 to 1:5700. The frequency of this condition is increasing due to a higher incidence of intra-abdominal surgery. Intestinal obstruction rarely occurs during the first trimester and occurs with equal frequency in the second and third trimester and the puerperium.

1.7.4.1. CLASSIFICATION.

The clinical course distinguish between dynamic (paralytic and spastic) and mechanical (obstructive, mixed and strangulation) ileus. Dynamic ileus may occur in pregnant women with an almost complete reduction in the tone of the intestine due to overproduction of progestogens. Postoperatively, the dynamic obstruction develops in various forms of peritonitis.

1.7.4.2. ETIOLOGY.

The main causes of mechanical intestinal obstruction during pregnancy are:

1. The compression of the growing uterus adhesions after previous bowel surgery (60-70%);
2. volvulus;
3. hernia;
4. neoplasms.

In the presence of adhesions in the abdominal cavity during the critical periods of gestation of acute intestinal obstruction are:

1. gestational age 12-16 weeks, when the uterus comes out of the pelvic cavity;
2. 36-40 weeks - the fetal head descends to the entrance of the pelvis;
3. The first hours postpartum period, due to the sudden decrease in the volume of the uterus after delivery and rapid change in intra-abdominal pressure.

During these periods, are prerequisites to a change in the topographic relations of the abdominal cavity. Moving intestinal loops in the presence of adhesions in some cases leads to excesses, compression, infringement, bloat.

1.7.4.3. CLINIC.

Abdominal pain is observed in 90% of patients and may be continuous or intermittent, simulating childbirth. The pain may radiate to the lumbar region, mimicking pyelonephritis. The severity of the pain may not reflect the severity of the disease.

Vomiting is a symptom varies greatly. If the obstruction is more proximal, then vomiting may be an early sign. In severe obstruction may not be vomiting.

Constipation is different from the usual constipation during pregnancy. Patients who experience a complete cessation of stool and gas.

The clinical picture of acute intestinal obstruction is diverse, due to the time elapsed from the onset of the disease and pregnancy. Classical triad of symptoms including abdominal pain (98%), vomiting (80%), delayed stool and gas (95%). Symptoms of peritoneal irritation in 70% of patients, bowel sounds resonating in 55% of patients.

The pain is colicky, there is every 4-5 minutes with intestinal obstruction and every 10-15 minutes during bowel obstruction. When intestinal obstruction pain expressed more than the colonic obstruction. At the beginning of the disease expressed little tension of the abdominal muscles. When intestinal obstruction is characterized by frequent vomiting, with colonic - only when running forms. Pa late stages of the disease develop fever, oliguria and shock due to hypovolemia, the development of water-electrolyte imbalance, acidosis, and infection.

1.7.4.4. DIAGNOSIS.

In case of suspected acute intestinal obstruction in pregnancy should not postpone a radiological investigation, as risk of severe complications is much higher than the risk of radiological investigation to the fetus. However, at the beginning of the disease in about 50% of patients with X-ray (panoramic picture of the abdominal cavity) study may be uninformative, which requires a re-investigation works in 4-6 hours. The presence of dilated bowel loops gas and horizontal levels of liquid in them, so-called "bowl Kloybera" on x-rays indicate intestinal obstruction.

Volvulus - the second most common cause of intestinal obstruction in pregnancy occurs in approximately 25% of cases. Primary obstruction usually occurs in the cecum due to violations of fixing ce in the right lateral channel. On radiographs cecum overstretched and sets in the shadow of the kidneys.

1.7.4.5. THE CURE.

Once the diagnosis of acute intestinal obstruction in pregnant dynamic nature can be taken conservative treatment. In such cases, appoint gastric lavage, Neostigmine, Reglan, ubretid, antispasmodics, cleaning and siphon enema. In some cases it is possible to achieve positive results from conservative therapy for continuation of the pregnancy, in others - requires its elimination. Termination of pregnancy in the early stages of development of dynamic ileus usually promotes faster healing of the woman conservative measures.

In cases where surgery for acute intestinal obstruction inevitably, pregnancy should also be interrupted, otherwise the treatment will be successful. At the same time begin intensive therapy for hemodynamic stabilization elimination of hypovolemia and fluid and electrolyte disorders. Shows the median laparotomy. Surgical treatment principles are the same as in non-pregnant. In the event that the third trimester uterus large impede access to the intestine, first performed a caesarean section, and then - the elimination of the causes of intestinal obstruction, nazointestinalnyh intubation, sanitation and drainage of the abdominal cavity.

1.7.4.6. PROGNOSIS.

Mortality in acute intestinal obstruction increases with gestation, which is most often caused by backwardness of surgery. The death of fetuses and newborns in this pathology reaches 50-75%.

The frequency of maternal mortality in acute intestinal obstruction reaches 10-20%, due to late diagnosis and surgery, inadequate preoperative preparation, infection of acute cardiovascular, renal failure and shock. Perinatal mortality ranges from 20-30% - as a result of severe pathology mother, leading to hypoxia and infection of the fetus.

1.7.5. GASTRIC ULCER AND DUODENAL

Peptic ulcer disease occurs in 1 in 4,000 pregnant women. It is believed that the risk of disease during pregnancy reduced. Pregnancy has a protective, possibly the estrogen-mediated activity against ulcers of the gastrointestinal tract. During pregnancy, reduce gastric motility, decreased gastric secretion, mucus secretion increases. However, by the end of pregnancy and the postpartum period peptic ulcer disease has frequent exacerbations.

1.7.5.1. CLINIC.

Clinical signs of peptic ulcer disease during pregnancy may be mistakenly regarded as signs of pregnancy itself: dyspepsia, epigastric discomfort. With the development of ulcer bleeding appears vomiting with unaltered or altered blood (the latter looks like coffee grounds). For the diagnosis of peptic ulcer disease and its complications in pregnancy shows esophagogastroscopy.

When perforation ulcers occur sharp pain, often - shock with difficult, painful breathing, muscle tension anterior abdominal wall. Fetal movement becomes painful. In the upper abdomen reveal the disappearance of "hepatic dullness." When X-ray detected free gas below the diaphragm or in the right half of the abdomen of a wall surface at the position of the pregnant woman on the left side.

1.7.5.2. DIFFERENTIAL DIAGNOSIS with acute appendicitis, pancreatitis, cholecystitis, renal colic, premature placental abruption, uterine rupture, myocardial infarction.

1.7.5.3. TREATMENT of uncomplicated peptic ulcer disease during pregnancy conservative. Suspicion of perforation of gastroduodenal ulcers is an indication for immediate laparotomy in any stage of pregnancy and the postpartum period. The volume of transactions should be minimal and confined in most cases to the suturing of the perforation. Preoperative and

postoperative treatment is carried out taking into account the duration of pregnancy and fetal condition.

1.7.5.4. OBSTETRIC MANAGEMENT of perforated ulcer is as follows: when the pregnancy up to 12 weeks to show it to interrupt at a later - conservative treatment aimed at preserving the pregnancy. Caesarean section was made based on obstetric indications or simultaneously with surgery at term, to reduce the harmful effects on the fetus. In the case of peritonitis after cesarean section shows hysterectomy with tubes.

1.7.5.5. PREVENTION of peptic ulcer disease during pregnancy should be carried out before pregnancy and is the treatment of gastritis and peptic ulcer disease. During pregnancy, the need for careful monitoring and diet therapy, and at the first sign of worsening - adequate treatment.

1.7.6. TORSION OF OVARIAN TUMORS

Education ovaries occur during pregnancy in 0,1-1,3% of cases and may be asymptomatic. Only 2% of cases there is a rupture of these formations, and torsion - much the cup in 50-60% of patients.

The most common form of the ovary in the first trimester of pregnancy is the corpus luteum, the value of the ovary at the same time rarely exceeds 6 cm in diameter. Among the pathological tumors revealed mature teratoma (21%), serous cystadenoma (21%), corpus luteum cysts (18%), and mucinous cystadenoma (15%).

The diagnosis of ovarian tumors in the first trimester is made by determining the education appendages when bimanual vaginal-abdominal study in the later stages of pregnancy may be determined by the formation of the anterior abdominal wall. The differential diagnosis of ovarian tumors should be done

with tumors of the intestine, subserous myoma node on the leg, pelvic kidney, congenital abnormalities of the uterus.

When the diagnosis of ovarian tumors raises the question of the need for surgical treatment. When unilateral mobile cystic inclusions without surgery can be postponed until the second trimester of pregnancy. Asymptomatic Ovarian education, first diagnosed in the third trimester, usually operate after delivery. Indications for urgent surgery are:

1. availability of education ovary, retained after 15 weeks of pregnancy and having a diameter greater than 6 cm;
2. The formation of the ovary contains a solid component or partitions;
3. in education at US defined internal expansion:
4. The presence of ascites.

Solid ovarian tumors require surgical treatment during pregnancy due to possible in 2-5% of cases the presence of ovarian cancer (the total number of entities of the ovaries), as well as to prevent torsion, rupture or mechanical obstruction in labor. Because of the potential risk of miscarriage in the postoperative period, solid or cystic ovarian education, revealed in the first trimester, surgically removed in the second trimester.

In case of partial torsion legs ovarian tumor clinical picture depends on the speed of eating torsion and its extent. When torsion of up to 180 ° possible regression of the pathological process at 270 ° torsion difficult venous drainage of blood, there are numerous large and small foci of hemorrhage into the wall of the tumor. At full torsion circulation stops and comes tumor necrosis. The clinical picture in the event of torsion legs ovarian tumor characterized by pain, which at first may be unstable, then the pain increases, gradually developing picture of peritonitis and shock.

Torsion legs ovarian tumor occurs most often in the second trimester. It is noteworthy that the right ovary more involved in the pathological process than the left. The differential diagnosis of torsion legs ovarian tumor should

be undertaken with malnutrition myoma node, acute appendicitis, renal colic, intestinal obstruction. In such situations shown emergency surgery: lower-middle laparotomy, salpingo-oophorectomy with the tumor. During the operation, should be very careful, as the capsule of the tumor can easy opening and gets infected contents into the abdominal cavity. Unwinding leg tumor is invalid because it threatens thromboembolism. Postoperatively, therapy should be aimed at maintaining pregnancy.

In 2-5% of cases of ovarian tumor during pregnancy is malignant. Tactics of treatment of ovarian cancer during pregnancy is not different from non-pregnant tactics - surgery: hysterectomy with appendages, resection of the greater omentum. The possibility of such a volume of operation the patient should be warned before the operation.

Adnexal torsion is unusual and occurs predominantly in teenagers and young women. Pregnancy predisposes to adnexal torsion, with 1 in 5 adnexal torsions occurring during pregnancy.[5, 87] The condition is associated with an ovarian mass in 50-60% of patients; the mass is most often a dermoid. Adnexal torsion occurs more frequently on the right than on the left, with a ratio of 3:2. It occurs most frequently in the first trimester, occasionally in the second, and rarely in the third.

1.7.6.1. HISTORY AND PHYSICAL EXAMINATION

Characteristics of adnexal torsion include the following:

- ✓ Pain - Patients present with acute, severe, colicky, unilateral, lower abdominal and pelvic pain; patients may provide a history of prior, intermittent episodes of similar pain
- ✓ Nausea and vomiting - Two thirds of patients also have nausea and vomiting
- ✓ Fever - A low-grade fever can occur

- ✓ Adnexal mass - A tender adnexal mass is palpated in 90% of patients with adnexal torsion

1.7.6.2.WORKUP

If adnexal necrosis has occurred, leukocytosis and fever can develop. Leukocytosis is also observed in normal pregnancy.

Ultrasonography can be useful for documenting the presence of an ovarian cyst. Color Doppler findings can possibly help document absent ovarian flow in the central ovarian parenchyma.[90] If the diagnosis is uncertain, diagnostic laparoscopy can be used.

1.7.6.3. SURGERY

Treatment is surgical, with preservation of as much ovarian tissue as possible.[86] If the tissue is necrotic, removal is warranted and unilateral salpingo-oophorectomy is appropriate. (If a partial torsion is confirmed, conservative management is appropriate.) Untwist the pedicle, remove the cyst, and stabilize the ovary. If removal of the corpus luteum is necessary prior to 10 weeks' gestation, progesterone supplementation is warranted.

1.7.6.4. PROGNOSIS

Pregnancy outcome associated with adnexal torsion generally is good.

CHAPTER II. MATERIAL, METHODS OF RESEARCH.

2.1. SUBJECTS.

2.1.1. CLINICAL CHARACTERISTICS OF EXAMINED PATIENTS:

To perform the tasks selected a specific program prospective and retrospective studies. In connection with the foregoing, prospectively and retrospectively studied 48 had histories of birth and pregnant women, operated and treated for acute abdomen during gestation from 13 to 38 weeks for the periods 2009-2013. Material for the study collected prospectively, when it produced a complex clinical, laboratory and instrumental examination and treatment of pregnant women with symptoms of acute abdomen, seeking medical care in Samarkand branch of RSCEC and Maternity Hospital №3 Samarkand, and in retrospect, by examining historical data stories diseases and childbirth.

2.1.2. CRITERIA FOR INCLUSION OF PATIENTS IN THE STUDY.

The sample included pregnant women who were hospitalized with acute abdominal pain in the emergency department of gynecology and surgery in Samarkand branch of RSCEC, as well as in the department of pathology of pregnancy and obstetric of maternity complex №3 Samarkand from 2009 to 2013.

2.1.3. EXCLUSION CRITERIA.

The study did not include pregnant women with abdominal pain caused by obstetric pathology, i.e., which could be directly connected with pregnancy, as well as nonspecific abdominal pain.

2.2. RESEARCH METHODS.

2.2.1. GENERAL CLINICAL METHODS.

In hospital all pregnant had a complete clinical examination. In addition to the general survey carried out a complete blood count, urinalysis, blood chemistry, blood type, Rh factor, ultrasound, electrocardiography, esophagogastroduodenoscopy. Pregnant women who underwent surgical treatment were examined by a physician, anesthesiologist. If necessary, the women were examined other related professionals, such as traumatologist, urologist. All women carefully took the history. When taking the history we paid special attention to the course of pregnancy, eating habits, presence extragenital diseases.

2.2.2. OBSTETRIC AND GYNECOLOGICAL EXAMINATION.

All pregnant women be subject to mandatory obstetric examination, to listen to the fetal heartbeat Doppler stethoscope and if allowed gestation, as well as a pelvic exam.

2.2.3. ULTRASOUND EXAMINATION.

Due to the versatility, safe, painless and easy preparation, as a special method of examination of pregnant women with suspected acute abdominal pathology repeatedly carried ultrasound. It helps to clarify the extent and stage of the lesion of an organ, to assess the condition of the abdominal organs and urogenital system and monitor the results of treatment. To conduct the study used ultrasound machines Aloka SSD 1100 and Voluson 730 Pro.

2.2.4. EGDS.

In one case out of 48 we used endoscopy to clarify the diagnosis.

2.2.5. HISTOLOGICAL STUDY OF PREPARATIONS OBTAINED DURING SURGERY.

In the course of the survey studied extragenital diseases and the relationship of these diseases with the etiology of acute abdomen in pregnancy.

The entire volume of research conducted in pregnant women is presented in Table 1.

TABLE 1.

№	Direction of research studies	Methods	Volume
1	The study of history	1. Medical history of life and disease. 2. The study of the flow of the present and previous pregnancy if they were.	48 pregnant women with clinical acute abdomen.
2	General clinical research methods	1. Complete blood count. 2. Urinalysis	48 pregnant women with clinical acute abdomen.
3	Assessment of the state of the genitals	Evaluation of genital pelvic examination (palpation and visual inspections)	48 pregnant women with clinical acute abdomen.
4	Assessment of the abdomen and pelvic organs	1.Examination of the surgeon.	1. 48 pregnant women with

		2. Inspection of the urologist, traumatologist, and other related professionals. 3.US 4. EGDS	clinical acute abdomen. 2. 48 pregnant women with clinical acute abdomen. 3. 48 pregnant women with clinical acute abdomen. 4. 1 pregnant woman with clinical acute abdomen.
5	Assessment of fetal	US	48 pregnant women with clinical acute abdomen.
6	Enzymatic Determination of blood	blood amylase	1 pregnant woman with clinical acute abdomen.

CHAPTER III. RESULTS AND DISCUSSION.

We have prospectively and retrospectively studied the history of childbirth and diseases 48 pregnant women with a diagnosis of acute abdomen admitted and received medical care in the maternity hospital №3 of Samarkand and the Samarkand branch of RSCEC.

Of the 48 women 6 enrolled in Maternity Hospital №3 of Samarkand, and 42 in Samarkand branch RSCEC.

Of these city dwellers accounted for - 10 (20.8%) and amounted village - 38 (79.2%), Fig. 3.1.

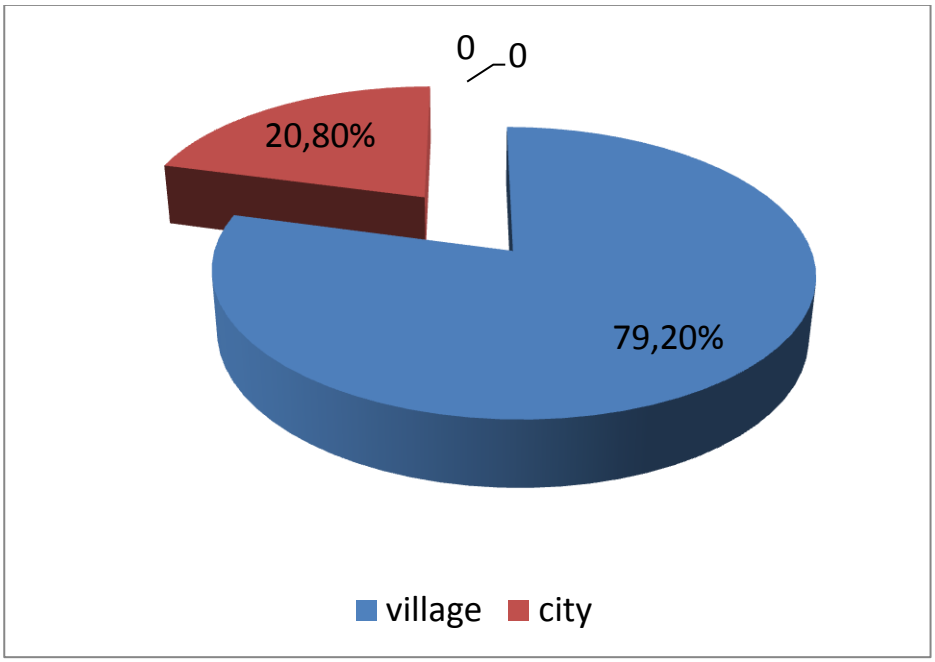


Fig. 3.1. The distribution of patients in the community

According to the literature, most diseases that cause acute abdominal pain seen in pregnant women aged 20-30 years, t. E. In the period of childbirth (N.A. Vinogradov). Age of women surveyed ranged from 18 to 36 years.

Women aged:

- from 18 to 24 years was 19,

- from 25 to 30 years - 18,
- from 31 to 36 years - 11.

According to our observations, acute abdomen often observed from 18 to 24 years and from 25 to 30 years, which is consistent with the data of other authors. The age distribution is graphically represented in the chart below (Fig. 3.2).

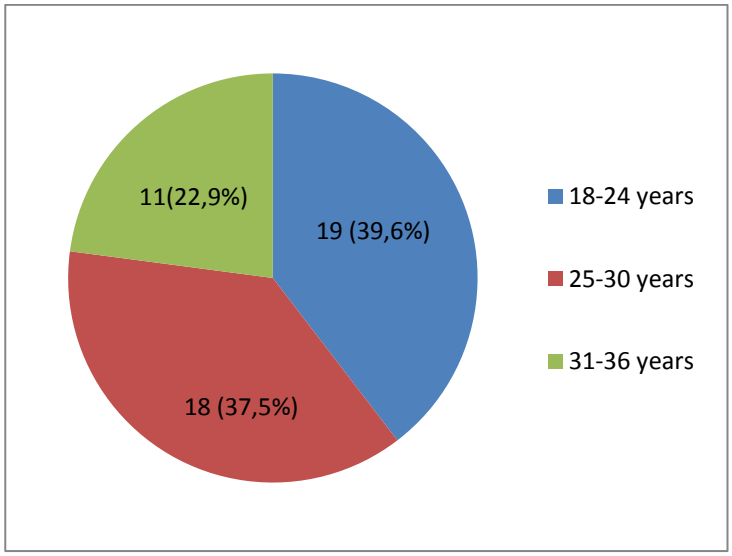


Fig.3.2. Distribution of pregnant women by age.

Clinical manifestations of acute abdomen were erased for 28 (58.3%) pregnant.

In patients with acute abdomen were determined by the following symptoms:

• Nausea - 81.25%;

• Local abdominal pain - 100%

• Vomiting - 23.4%;

• Heartburn - 3.1%;

• Loss of appetite - 84.3%;

• Increased body temperature - 52.12%;

• Bloating - 2.4%;

• Symptom Kocher-Volkovich (migration of epigastric pain in the right lower quadrant of the abdomen) - 76.15%
• Symptom Ortner (pain during effleurage right costal edge of his hand) - 4.2%;
• Symptom Kerr (increased pain with a deep breath when palpated hand touches the inflamed gallbladder) - 4.2%;
• Symptom Murphy (involuntary breath holding at inspiration at a pressure in the region of the right hypochondrium) - 4.2%;
• Musset's sign (pain on palpation between legs right Sternocleidomastoid muscle) - 6.2%;
• symptom local muscle protection in the right iliac region - 62.12%;
• symptom Sitkovskiy (with the patient on the left side exacerbated pain in the right iliac region) - 32.4%;
• symptom Rovzinga (increased pain in the right iliac region with compression of the sigmoid colon and jerky while pressure on the descending colon) - 35.3%;
• symptom Cheremskih-Kouchnirenko (during coughing exacerbated pain in the right iliac region) - 47.8%;
• symptom Brando (determined by pain on the right when pressing on the left edge of the pregnant uterus) - 47.8%;
• symptom Rizwan (during deep inspiration is enhanced pain in the right iliac region) - 47.8%;
• reflected pain symptom - 53%;
• constipation - 3.1%;
• pain in the abdomen and in the lumbar region - 79.2%.

As we can see, the clinical symptoms of acute abdomen a large number, but for each disease, leading to acute abdomen, there are characteristic signs. Such symptoms as nausea, malaise, fever, lack of appetite met almost 85% of

the surveyed pregnant. Vomiting, a symptom Ortner, Kerr symptom, a symptom Murphy, De Musset's sign were observed in women with acute cholecystitis, with vomiting than did not bring them any relief. Symptom local muscle protection was observed in all observed cases. Symptoms Sitkovskiy, Rizwan, Rovzinga, brand, Cheremskih-Kushnerenko were a characteristic feature of acute appendicitis.

Time from onset of the disease in our study was different:

4 (8.3%) women sought medical help within the first 1.5 hours; 6 (12.5%) - 3 hours; 4 (8.3%) - 6 hours; 3 (6.3%) - 7 hours; 4 (8.3%) - 8 hours; 5 (10.4%) - 10 hours; 8 (16.6%) - 12 hours; 11 (22.9%) - 18 hours; 3 (6.3%) - 24 hours (Fig. 3.3.).

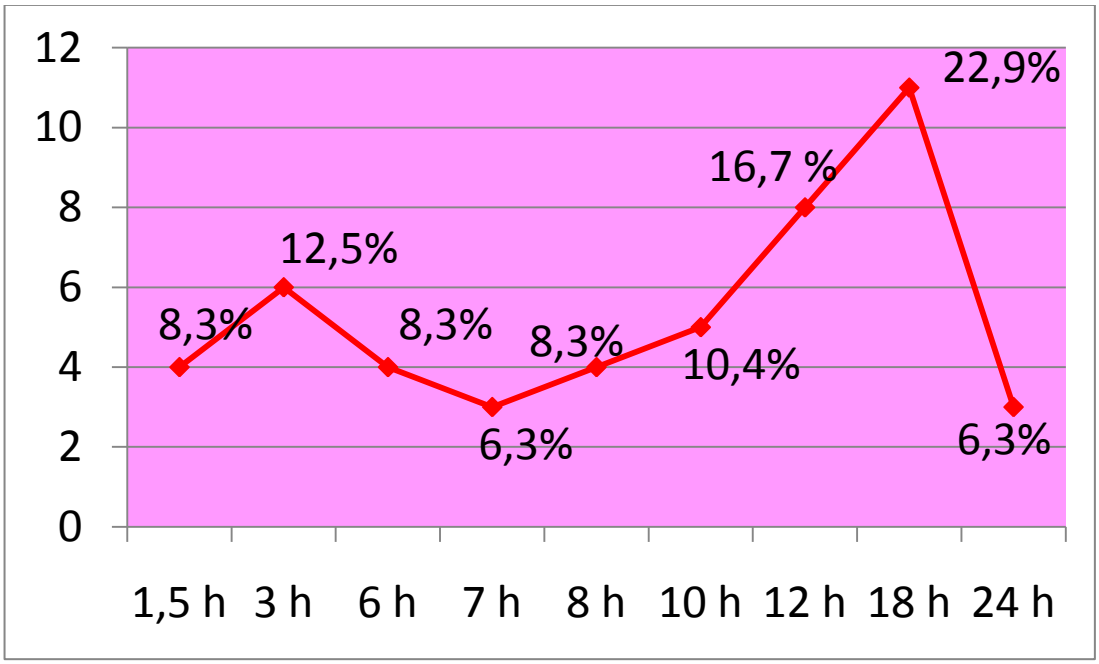


Fig.3.3. Time from onset to treatment.

In connection with atypical clinical picture of acute abdomen, time to onset of surgery, according O.V.Makarov, almost 80% of the patients more than 12 hours, and every fourth - more than one day, thereby increasing the frequency of complicated forms of the disease. In our study, 53% of women seeking

care more than 12 hours, which is much smaller than the data of other authors.

Women pregnant for the first time, there were 22 (46.8%) and multiparous - 26 (53.2%) (Fig. 3.4.).

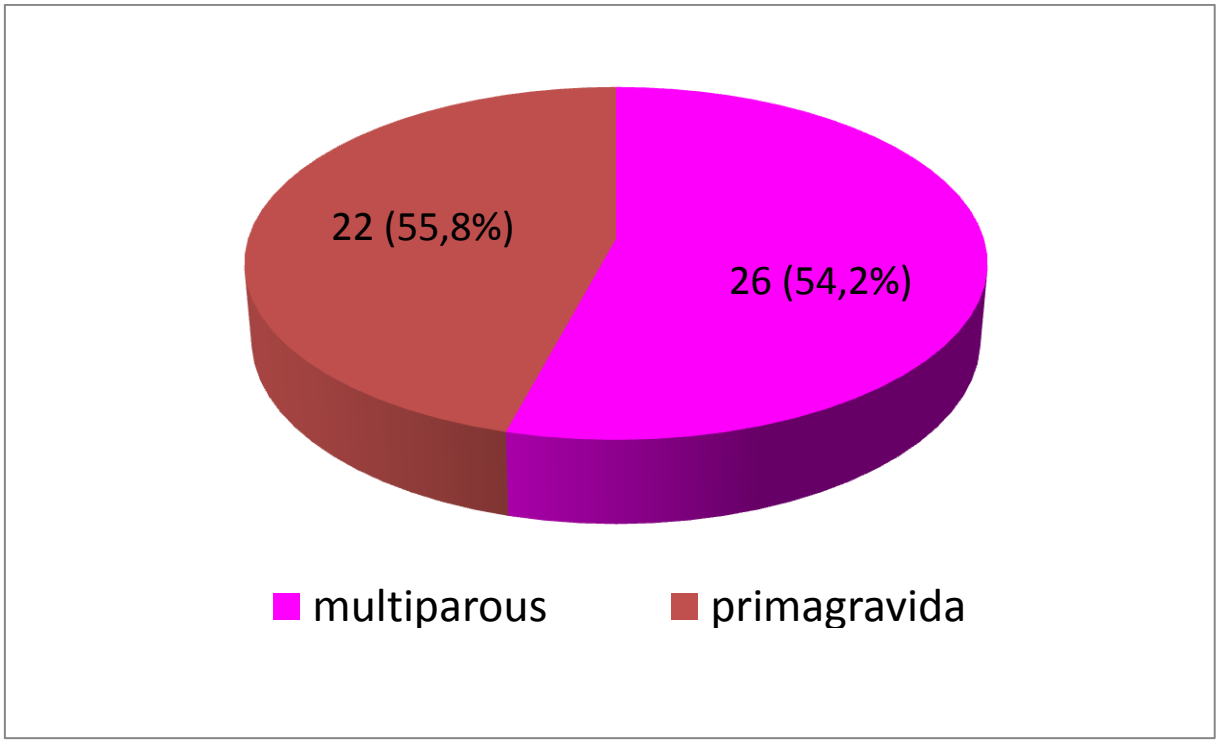


Fig.3.4. Parity pregnant

Transferred extragenital diseases in pregnant women surveyed.

№	disease	n	%
1.	Cardiovascular system	2	4,2%
2.	respiratory system	4	8,4%
3.	Gastrointestinal tract	14	29,2%
4.	The urinary system	3	6,25%

5.	organ of vision	3	6,25%
6.	other diseases	3	6,25%

When you receive a set of patients was carried out laboratory and instrumental studies, including ultrasound (Fig.3.5, 3.6)

Figure 3.5. Ultrasound examination. Phlegmonous appendicitis: appendix with thickened wall (1), the lumen is not expanded (2).

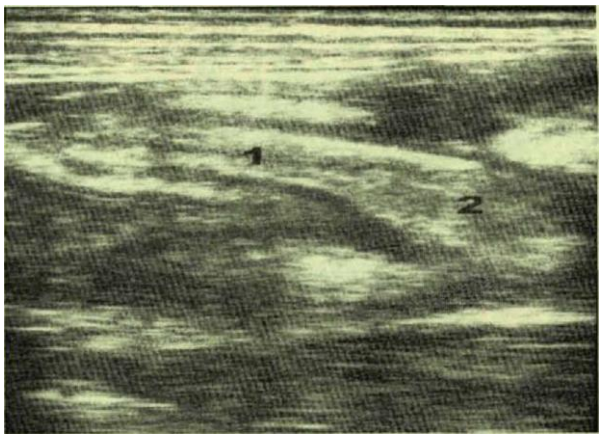
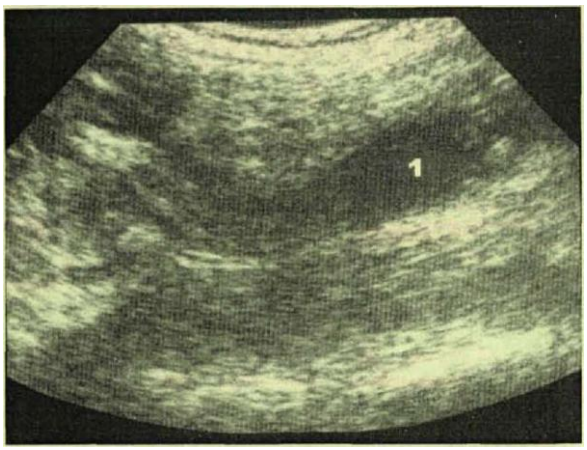


Figure 3.6. Ultrasound examination. Gangrenous appendicitis: the destruction of the distal portion of the appendix (1)



COMPLETE BLOOD COUNT

Type of study	Count of research	Normal	data interpretation
Hemoglobin	48	120-140g/l	below 70 g/l – 2 70-90 g/l – 46 above 90 g/l – 0
erythrocytes	48	3,9-4,7*10^{12}/l	Below normal – 1

			normal- 46 above normal - 1
CI	48	0,85-1,05*10^9/l	Below normal – 1 normal- 46 above normal - 1
leukocytes	48	4,8-9,0*10^9/l	Below normal – 0 normal- 2 above normal - 46
platelets	48	180-320*10^9/l	Below normal – 1 normal- 46 above normal - 1
stab	48	1-6%*10^9/l	normal – 1 above normal - 47
segmented	48	47-42%*10^9/l	normal - 48
eosinophils	48	0,5-5	normal - 48
basophils	48	0,1-0,55	-
monocytes	48	3-11	normal – 46 above normal - 2
lymphocytes	48	19-37	normal – 46 above normal - 2
ESR	48	2-15mm/h	above normal - 48

These indicators may correspond to physiological changes in the blood during pregnancy. Similar results were obtained I.P.Korkan (1990). We have not found any pattern of the pain depending on the duration of pregnancy, as it depends on many factors, take into account that in each case it is not possible: the constitution, the size of the pelvis, number of pregnancies, the tone of the anterior abdominal wall, previously transferred inflammatory diseases abdominal surgery.

In general, the analysis of urine in 4 patients was discovered protein in 2 patients white blood cell count higher than normal. The other pregnant women data urinalysis were within normal limits.

1. Determination of blood group ABO system showed:

a. About (I) group of 19 (39.6%)

b. A (II) group of 20 (41.7%)

c. In (III) group of 8 (16.7%)

d. AB (IV) Group 1 (2%)

2. (Rh) Rh factor:

a. (Rh) Rh - positive - in 39 (81.6%)

b. (Rh) Rh - negative - 9 (18.4%)

The results of ultrasound showed:

- The presence of a gestational sac in the uterus - 48 (100%)
- Pneumatosis - 24
- Increase in the tone of the uterus - 46
- Effusion in the right iliac region - 38
- Pyelectasia - 4
- CFPI - 5
- Urolithiasis - 1

- Choledocholithiasis - 3
- Torsion of an ovarian cyst - 4
- Free gas in the abdominal cavity - 1
-pankreatitis - 1

The results of EGDS:
- Erosive esophagitis - 1
- Erosive gastritis – 1

For anesthetic management 44 (91.7%) pregnant women conducted ECG.
The results of the laboratory tests used to diagnose a disease during pregnancy are estimated differently than usual. Diagnostic value has increase in white blood cells more than 12.5 * 109 / L in any trimester of pregnancy, as well as leukocyte shift to the left (Saveliev BC, Krieger AG).

Each diagnosis was confirmed by clinical and laboratory-instrumental. Among the causes of acute abdomen acute appendicitis was observed in 28 pregnant women (58.3%), acute cholecystitis - in 2 (4.2%), ovarian cyst torsion legs - in 6 (12.5%), erosive gastritis - in 1 (2 1%), acute pancreatitis - in 1 (2.1%), acute intestinal obstruction - in 6 (12.5%) and trauma to the abdominal organs - in 4 (8.4%) (Figure 3.7).

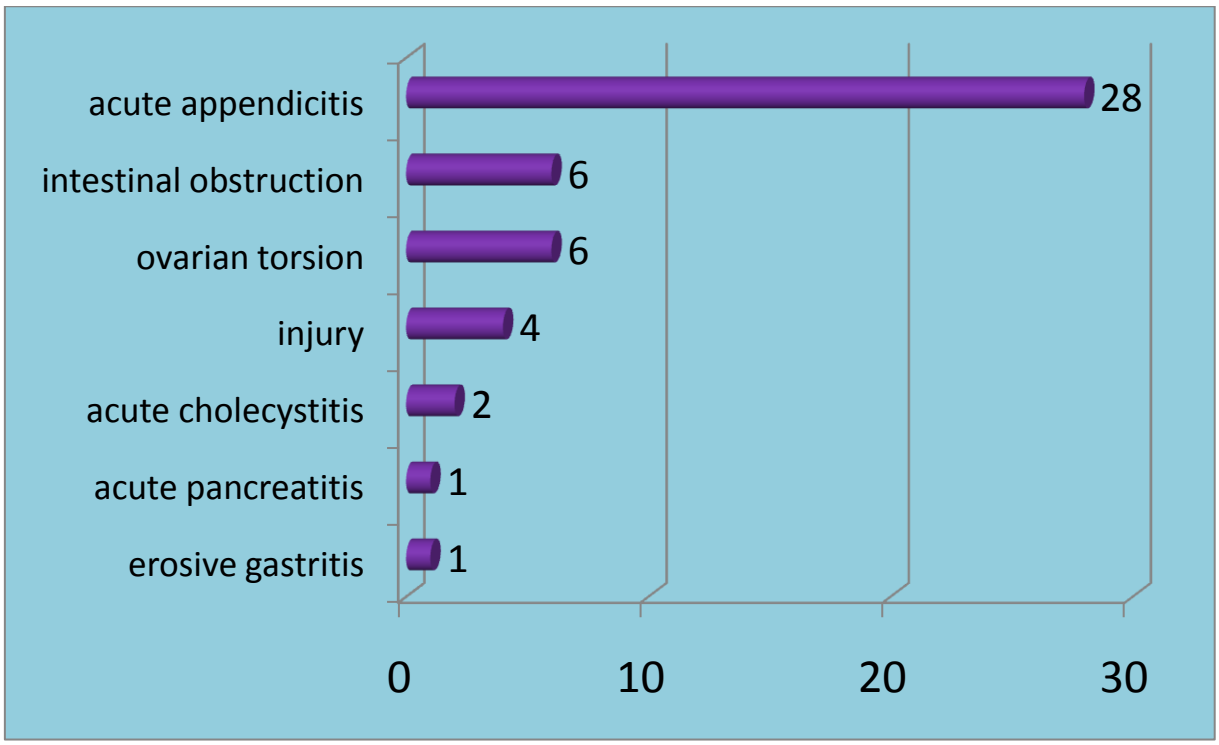


Figure 3.7. Causes of acute abdomen during pregnancy.

Therefore, according to our data, the most common cause of acute abdomen - 58.3%, acute appendicitis is that less data Savelyev V.S. et al. - 90%, but still they are not inconsistent with the data of other researchers that the first place among the diseases causing acute abdomen, occupies acute appendicitis. Thus appendicitis is more common in the second half of pregnancy (72.6% - A.A. Zykov et al.).

Diagnose diseases caused by acute abdomen becomes difficult due to the increase of the duration of pregnancy. Up to 16 weeks of pregnancy diagnosis of acute abdomen more or less simple. In the later stages of pregnancy diagnosis is difficult, especially diagnosis of acute appendicitis, because by this time the cecum with the vermiform appendix is usually shifted upward in the right hypochondrium; exception to this are cases of so-called pelvic position of the appendix, which causes clinical features of the disease and creates difficulties in the diagnosis, as well as impact on surgical technique and postoperative course. Since we studied the characteristics of acute

abdomen of pregnant women in II and III trimester of pregnancy, it is important to note that pregnant women in the second trimester II (13 to 28 weeks of gestation) were 26 pregnant women (54.2%) and in the III trimester (from 29 to 38 weeks of gestation) - 22 pregnant women (46.8%) (Figure 3.8.).

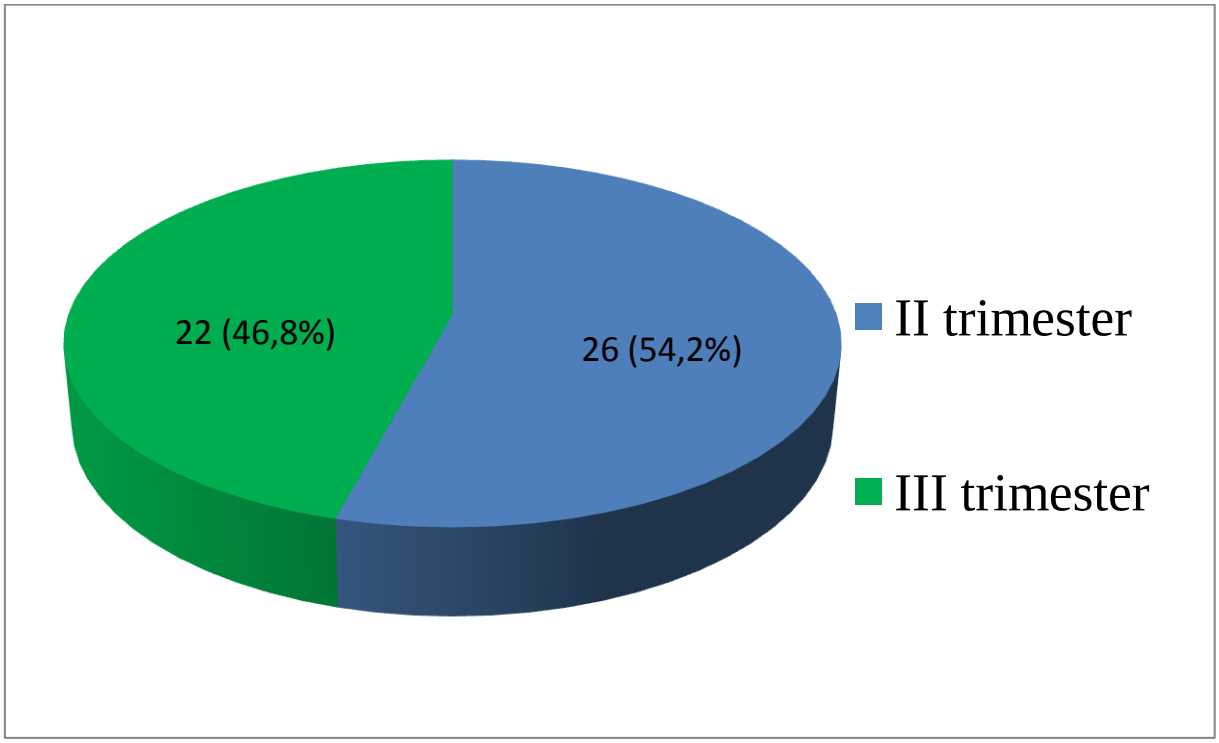


Figure 3.8. Distribution of pregnant women for gestational age.

According to the collected history of pregnancy, 18 pregnant women previously noted the threat of termination of pregnancy, on which women were treated in hospital.

Pregnancy complications are not uncommon in the event of an acute abdomen, according to the Greenough A., J. Osborne., And S. Sutherland observed in 79% of pregnant women, and according to our data, in 66.7% of cases were threatening the state by the pregnant uterus (Fig.3.9 .).

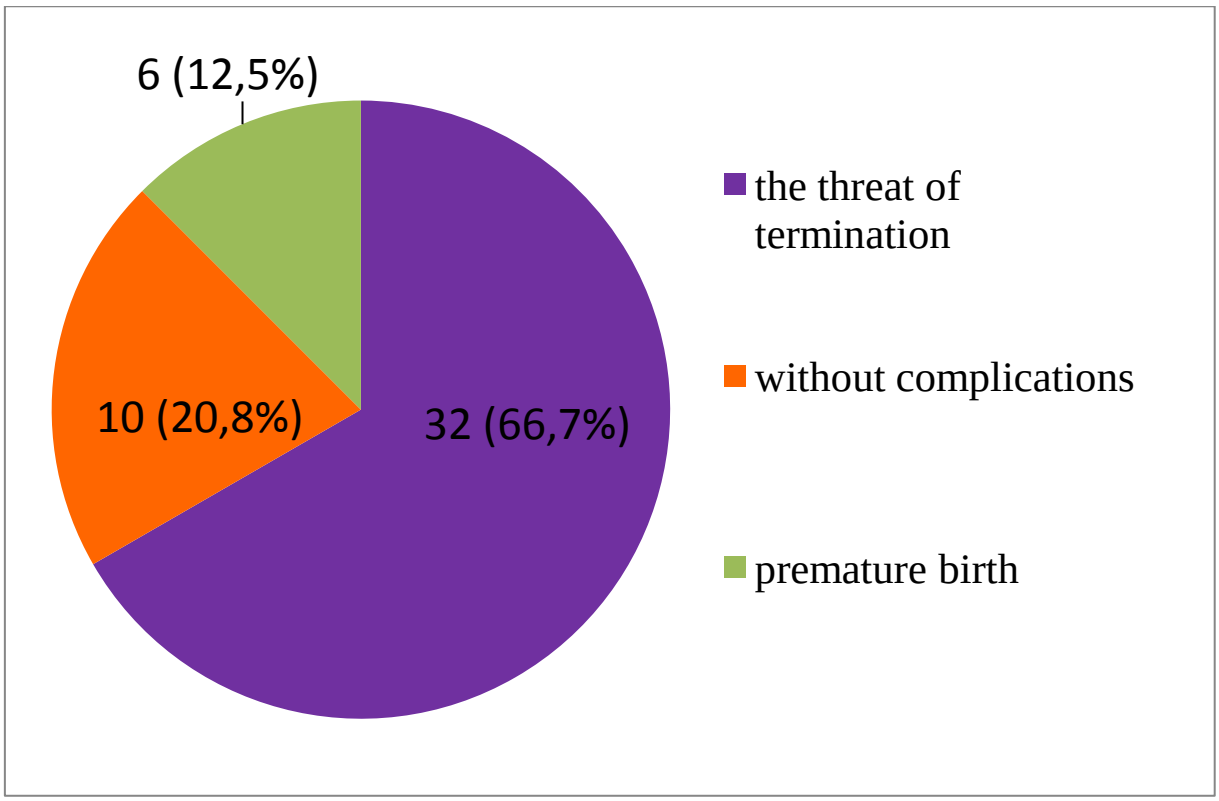


Fig.3.9. Complications of pregnancy with acute abdomen.

After the examination and inspection related professionals have been identified comorbidities (Figure 3.10.).

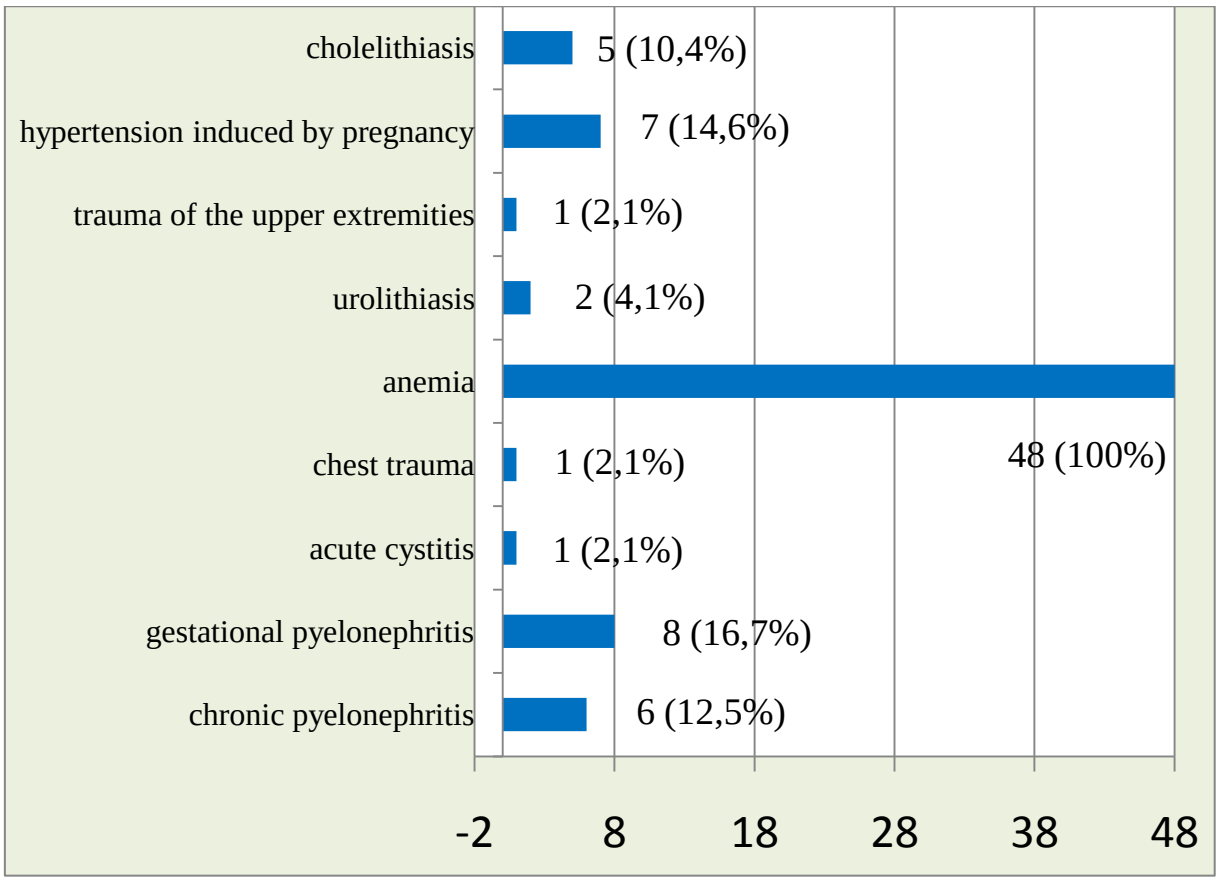


Figure 3.10. Comorbidities.

Anemia in varying degrees of severity was observed in all pregnant women.

Injuries of the upper limbs and chest were observed at 2.1% in women with closed injuries of the abdominal cavity.

Gallstone disease was studied in 5 women, with 2 of them we observed acute cholecystitis, and at 1 - acute pancreatitis.

In 7 women were diagnosed as hypertension induced by pregnancy, in its different variations. Among them: 1 woman in hypertension induced by pregnancy is associated pathology in acute pancreatitis in 1 case in acute cholecystitis and 5 cases of acute appendicitis. According to O.V.Makarova, gestational hypertension may be the etiologic agent of acute pancreatitis.

Analyzing data histories and childbirth, causes of acute abdomen in the II trimester of pregnancy were more acute appendicitis, torsion legs ovarian tumor, acute intestinal obstruction and traumatic injury of the abdominal

cavity and in the III trimester - acute pancreatitis, acute cholecystitis and erosive gastritis (Figure 3.11.).

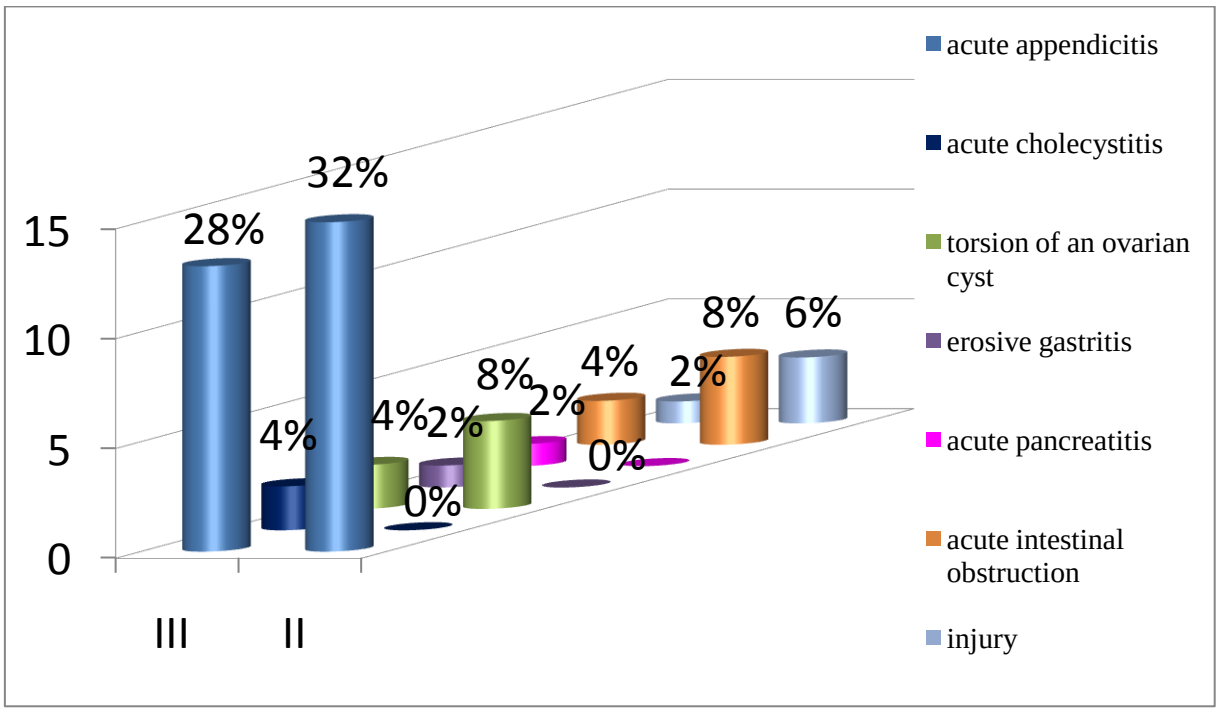


Fig. 3.11. Causes of acute abdomen in different trimester of gestation.

The choice of treatment regimens for acute abdomen depends on the disease that caused this clinical picture. Indications for emergency surgery in pregnant women are the same as for other patients (D.Taylor, R.Perry). After the survey, 42 pregnant women received emergency surgical treatment, the other 6 - conservative treatment (Fig.3.12.)

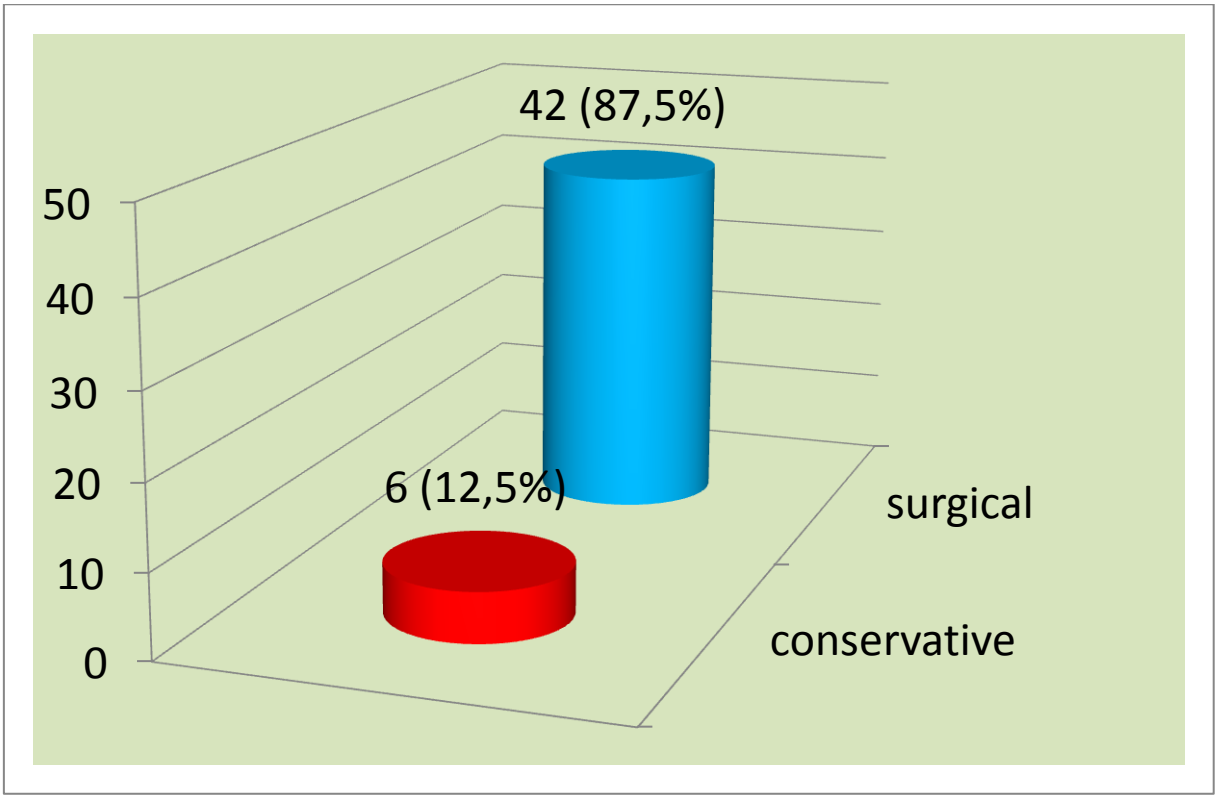


Fig.3.12. Methods of treatment.

After a survey conducted in the absence of contraindications start to prepare patients for surgery, if it was necessary. Patients with a diagnosis of acute appendicitis (28; 58.3%) (Fig.3.13, 3.14), torsion of ovarian tumor stem (6; 12.5%), acute intestinal obstruction (4; 8.3%), acute cholecystitis (2; 4.2%), injury of the abdominal cavity (2; 4.2%), (which totaled 87.5% of all patients) were operated on an emergency basis during the first day of hospitalization. 6 pregnant women (12.5%) received conservative treatment of diseases caused by the clinic of acute abdomen. Women with erosive gastritis and acute pancreatitis received conservative treatment.

4 patients with acute intestinal obstruction performed surgical treatment, 2 - received conservative treatment.

Women admitted with traumatic abdominal organs in 2 cases had surgery, and in 2 cases received conservative treatment.

38 (79.2%) got pregnant with the pregnancy therapy with conservative and surgical treatment of diseases caused by the clinic of acute abdomen and in

the postoperative period. In 1 (2,1%) case of pregnant women with acute pancreatitis, there was a spontaneous miscarriage, in other cases, the pregnancy has been saved. In 2 case (4,2%) at 33 and 36 weeks of gestation was performed cesarean section with lower-middle access, followed by appendectomy and sanitation of the abdominal cavity.

Figure. 3.13. Location of the appendix after surgery cesarean section.

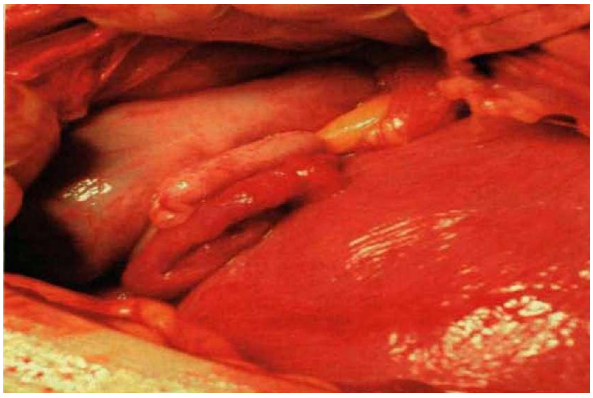
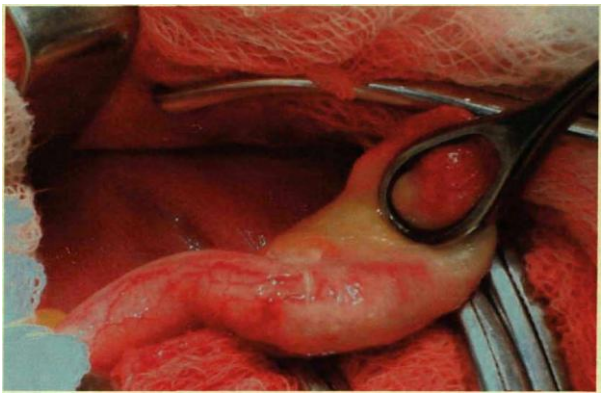


Figure 3.14. Clinical observation. Location appendix gestation of 20 weeks.



38 (79.2%) of pregnant women received treatment with the pregnancy. As pregnancy preserving therapy was administered:

- Physical rest, adherence «bed rest»;
- Psychotherapy, sedatives: decoction of motherwort, valerian;
- Tocolytic therapy: 10 mg nifedipine sublingually, ginipral 10 mg in 500 ml of sodium chloride 0.9%.

For the prevention of fetal distress dexamethasone administered 6 mg / m 4 doses every 12 hours.

In 100% of cases of acute appendicitis was performed emergency surgery followed by histological examination macropreparations remote. The incision was made at Dyakonov-Volkovich and depending on the gestational age above the line passing through the Mac Burney. Pregnant women diagnosed

with ovarian cyst torsion, cystectomy was performed on the right or left depending on the location.

In order to prevent postoperative septic complications and infection in utero pregnant, regardless of gestational age and clinical and morphological forms of acute disease in the postoperative period was conducted antibacterial therapy, which was held in the II and III trimester of penicillins or cephalosporins.

In 2 cases, surgery was performed caesarean section 33 of gestation and 36 weeks, followed by appendectomy, postoperative woman also received antibiotic therapy, 1 case was performed cesarean section followed by cystectomy.

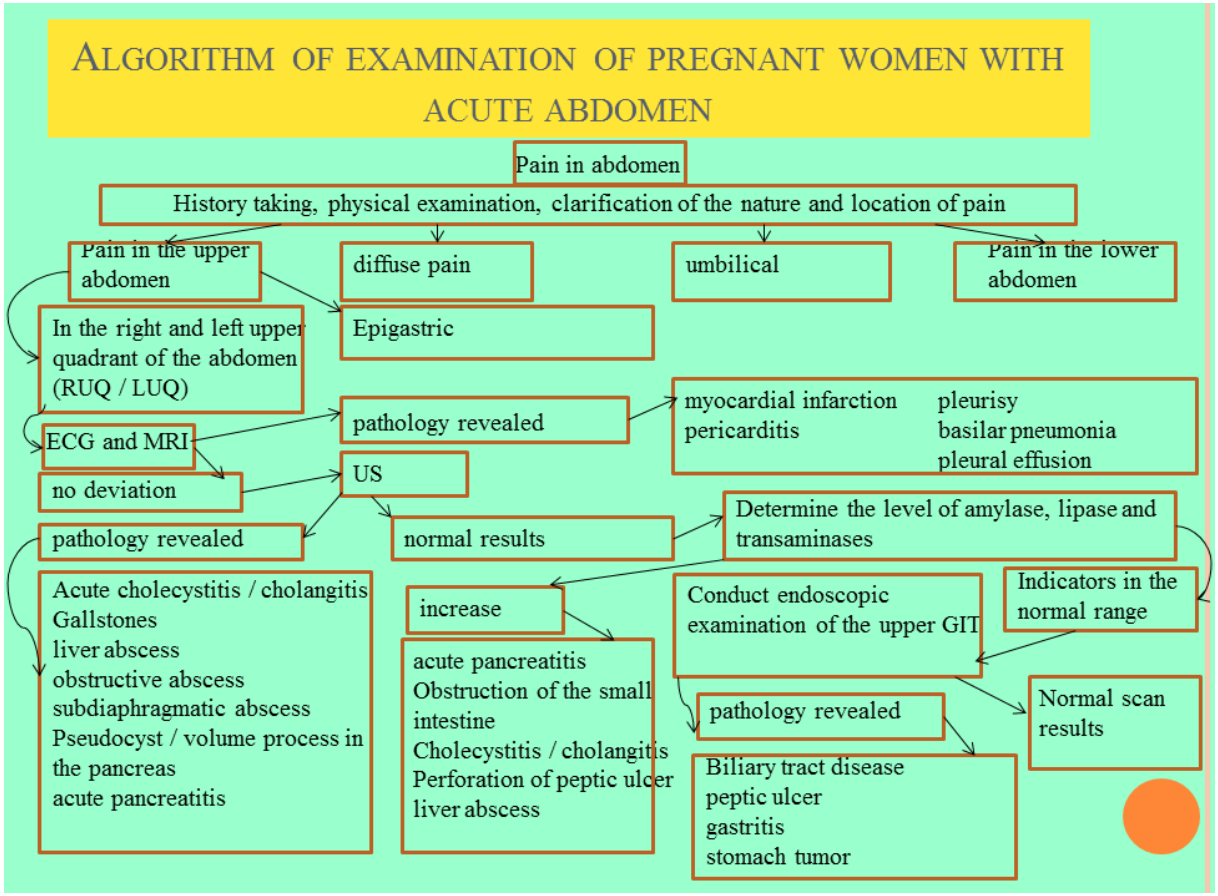
CONCLUSIONS:

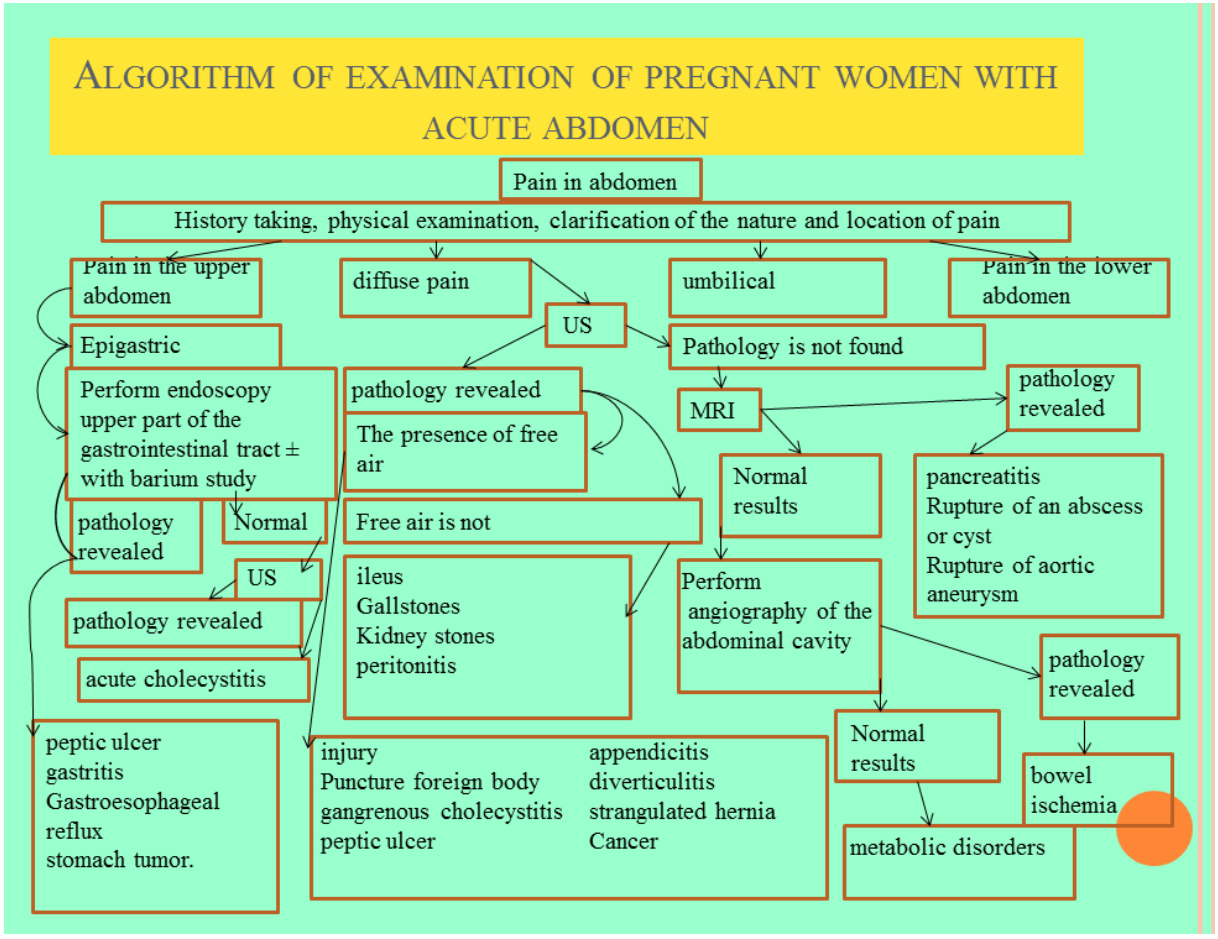
1. The use of high-tech research methods and modern laboratory tests in pregnant women with acute abdomen allowed in 58% of the diagnosis of acute appendicitis in 13% - torsion legs ovarian cyst and acute intestinal obstruction, 4% - acute cholecystitis and 2% - erosive gastritis and acute pancreatitis.

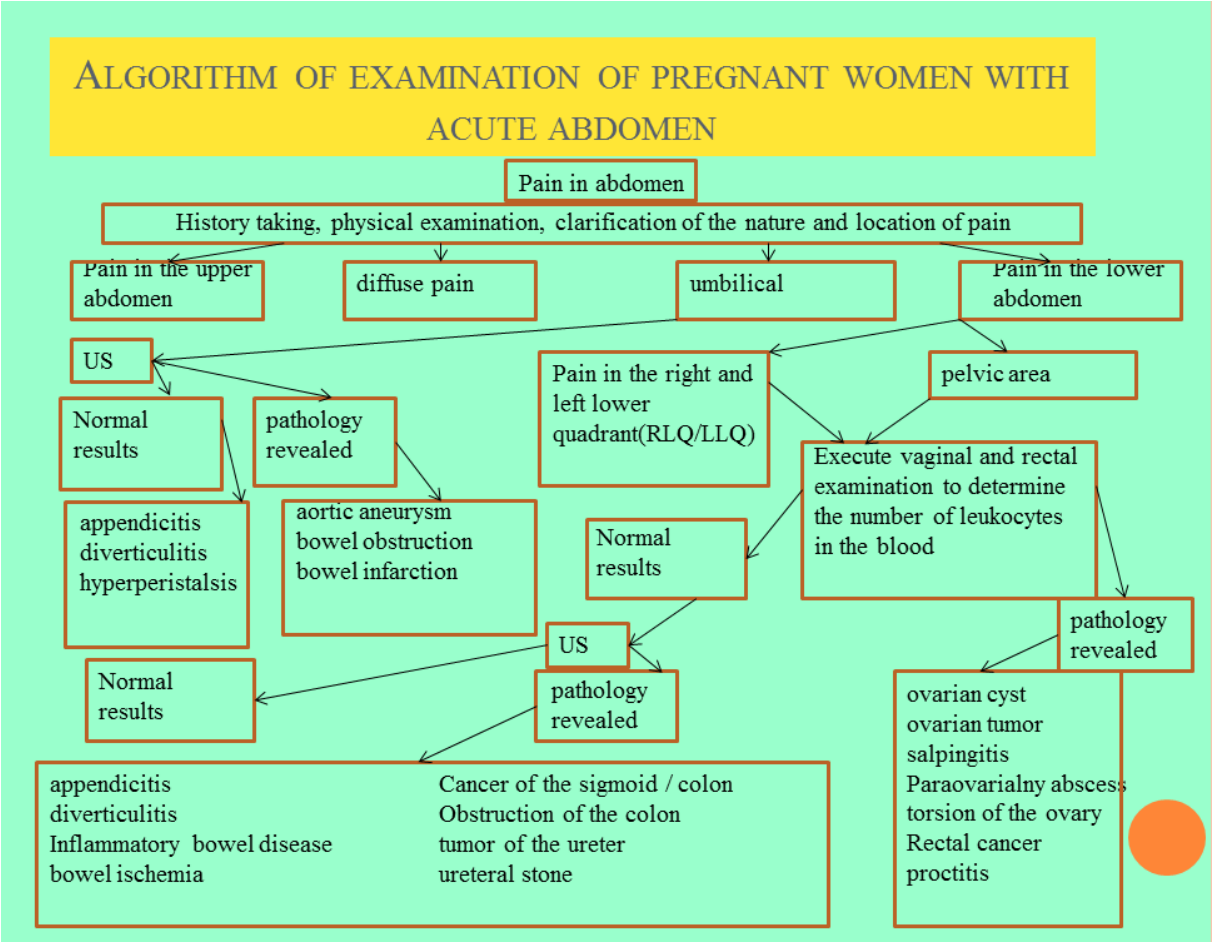
2. The clinical picture of acute abdomen features a large variety of symptoms, depending on the calling of the disease and the most common causes of acute abdomen in the II trimester are acute appendicitis (31.3%), ovarian cyst torsion legs (8.3%), acute intestinal obstruction (8.3%) and traumatic injury of the abdominal cavity (6.3%) and in the III trimester - acute cholecystitis (4.2%), erosive gastritis (2.1%) and acute pancreatitis (2.1%).

3. Acute abdomen was the indication for surgical treatment in 88% of cases. Indication for surgery in pregnant women with acute surgical pathology is the presence of characteristic pain and objective evidence of disease of the abdominal cavity.

4. The threat of termination of pregnancy in the early postoperative period is observed in 72% and continues throughout gestation in 15% of pregnant women.


ALGORITHM OF EXAMINATION OF PREGNANT WOMEN WITH ACUTE ABDOMEN
Pain in abdomen
History taking, physical examination, clarification of the nature and location of pain
Pain in the upper abdomen
diffuse pain
umbilical
Pain in the lower abdomen
Epigastric
In the right and left upper quadrant of the abdomen (RUQ / LUQ)
ECG and MRI
pathology revealed
myocardial infarction
pericarditis
pleurisy
basilar pneumonia
pleural effusion
no deviation
US
pathology revealed
normal results
Determine the level of amylase, lipase and transaminases
Acute cholecystitis / cholangitis
Gallstones
liver abscess
obstructive abscess
subdiaphragmatic abscess
Pseudocyst / volume process in the pancreas
acute pancreatitis
increase
Conduct endoscopic examination of the upper GIT
Indicators in the normal range
acute pancreatitis
Obstruction of the small intestine
Cholecystitis / cholangitis
Perforation of peptic ulcer
liver abscess
pathology revealed
Normal scan results
Biliary tract disease
peptic ulcer
gastritis
stomach tumor


ALGORITHM OF EXAMINATION OF PREGNANT WOMEN WITH ACUTE ABDOMEN
Pain in abdomen
History taking, physical examination, clarification of the nature and location of pain
Pain in the upper abdomen
diffuse pain
umbilical
Pain in the lower abdomen
Epigastric
US
Pathology is not found
Perform endoscopy upper part of the gastrointestinal tract ± with barium study
pathology revealed
MRI
pathology revealed
The presence of free air
Normal results
pancreatitis
Rupture of an abscess or cyst
Rupture of aortic aneurysm
pathology revealed
Normal
Free air is not
US
ileus
Gallstones
Kidney stones
peritonitis
Perform angiography of the abdominal cavity
pathology revealed
pathology revealed
acute cholecystitis
Normal results
bowel ischemia
peptic ulcer
gastritis
Gastroesophageal reflux
stomach tumor.
injury
Puncture foreign body
gangrenous cholecystitis
peptic ulcer
appendicitis
diverticulitis
strangulated hernia
Cancer
metabolic disorders


ALGORITHM OF EXAMINATION OF PREGNANT WOMEN WITH ACUTE ABDOMEN
Pain in abdomen
History taking, physical examination, clarification of the nature and location of pain
Pain in the upper abdomen
diffuse pain
umbilical
Pain in the lower abdomen
US
Normal results
pathology revealed
appendicitis
diverticulitis
hyperperistalsis
aortic aneurysm
bowel obstruction
bowel infarction
Pain in the right and left lower quadrant(RLQ/LLQ)
pelvic area
Execute vaginal and rectal examination to determine the number of leukocytes in the blood
Normal results
US
Normal results
pathology revealed
pathology revealed
appendicitis
diverticulitis
Inflammatory bowel disease
bowel ischemia
Cancer of the sigmoid / colon
Obstruction of the colon
tumor of the ureter
ureteral stone
ovarian cyst
ovarian tumor
salpingitis
Paraovarialny abscess
torsion of the ovary
Rectal cancer
proctitis

PRACTICAL RECOMMENDATIONS:

1. For the diagnosis of diseases causing acute abdomen during pregnancy is necessary to use complex clinical laboratory and high-tech methods.
2. In order to prevent postoperative septic complications and infection in utero pregnant, regardless of gestational age and cause of acute abdomen in the postoperative period showed antimicrobial therapy.
3. In addition to surgical or conservative treatment of acute abdomen complex therapy, including tocolytic aimed at prolonging pregnancy.
4. Acute abdomen is not an indication for emergency abortion, so after both surgical and conservative treatment, childbirth can be carried out in a subsequent vaginal delivery.

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