

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

BUKHARA MEDICAL INSTITUTE NAMED AFTER ABU ALI IBN SINO

DEPARTMENT OF PEDIATRIC DENTISTRY



Educational and methodical complex  
for 4th year students on the subject

**"Errors and complications in pediatric dentistry"**

Field of knowledge - 500000 "Health and social security"

Field of education - 510000 "Health care"

Direction of education - 5510400 "Dentistry"

Bukhara – 2021

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"I approve"

Vice-Rector for Academic and  
Educational Work

\_\_\_\_\_ G.Zh. Zharylkasynova

" \_\_\_\_\_ " \_\_\_\_\_ 2021 y.

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**"ERRORS AND COMPLICATIONS IN PEDIATRIC DENTISTRY"**

Field of knowledge - 500000 "Health and social security"

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Bukhara – 2021

The educational and methodical complex is developed on the basis of the curriculum of the subject "Errors and complications in pediatric dentistry" registered by the Ministry of Higher and Secondary Special Education

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The educational and methodological complex was compiled on the basis of the curriculum and curriculum in the direction 5510400 - Dentistry, discussed and approved at the cathedral meeting.

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The educational and methodological complex was discussed and approved at the Central Methodological Council of the Bukhara State Medical Institute.

Protocol № \_\_\_\_\_ " \_\_\_\_ " \_\_\_\_\_ 2021 y.

**Methodist:**

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Zhumaeva Sh.B.

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## 1. TRAINING MATERIALS

## 1.1 LECTURE CLASSES

### Lecture No 1

Subject: Errors and complications in the formation and dissecting of cariosis cavity in childhood.

#### 1.1. Technology models by education

Class time 80 minutes	Number of students 18-36
View of the class	Introduction of news on lectures
Lecture plan 1. Etiology. Pathogenesis. Classification of tooth decay	Familiarity with etiology, pathogenesis, classification of tooth decay.
The task of the training session	The basis for the prevention of tooth decay.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

#### 1.2. Technology map of lecture sessions

Stages of work	Teacher	Student
Preparation stages (5 minutes)	1.Student performance check 2.Preparing slides on lecture material 3.Literature on the topic T.H.Safarov, I.H.Khalilov - "Bolalar Davolas dentistry amalia kulllanma" T-1997 y. N.V.Kuryakina - "Therapeutic Dentistry of Childhood."	<b>Listens and records</b>
1.Introduction (15 minutes)	<ul style="list-style-type: none"> <li>1.The purpose and objectives of the lecture material: Goal: To give the concept of ethiopathogenesis of tooth decay in children. Pay special attention to the clinical classification and features of the course of tooth decay in children. Teach to properly conduct differential diagnosis of</li> </ul>	<b>Listen Answers students' questions</b>

	<p>surface tooth decay with hypoplasia of enamel with fluorosis. Medium tooth decay with chronic forms of pulpitis and periodontitis, deep tooth decay with acute and chronic pulpitis and chronic periodontitis. To teach the peculiarities of carious cavities in milk and permanent teeth with unfinished root formation. Features of treatment of milk and permanent teeth affected by tooth decay.</p> <p>Task:</p> <p>Features of tooth decay in childhood and treatment. Examine the patient and develop a treatment plan; Develop major dental syndromes Make a treatment plan and prevention of the stom. Diseases.</p> <p>2. Issues on the topic</p> <p>Classification of tooth decay in children?</p> <p>Complications with improper treatment of tooth decay in children?</p> <p>The importance of fluoridated water in the prevention of tooth decay?</p>	
2 main stage (50 minutes)	<ol style="list-style-type: none"> <li>1. 1. Introducing the topic of the slides</li> <li>2. 2. Handouts</li> </ol>	Listen and write Listen
Final stage 10 minutes	<ol style="list-style-type: none"> <li>Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listens and records Writes

## Lecture text

### Medical error

I.V. Davydovsky to medical errors from the honest delusion of the doctor due to either the imperfection of medical science, or the lack of experience of the doctor, or the special course of the disease in a certain patient, or lack of experience and experience and doctor's knowledge.

It divides errors into two groups: subjective (incomplete examination, lack of knowledge and not caution of judgment) and objective (imperfections of medical science, excessively narrow specialty, difficulty of research).

A.I. Rybakov (1988) mistakes in dentistry divides into 4 groups:

- 1. unforeseen errors. The doctor acts correctly, but in the process of treatment there are unforeseen situations.
- 2. due to negligence or negligence of the doctor.
- 3. low training of the doctor, his inexperience.

- 4. imperfect diagnostic methods, medical equipment, devices.

Errors in the patient's questioning

It happens that the dentist, except the affected tooth, tongue or other oral organ no longer sees anything, does not ask about anything.

The doctor rarely asks about the condition of the SSS, does not always find out the presence of pathological processes in the body.

The doctor also rarely finds out in the patient on the tolerability of drugs (especially on anesthetics).

Errors in the disparagement of the cavity

Accidental exposure of tooth pulp

The cause may be:

Not knowing the topographical features of the location of the tooth pulp depending on the grouping of teeth, especially in the treatment of deep tooth decay;

Use large hogs and high speed of their rotation;

Not complying with the basic principles of dissecting cavities;

Autopsy of the tooth cavity

(a) The autopsy site;

b) the original direction of the boron;

C) direction of boron in the second stage of tooth trepanation;

d) Expansion of the cavity after its opening;

Creating a protrusion before the aporal narrowing;

Mistaken opening of the tooth cavity

(a) Perforation at the neck level of the tooth;

b) giving the channel the wrong direction;

(c) Changing the color of the crown with insufficient cavity opening, which does not allow to remove the remnants of the pulp or its decay;

d) perforation of the root and fragmentation of the tool in the channel when the channel direction is incorrectly created;

Autopsy of the premolator cavity in/jaw

(a) Trepanation of the tooth crown in the center of the chewing surface;

b) removing sheds;

c) A cavity with good access to root canals;

Mistaken premolars in/jaw

(a) An autopsy of the tooth cavity in the pulp horn area in case of acceptance of it Behind the mouth of the canal;

b) perforation of the neck when the tooth cavity expands;

(c) Perforation or tool fragmentation in the absence of a direct approach to the root canal;

Mistaken pre-mintoy teeth n/jaw

- (a) Perforation at the neck level of the tooth;
- b) giving the wrong direction to the channel;
- (c) Changing the colour of the crown with insufficient disclosure and removal of the residue

Pulp's carpet or its disintegration;

- d) perforation of the root or fragment of the tool in the channel when creating a non-approach to it;

Mistaken dissecting of molars in/jaw

- (a) Opening the cavity of the tooth according to the horn of the pulp;
- b) weakening of the tooth crown due to excessive removal of dentin;
- c) perforation of the bottom of the tooth cavity;
- d) partial dissection of the tooth cavity;
- (d) The perforation of the root canal with insufficient opening of the tooth cavity;
- (e) The perforation of the root canal when using a large

Size with a sharp top;

Mistaken dissecting of molars n/jaw

- (a) Excessive removal of solid tooth tissue at a deep location

The slob

- b) perforation of the bottom of the cavity;
- c) perforation over - and subdesnaeuving when dissected without taking into account inclination

Tooth;

- d) the opening of the pulp's horn, mistaking it by the mouth of the canal;
- (d) The perforation of the root at the site of its spark;

Before making a final diagnosis, it is necessary:

Find out the history of life.

Find out the history of the disease;

Use diagnostic tools and various devices to clarify the diagnosis.

Leaving areas of softened dentin subsequently leads to infection of the areas below it and the development of secondary tooth decay or inflammation of the pulp - pulpitis.

If even there are no such unpleasant complications, the softened dentin absorbs pigments, changes its color, which leads to darkening of the crown of the tooth.

When secondary tooth decay occurs, the tooth tissue surrounding the filling is destroyed and it falls out.

Incorrect formation of the cavity leads to fractures of filling material or break (enamel edge) of cavity walls.

Breaking the wall of the cavity can occur during the rough lever-shaped movements of the excavator or boron, when there is excessive pressure on one of its walls.

Damage to the boron of neighboring teeth can occur when the cavity cavities located on the contact surfaces of the teeth are dissected, in cases when the rules of excretion of cavities on the chewing (palate) surface are neglected.

Damage to the gum area occurs when carious cavities are dissected, located on the contact surfaces and in the collar area of the teeth.

A number of errors and complications occur during the filling of the cavity.

When filling, it is important to choose the right filling material and prepare it.

## Lecture No 2

Subject: Errors and complications in fillings, wrongly picked and placed fillings in childhood

### 1.1. Technology models by education

Class time 80 minutes	Number of students 18-36
View of the class	Introduction of news on lectures
Lecture plan Give a concept about the clinic, dif. diagnosis and treatment of non-kariosisic lesions in children.	Familiarity with the clinic and treatment of non-karyous teeth lesions.
The task of the training session	Mastering the clinic and treating non-kariosis tooth lesions
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Teaching aid, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of lecture sessions

<b>Stages of work</b>	<b>Teacher</b>	<b>Student</b>
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<p>Preparation stages (5 minutes)</p>	<p>1.Student performance check 2.Preparing slides on lecture material 3.Literature on the topic  T.H.Safarov, I.H.Khalilov - "Bolalar Davolas dentistry amalia kullanma" T-1997 y.  N.V.Kuryakina - "Therapeutic Dentistry of Childhood."</p>	<p><b>Listens and records</b></p>
<p>1.Introduction (15 minutes)</p>	<p>1.The purpose and objectives of the lecture material: Goal: 1.To give the concept of a clinic of non-kariosisous lesions in children. Pay special attention to students on the classification of non-kariosisous tooth lesions in children. 2. Teach to properly conduct differential diagnosis of non-karyous teeth lesions in children. 3. Features of treatment of non-karyous tooth lesions in children. To give the concept of etiopathogenesis of acute and chronic pulpitis in children. Pay special attention to the clinical classification and features of the course of acute and chronic pulpitis in children. Teach to conduct a differential diagnosis of pulpitis correctly. Features of the treatment of pulpites of milk and permanent teeth. Task: To introduce students to the etiology, pathogenesis of non-karyosic teeth Denia. To familiarize students with the anatomic physiological features of the pulp structure in milk teeth, as well as the features of the clinical flow of pulpitis in children</p>	<p><b>Listen</b> <b>Answers students' questions</b></p>
<p>2 main stage (50 minutes)</p>	<p>1. 1. Introducing the topic of the slides 2. 2. Handouts</p>	<p>Listen and write Listen</p>
<p>Final stage 10 minutes</p>	<p>Conclusion. 2. Self-employed. 3. Homework.</p>	<p>Listens and records Writes</p>

Lecture text

Incorrect imposition of insulating pads in medium and deep tooth decay can cause irritation or damage to the pulp by chemical, toxic or thermal stimuli of permanent filling materials.

The presence of padding on the side walls of the cavity (above the enamel-dentin compound) worsens the edge adjoining and fixation of permanent filling material, predisposes to the occurrence of secondary tooth decay and loss.

Overestimating the bite when filling the cavity causes pain or embarrassment when chewing, can limit the movements of the lower jaw.

Constant overload of the sealed tooth can lead to chronic periodont injury - the occurrence of acute or chronic periodontitis.

The absence of a contact point creates conditions for the accumulation between the teeth of food residues, which traumatize the interdental nipple, contribute to the development of tooth decay on the contact surfaces of the teeth, as well as periodontal diseases (papillitis, gingivitis, periodontitis).

The imposition of a single filling in the adjacent cavities disrupts the natural micro-tours of teeth.

This leads to:

loosening the fillings;

its slag;

Loss.

Overhanging edges of seals that protrude in the interdental lapse injure the gum;

create conditions for the accumulation of food residues between the teeth.

Wrong choice and preparation of filling material often lead to immediate complications.

Mistakes and complications that occur after treatment of tooth decay

A number of complications can occur at different times (after a few months or years) after treatment.

It is quite common to note:

inflammation of the pulp;

pulp necrosis.

Secondary tooth decay may occur as a result of insufficient preparization of the cavity, when there are areas of demineralishiro-van dentin on the walls and bottom of the cavity.

Papillitis, or inflammation of the interdental gum papillo, occurs when:

defects in filling cavities on the contact surfaces of teeth;

Overhanging edges of seals;

The presence of a single filling in two adjacent cavities;

trauma to the gums in the preparization and filling of the cavity.

Acute and chronic high periodontitis usually develop after a few days (acute) or months (chronic) after treatment with tooth decay.

A common cause of periodontitis is chronic tooth overload due to increased bite filling.

Changing the color of the crown of the tooth (to gray, dark gray) may be a consequence:

- Insufficient dissecting;
- Removal of necrotized dentin pulp necrosis;
- chronic periodontitis.

The excoriation of the gum squime, which adjoins the filling in the neck, may be a consequence of the body's improved sensitivity to the material from which the filling is made.

Displacement, fractures and filling slack falls most often occur as a result of:

- violations of the rules of cooking slab-biormaterial;
- carious cavity formation.

The inconsistency of the color of the fillings with the color of tooth enamel is most often undetected by the patient, if it is detected on the frontal teeth and premol-rah.

As a complication or error can be considered ineffective me-diamental treatment of primary tooth decay.

This may be a consequence: the wrong choice of tactics, the copper-stone remedies, the methods of their treatment and the duration of treatment.

Errors and complications arising from the use of composite

Materials

Allow to prevent a number of complications and avoid errors:

- The right choice of compositional filling material;
- careful adherence to the methodology of application.

Composite filling materials

Composites:

- Organic matrix
- Inorganic filler
- Dyes
- supplements: catalyst, inhibitor, ultraviolet stabilizer, cymofoquinone.

Classification of composite filling materials

- Macro-filled macrophile composites (particle size 8-12 micro and more);
- Microfilled composites. Microphiles (particle size 0.04-0.1 micro);
- Hybrid composites (particle size 8-12 micro and 0.04-0.1 micro);
- Microhybrid composites (particle size 1-5 microandia and 0.04-0.1 micro);

Total-executed composites. Condensed composites, postcures (particle size 5-8 micro, 1-5 micro, 0.04-0.1 micro);

Low-modular composites. Liquid (flowing) composites.

In recent years, microhybrid composites with a large percentage of particle particles have been preferred, which largely meet the requirements for restorative materials (Tetric, Degufill, Prodigy, Arabeck, etc.).

The disadvantages inherent in these materials are:

do not possess chemical adhesion to the tooth tissues of the tooth, i.e. do not "stick";

form on the surface of seals of integrity due to differences in the abrasive resistance of the inorganic filler and the organic matrix;

have a fairly high polymer-reduction (2-5%);

have allergenicity of both the components themselves and the elements of adhesive systems.

Condensed (packed) composites have high strength and are easy to use.

They are made on the basis of modified (thick) polymer matrix.

Adhesive systems

In order to provide adhesion of the composite to the tissues of the tooth use adhesive systems, which are a mandatory composite when working with composites and consist of a primer and adhesive.

Stages:

1. Hygienic brushing of teeth with special pastes that do not contain fluoride;

Determining the color of the filling material;

3. Preparation of the cavity;

4. Isolation of teeth from saliva;

5. Handling the cavity with a gun or pistol;

6. Laying pads;

7. The etching of tooth tissues with acid gel;

8. Drying the cavity with an air pistol, cotton tip;

9. Applying an adhesive system;

Making a filling material;

11. Processing the filling;

Preventive coating of the filling.

Compomers

Compomers (glass-ionomers) are a combination of composite and glass-ionized cement.

They:

Easy to use

Highly aesthetic;

have adhesion to tooth tissues;

contain in its composition and excrete fluoride.

Weaknesses compared to composites:

- Less strength;
- Less durability;
- worst polish.

Keromers, Ormokers

The keromers are a light-and-light composite.

The "Targis" material includes package, base, enamel masses of different colors, there is also a range of dyes and mass effect. Convenient consistency and unlimited working hours make it possible not to perform dental restoration.

One of the most common oshi-sides in the use of composite materials is the use of micron-full composites to restore chewing surfaces in Grade II-class cavities and cutting edges of frontal zu-bbs.

In these areas, teeth are subjected to a very significant chewing problem, which can not withstand microphilic composites. As a result, there are fractures or breaks of reseeded teeth. In order to avoid complications, microhybrid or total composite materials should be used.

A similar situation occurs when the chewing (occlusion) surface of the tooth is restored, if the thickness of the superimposed composite is less than 1 mm. This can lead to the break-up of fine restoration under the influence of chewing pressure.

Due to the drying of the surface oxygen-beaten layer superimposed on it the subsequent layers of the composite are not glued together and the restoration breaks.

The same result can be if you ignore the rule of direction of the beams of the polymerization lamp - they should go from the side of the surface to which the portion of the composite is glued.

Features of the use of glass-numbered cements (SIC).

The main drawback of composite materials is their weak connection with dentin.

Benefits of the SIC:

- Good adhesion to hard tissues;
- Dense edge fit;
- The presence of fluoride in the HIC;
- Elasticity

do not have an irritating effect on the pulp of the tooth.

The disadvantages of the SIC include:

- Fragility
- slow hardening (this applies to chemo-ches of curable materials);
- not high enough aesthetics.

That is why, in the restoration works, which involve an increased occlusion load, glass-ion-ion-cements strengthen with the power of lamination ("sandwich-technical-ka").

Classification of Glass-Numbered Cements (Wilson and McLean, 1988)

Type I - for fixing orthopedic and orthodontic structures ("Aquacem," "Vitremer Juting Cement," "Fuji" etc.);

Type II - restorative cement (to repair defects in hard tooth tissue);

Type II 1 - for cosmetic work without occlusion load (Chemfil Superior, Fuji IILC, etc.);

Type II 2 - if necessary, increased strength of seals. Kerment-cements (Ketac-Silver, She-Ion-Silver, Argiron, etc.);

Type III - linings (Styon, Base Line, "Vitre bond," "Lining Cement," "Jonoseal," "Time Line" and others).

This classification should now be supplemented by two other groups:

SIC to fill root canals (Ketac-Endo, Endion, etc.);

SIC for sealing fissures.

The need for glass pads arises when the applied composite does not contain a dentin sealant - primer.

One of the complications of large restorations in undepulp teeth was the postoperative sensitivity of them.

It can manifest itself in the form of short-time pain, which occurs under the influence of thermal stimuli, and in more severe cases - the dilation of acute or chronic pulpitis. The reasons for this sensitivity may be different.

They highlight the following groups:

Surgical trauma with the de-surgery of solid tissues;

toxic influence of compositional material;

acid etching of dentin;

poor-quality (incomplete) light polymerization of the composite;

Reducing (shrinking) the compositional material during polymerization;

micro-leakage followed by the introduction of microorganisms into the pulp;

incorrect final treatment of the restoration.

The pre-disruption of hard tissues of teeth should be carried out in compliance with all the rules, after anesthesia, cooling boron and hard tissues of teeth to avoid overheating pulp.

It is necessary to remember about the cumulative effect of previous dental sparge and fillings, as ignoring this fact can cause inflammation of the pulp.

The toxic effect of composition-on-material is more pronounced when using chemical curing composites and to a lesser extent light.

Incorrect acid etching (conditioning) of dentin can be the cause of pulp irritation.

Insufficient polymerization of the material leads to the appearance in its thickness of excess of non-polymerized monomers.

One of the reasons for the substandard polymerization of the composite may be the use of insulating pads from materials impervious to light, such as phosphate cement.

Reducing (shrinkment) at polymerization is one of the special composites, it is possible to avoid which swarms with the right application of adhesive systems, layer-overlay and polymerization of layers no more than 1-2 mm thick, the right direction of the beams light polymerization lamp.

The formation of micro-leaks, cavities, violation of sealing them occurs when the adhesive system is applied incorrectly and then ruptured during the polymerization of the main material.

A common cause of this complication may be the incorrect direction of the beam of light (perpendicular to the surface of the portion of the material) during polymerization.

Incorrect, rough, without cooling the final treatment and restoration can be weighted to overheat the pulp and develop inflammation in it.

The postoperative sensitivity of the restored tooth is a fairly common complication.

Hidden flaws of dental restorations can be manifested both in the near est and in the distant time.

This means that the guarantees of a dentist should be covered for at least a few years.

An immediate guarantee is given to the patient for three years, with all restoration correspondence within this period at the expense of a doctor or dental institution.

In any case, after restoration, the patient is recommended to carefully care for the oral cavity, following all hygiene rules.

Particular attention is paid to the restored area, which is regularly carefully cleaned with a toothbrush and dental floss (dental floss).

The dentist should monitor the state of restoration and oral hygiene every six months.

During these visits, they are ordered to:

Professional tooth brushing;

Remove dental deposits

If necessary - polishing and

correction of restoration.

Lecture No 3

Subject: Errors and complications in the diagnosis of pulpitis.

### 1.1. Technology models by education

Class time 80 minutes	Number of students 18-36
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View of the class	Introduction of news on lectures
Lecture plan Features of the current of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis permanent teeth with unformed roots	Familiarity with the peculiarities of the course of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis permanent teeth with unformed roots
The task of the training session	The basis of treatment of acute top periodontitis. Features of the treatment of periodontitis permanent teeth with unformed roots
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2. Technology map of lecture sessions

Stages of work	Teacher	Student
Preparation stages (5 minutes)	1.Student performance check 2.Preparing slides on lecture material 3.Literature on the topic T.H.Safarov, I.H.Khalilov - "Bolalar Davolas dentistry amalia kulllanma" T-1997 y. N.V.Kuryakina - "Therapeutic Dentistry of Childhood."	<b>Listens and records</b>
1.Introduction (15 minutes)	1.The purpose and objectives of the lecture material: To draw students' attention to the specifics of periodontitis in children and the pathway of infection. To understand the peculiarities of the course of acute periodontitis in children. Give a dif. diagnosis of acute high-frequency periodontitis.	<b>Listen</b> <b>Answers students' questions</b>

	Teach to properly treat baby teeth and permanent teeth with unformed roots. The task: To familiarize students with the etiology and pathogenesis of periodontitis of milk and permanent teeth.	
2 main stage (50 minutes)	<ol style="list-style-type: none"> <li>1. 1. Introducing the topic of the slides</li> <li>2. 2. Handouts</li> </ol>	Listen and write Listen
Final stage 10 minutes	<ol style="list-style-type: none"> <li>Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listens and records Writes

### Lecture text

What is pulpitis? The root cause of pain is hidden behind a recurrent inflammatory process or a banal trauma of the dental element. The dentist can remove near the top of the dental root vascular-nervous bundle, and at the same time damage the near-root tissue. During the anesthesia and after a while on the fact of completion of the procedure there is no soreness. But, after a few hours, the patient may feel discomfort in the causal tooth. Not only tissue damage can be caused by painful sensations, but also by exposure to medications. This means that during dental activities, the dental canal is washed by antiseptic agents, causing subsequent soreness due to irritable exposure. Additional causes of pathology can be many. The most common are: Tooth injury (breaking the fragment, as a result of which the pulp is bare). A large number of pathogenic bacteria (as a result of tooth decay and poor oral hygiene). Chemical effects on enamel. Poor and poor nutrition (in this case, the teeth do not receive the necessary amount of "building material"). Tooth decay. Wrongly selected teething products. Inflammatory processes in the gastrointestinal and oral cavity. Infectious diseases in the body. Wrong treatment of tooth decay. However, these reasons are not the only one. Pathology can develop due to the incorrect physiological structure of teeth, demineralization of enamel, problems with calcium absorption and other factors. Pulpitis is an inflammatory disease of the pulp of the tooth, which is a vascular-nervous bundle of the tooth (or nerve, as it is called), as well as cells of connective tissue. The pulp is located under the dentin, which in turn is covered with tooth enamel. Pulpa is responsible for nourishing the teeth from the inside out. Pulpitis is often a complication of another

tooth disease - tooth decay, and therefore, the main cause of pulpitis, as well as tooth decay, is an infection, for example - streptococcus. Thus, the prevention of pulpitis means the protection of teeth from infection - proper care of teeth and oral cavity. According to statistics, up to 20% of patients complaining of toothache are possessing pulpitis. Children, who usually find a milk tooth pulpitis, are especially frequent guests of the dentist. The development of pulpitis As you can see, dear readers, that at the beginning of tooth damage, it appears plaque, which is the remains of food (which eventually begin to rot) and various microflora, most often pathogenic. If you do not brush your teeth, infectious microorganisms, in the course of their life, produce acid, which together with rotting particles of food begin to eat tooth enamel, which is a superficial, or protective layer of the tooth. Defeat of tooth enamel is called tooth decay. The more time passes without proper oral care, the faster the pathological processes of tooth destruction take place. The third stage of pulpitis development is to get an infection under the tooth enamel, and the defeat of dentin infection. Dentin is a solid and the main part of the tooth, in fact - it is a bone. This is the last step of the infection before it is reaching the pulp - the soft tissues of the tooth that are right under the dentin.

In the pulp there are blood vessels and nerve endings. This is the reason for the appearance of severe pain in pulpitis. The fourth stage is actually a pulpitis, in which the infection reaches the pulp, causing its inflammation. The onset of pulpitis is accompanied by toothache, often throbbing, increased sensitivity of the tooth to temperature changes, as well as a painful reaction of the tooth to cold or hot food/drink. Toothache in pulpitis can spread to several nearby teeth, and the entire jaw, over time to pass even in a headache. It is also worth noting that the course of pulpitis can be asymptomatic. But still, you can independently determine the presence of pulpitis can be on the presence of gray enamel frequent bleeding, dark holes or overgrown tissue in the hole from the tooth decay, as well as increased sensitivity of the tooth when chewing. The consequence of pulpitis in many cases is the loss of a tooth, but if this inflammatory process is not given due attention, it can pass on to the jaw tissue, and then to sepsis, which is quite a dangerous complication. Pulpitis is called painful inflammation of the pulp - a beam of vessels and nerves that feeds the tooth. It is located in the pulp chamber of the crown part of the tooth or in its channels. Nerve endings with branched blood vessels pierce the dental tissues, passing into the pulp. Nerve cells inside the tissue are a huge variety, so their irritation as a result of inflammation and compression of tissues causes very severe pain.

Depending on the degree of destruction, chronic and acute forms of the disease vary. See in the video below for more details about what pulp is. The pain of the teeth when the pulp is affected is very strong, as the pulp tissue is permeated with nerves and blood vessels. Inflammatory reaction is accompanied by swelling and overgrowth of the pulp as a result of which nerve fibers begin to squeeze. In the neglected forms, the dental nerve is closed by a layer of carious plaque deposits. Often in chronic forms of disease development, when pain syndrome may not be sufficiently pronounced, the carious chamber is combined with the pulp chamber. The patient in this case faces unbearable tooth pain only after the tartar is hit by pulp in the pulp chamber or when it is clogged with food. Due to compression and increasing the size of the swelling begins to dead the nerve. In the chronic form of the disease, part of the crown tissue, located in the canals, remains alive. Inflammation of the pulp requires special attention on the part of the patient. Remember that the sooner you go to the dentist, the easier, cheaper and painless will be dental treatment.

Causes of pulpitis

- Tilted teeth - the doctor does not take into account the position of the pulp chamber when changing the position of the tooth.
- The doctor's ignorance of the anatomy of the location of the mouths of the root canals.
- Curved, narrow and licked channels - with the application of greater force for their passage can be perforated the root wall.

The cause of inflammation of the pulp of the tooth is always an infection, mainly of a bacterial nature - staphylococcus, streptococcus, lactobacillus. As we have already said, the infection, in the course of its life, produces acid, which in conjunction with the remains of food destroys the integrity of the tooth enamel, after which the dentin, and then begins to affect the pulp itself. However, it is an infection inside the tooth through the crown, i.e. the visible part of the tooth, but there is also another way of infection - through the apical hole of the tooth, which is the source of the root of the tooth, through which the tooth is brought to the blood vessels and nerve endings. Let's look at how the integrity of the dental "camera" is violated and infection:

- Caries; Violation of the integrity of the tooth in the wrong actions of the doctor (poor filling, tooth bypass, surgery in the jaw);
- Gingivitis, which can affect the upper teeth;
- Breaking the crown or root of the tooth, especially often break the front teeth of children;
- Increased tooth erosion, often facilitated by diseases such as diabetes or osteoporosis;
- Wrongly selected and installed braces;

Other causes of pulpitis include:

- Non-compliance with personal oral care rules;
- Overheating of pulp in the treatment of the tooth;
- Wrong method of dental treatment, including tooth decay;
- Toxic exposure to the tooth filling material;
- Use of substandard materials in the treatment of teeth;
- The presence of an infection in the blood.

Acute pulpitis is

provoked by a variety of stimuli. Classification of pulpitis. There is a certain classification of pulpitis. For example, by the localization of the inflammatory process, you can distinguish such types of disease: crown; Root; Total. In addition, it is possible to classify the pathology by the nature of the current: chronic; Sharp; gangrene. This classification of pulpitis is the most common and most accurate.

Sharp pulpitis. Characterized by an acute course of inflammation with severe irradiative pain, increasing at night or when the tooth comes into contact with hot or cold. The acute form of pulpitis is divided into the following subspecies: Serous is the initial stage of pulp inflammation, without the formation of pus exudate; Hot pus is the second stage of pulp inflammation, in which pus exudate is formed in the dental cavity, and the pain sometimes passes when the tooth comes into contact with a cold substance; Diffuse pulpitis. Chronic pulpitis. Usually is a continuation of the development of acute pulpitis. Characterized by weakened pain with frequent aggravations. Sometimes it occurs with minimal symptoms, but pathological processes at the same time continue to destroy the tooth. The chronic form of pulpitis is divided into the following subspecies: Fibrous is the initial stage of chronic pulpitis, which is characterized by the growth of connective tissue of the pulp, with inflammation almost asymptomatic; Hypertrophic (proliferation) - is an extension of fibrous pulpitis, in which the tissue of the pulp grows through the cavity of the tooth, forming a fibrous polyp; Gangrenous - characterized by the decay of the tissues of the pulp. Also there is a retrograde pulpitis, which is characterized by infection to the tissues of the pulp through the apical hole of the tooth. Acute Chronic Form is the initial stage. Fibrous is the result of acute form. Diffuse is a complicated form. Hypertrophic - characterized by the appearance of polyp on the pulp. Gnoite - accompanied by the presence of a hotbed of pus in the tissues of the tooth. Gangrenous is the most dangerous stage. For all forms of acute category of pulpitis, there will be bouts of pain, increasing by about 21:00 pm. Forms and stages In today's medicine distinguish the following acute forms of pulpitis: infectious / aseptic pulpitis - by etiology; reversible/irreversible pulpitis - by outcome; root / total / crown pulpitis - by location; diffuse / focal - on morphological and clinical grounds. The focal form of the acute partial pulpitis it is the initial period of inflammation occurring in the dental pulp. It takes about two days for the duration. At the same time, the hearth is usually located in the area of the pulp, which is closest to the cavity of tooth decay. The process of development of pulp inflammation of pulp is associated with complex changes in biochemical, structural and functional nature. The intensity of the disease, first of all, is determined by the state of reactivity of the body. In addition, the nature of the irritant, the effects of toxins and products of the decay of

microorganisms that have biochemical activity, have a sufficient effect on the course of the inflammatory process. The variety of clinical signs and the outcome of the disease depends on these factors. The peculiarity of pulpitis is that the pathological process takes place in a confined space - a pulp chamber - limited on all sides by solid tooth tissues. It is for this reason that this disease leads faster to the compression of the pulp, breaking of the trophics, venous stagnation and necrosis. But, regardless of the causes of the inflammatory process, pulpitis develops according to the following stages: Alteration - primary change and damage to the tissues of the dental nerve. Exudation is a violation of blood flow in a microcirculatory channel. Proliferation is the reproduction of cellular elements. Root (part of the pulp, located in the root part of the tooth) and crown (part of the pulp, located in the crown part of the tooth) pulp departments, due to the features of the structure, react to inflammation in different ways: in the crown part more pronounced exudative phenomena, and in the root - the processes of proliferation. At the very beginning of the disease, fluid stagnation in the pulp is compensated by increased outflow of venous blood, but gradually vascular permeability becomes too pronounced, plasma and blood cells seep into the tooth cavity. Against the background of the appearance of inflammatory reaction of the pulp there is a decrease in acidity, which further accelerates the development of the pathological process. As a result, the cells of the dental nerve are damaged, irreversible denaturation (disintegration) of proteins occurs. Exudate, at the beginning of the disease is serous, quickly turns into a gummy separated. Swelling tissues, pneumatic content and severe hypoxia lead to severe pain and gradual death of the pulp. The outcome of the acute stage of pulpitis can be different, depending on whether the process will be resolved by the gummy melting of the vascular-nervous beam, necrosis or the transition to a chronic stage. But, chronic pulpitis has the ability to develop independently, bypassing the acute stage. The patient may not even know about its presence, and the disease is detected when contacting the dentist in order to cure tooth decay. Signs of the disease If you have pulpitis, the symptoms you feel not immediately. Only a regular dental check-up will help identify and fix the problem at an early stage of development. The disease can manifest itself in different symptoms: Pain sensations (they may have different intensity and type). The inability to eat hot dishes, cold water. Discomfort in the mouth. The ability to detect a hole in the tooth with your tongue. If you have acute pulpitis, symptoms are felt almost immediately. Therefore, you will have to make an appointment with the doctor very quickly, and in some cases home tooth anaesthesia may not succeed. In addition, the pathology can develop under the seal, and in this case, you can not do anything on your own. If you have chronic pulpitis,

the symptoms may be slightly different. Naturally, there are pain sensations, but the patient is not always turns to the doctor, and they may pass over time. In this case, the signs of pathology may disappear, but the damage to the teeth remains. Most often the patient complains of a little discomfort during the meal, as well as a short pain while eating hot or cold dishes. If you have fibrous pulpitis, symptoms also include an formation on the gum, which may be of different sizes. In addition, the pathology can be accompanied by bleeding, unpleasant rotten smell, destruction of enamel. Symptoms Feeling the "failure" of the tool. Pain in sensing (if the patient is treated without local anesthesia). Bleeding from the place of perforation. Prevention consists of analyzing the X-ray before endodontic treatment of the tooth in order to identify the features of the location and direction of the channels. Excretion of the material at the top of the root is a frequent complication, but the danger can only be the presence of a large amount of filling material, as well as its excretion in the maxillary sinus (in the treatment of the upper premolars and molars). Such situations can lead to inflammation of the sinus mucous (sinusitis), and it may be necessary to remove the tooth with sinus cleansing from infection. If the patient has no complaints, in most cases such teeth are dynamically observed. Post-filling pain is a common complication, which can be caused by the introduction of the material behind the apical opening, poor filling, and the reaction of periodont tissues to intervention. The latter option is most common. With an adequately sealed canal of the patient's tooth may be bothered by soreness when biting on it. Within two weeks of endodontic treatment (filling channels) pain of varying intensity may be present, mainly when pressed on the tooth. Usually these sensations take place within a few days, but in some cases they prescribe painkillers (e.g. nimesulid) and physiotherapy. We advise you to study: granulating periodontitis - clinical picture, diagnosis, treatment of [stom4you.ru](http://stom4you.ru) Tooth pain in pulpitis is the main sign of this disease. By nature, the pain in pulpitis usually is pulsating, often the tooth hurts so much that the patient seems as if the head hurts half of the head. Increased pain usually occurs at night, as well as when exposed to the affected tooth cold or hot air or food, temperature changes, chewing food. When the tooth is insensitive or insensitively. Other signs of pulpitis are: The graying enamel of the affected tooth; Open tooth cavity; Bleeding from the tooth; Insomnia; Increased irritability. Complications of pulpitis If pulpitis is not treated, it can lead to the following complications; Recognize pulpitis is not difficult, but it is difficult to

determine what form of the disease is present in the patient. Symptoms of inflammation of pulp, periodontal and periodontitis have a certain similarity, which makes the diagnosis more confusing. The methods of objective research are also used: Inspection; Percussion; Palpation; Sensing; Thermometry; Electroodontodiagnosis; Radiography. During the first visit, the doctor, during the survey, finds out the nature of pain, history (current) of life and disease, as well as the general well-being of the patient. The history of life is necessary to determine the factors that can contribute to the development of pulpitis. The survey allows us to present an approximate course of development of the pathological condition in a certain person. Objective methods of research confirm and clarify the diagnosis made by the doctor, and depending on the form of pulpitis and the nature of its course, treatment is prescribed. Diagnosis of pulpitis includes the following methods of examination: Collection of history; Visual examination of teeth; A patient's survey of the nature of pain that is needed for differential diagnosis of pulpitis; Teeth X-rays. Only a dentist can diagnose the disease, having studied the history, after the examination of the oral cavity with the help of tools, electro-odontodiagnosis of a disturbing tooth, X-ray.

#### **Lecture No 4**

Subject: Errors and complications during the treatment of pulpitis in children

##### 1.1. Technology models by education

Время занятия 80 минут	Количество студентов 18-36
View of the class	Introduction of news on lectures
Lecture plan Features of the current of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis	Familiarity with the peculiarities of the course of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis permanent teeth with unformed roots

permanent teeth with unformed roots	
The task of the training session	The basis of treatment of acute top periodontitis. Features of the treatment of periodontitis permanent teeth with unformed roots
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2. Technology map of lecture sessions

Stages of work	Teacher	Student
Preparation stages (5 minutes)	<p>1.Student performance check</p> <p>2.Preparing slides on lecture material</p> <p>3.Literature on the topic</p> <p>T.H.Safarov, I.H.Khalilov - "Bolalar Davolas dentistry amalia kulllanma" T-1997 y.</p> <p>N.V.Kuryakina - "Therapeutic Dentistry of Childhood."</p>	<b>Listens and records</b>
1.Introduction (15 minutes)	<p>1.The purpose and objectives of the lecture material: To draw students' attention to the specifics of periodontitis in children and the pathway of infection. To understand the peculiarities of the course of acute periodontitis in children. Give a dif. diagnosis of acute high-frequency periodontitis. Teach to properly treat baby teeth and permanent teeth with unformed roots. The task: To familiarize students with the etiology and pathogenesis of periodontitis of milk and permanent teeth.</p>	<p>Listen</p> <p>Answers students' questions</p>
2 main stage	<p>1. 1. Introducing the topic of the slides</p> <p>2. 2. Handouts</p>	<p>Listen and write</p> <p>Listen</p>

(50 minutes)		
Final stage 10 minutes	Conclusion. 2. Self-employed. 3. Homework.	Listens and records Writes

### Lecture text

Pulpitis is an inflammatory process of soft tissues in the tooth cavity. They secrete the acute and chronic course of the disease. If left untreated, the inflammatory process progresses and there are complications of pulpitis such as periodontitis, periostitis, abscesses and phlegmons, osteomyelitis and amyloidosis. The causes of pathology are most often not cured deep tooth decay, a chipped tooth crown or a closed pulp injury.

Acute forms are characterized by periodic pain attacks, which most often occur at night. They are amplified by various stimuli. The time of the pain attack is from 20-30 minutes to several hours.

Chronic forms are characterized by aching pains. They can also be enhanced by cold, hot, salty or sweet foods. If there is no treatment in the future will need more complex therapeutic intervention, and in some cases, the removal of the diseased tooth. Inflammatory hearth can move to neighboring areas and cause severe pathologies with serious consequences.

The most common complications of pulpitis

Inflammatory process at first affects only the crown pulp. In the future, it moves through the root channels and goes beyond the apex. Inflammation behind the top hole is called periodontitis. This is a major complication of the course of acute and chronic pulpitis.

If periodontitis progresses and the person does not seek dental care, there are already more serious problems:

The flux. Pathological lesion of the alveolar bone. Characterized by the appearance of deformation of the gum or the formation of a fistula.

Osteomyelitis. This disease is always preceded by periostitis. Osteomyelitis is a gneuhide-necrotic lesion of the bone of the jaw.

The flegmon. A severe complication on the maxillofacial area. It occurs as a result of the penetration of a gneutin exudate into the soft tissues of the face. In a severe course of phlegmon can cause death.

An abscess. It is a limited inflammatory process of soft tissues. It can precede phlegmon. Symptoms of the abscess are not as severe as in the spilled inflammation.

Septic shock or blood poisoning.

Amyloidosis. The disease develops due to chronic poisoning of the body by the products of the decay of the inflammatory hearth. The clinical picture is a sharp disruption of the work of various organs and systems.

Errors and complications in the treatment of pulpitis

The tooth is a complex anatomical formation. Due to limited access to the pathological center, it is difficult to carry out quality treatment. A very fine toolkit is required. Most often, errors and complications in the treatment of pulpitis occur just during endodontic intervention.

The root channels of the teeth are difficult to access for mechanical and medical treatment. Of course, modern dental equipment allows you to view the features of the structure of root canals under X-rays or ultrasound radiation. But this does not exclude the occurrence of some complications.

Tool break

This is a common situation in endodontia. The reason for the breakdown is mainly that the channels are narrow or curved. A doctor's error is often associated with the wrong endodontic toolkit.

For example, during mechanical processing, files or drillbors are not selected in size and are used in stages. The toolkit breaks off in the work space. At the root channel remains either the top of the file, or 1/3 of the part. These areas are most worn out and have less strength.

For mechanical processing to be successful, a good approach to the root canal must be provided. During the manipulation, the doctor is obliged to observe the entire frequency of the technique, especially when it comes to the treatment of a tooth with warped roots.

If there is a breakdown of the toolkit, there are several ways to solve the problem:

First of all, you should try to extract everything from the root canal. In most cases, this can be done, even if the roots are slightly warped and previously sealed.

When part of the tool is left in the upper hole area, but closes it well, the root canal is further sealed. The passable part is filled with material with an antiseptic effect, and then put a permanent filling.

The patient must be advised to explain the situation and recommend physiotherapy for preventive purposes.

When a tool breaks with perforation, it is recommended to be removed in all possible ways. Despite high-quality antiseptic treatment and special filling material, the risk of soft tissue infection increases at this complication.

#### Perforation of the tooth cavity

In fact, this complication after treatment of pulpitis refers to the doctor's mistakes. The perforation of the bottom or wall in the cavity is due to the excessive removal of hard tooth tissue. The dentist tries to remove the affected enamel and dentin by dissecting the boron as possible. Treatment recommendations require the removal of solid tissue to apparently healthy areas. Therefore, the doctor struggles to do his job qualitatively.

The consequence of the treatment of pulpitis in the form of perforation of the wall of the cavity - not so serious complication. The hole is sealed with solid materials, and treatment continues further. However, the crown can be perforated even during the examination, for example, by a dental probe due to the fact that the enamel is severely thinned from the carious process. In this case, the perforation is eliminated after the removal of the crown pulp.

It is more dangerous to create a hole in the area of bifurcation or trifurcation of the root system. In this case, the risk that the tooth will simply burst in half during further use increases. In addition, it is possible to injure soft tissues located under the bottom of the tooth cavity. If this happens, the inflammatory process develops due to infection with the pathogenic microflora of periodontal tissues.

This complication is possible for several reasons:

A medical error. The doctor did not take into account the anatomical features of the location of the mouths of the root canals.

Slopes of teeth. During treatment, it is necessary to take into account the position of the pulp chamber, especially if the placement of teeth has changed due to abnormalities in the structure of the maxillofacial area.

Obliteration of root canals. In certain cases, they can grow on their own. The doctor during the dissection tries to find the mouth of the canal. As a result, with a long drilling there is a protrusion outside the cavity.

Strong curvature of the roots. This pathology leads to a change in the shape of the crown part. That's why X-ray examination before treatment is so important.

Removing filling material behind the apical hole

Sealing a treated tooth with pulpitis is no less important than dissection. The outcome of treatment depends on its quality. Withdrawal of the material for apex, unfortunately, is a frequent complication. In this case, after treatment, pulpitis is prescribed physiotherapy procedures and antibacterial drugs. If they do not help, the tooth has to be removed.

It is especially dangerous when some groups of teeth on the upper jaw are sealed. This applies mainly to pre-molars. Their roots can be located very close to the sinus. If the filling material is over-inflated, it can get into it and cause inflammation - sinusitis. Treating the disease is extremely difficult, often have to perform additional surgery.

Burn of periodontal tissues with chemicals

Many dental drugs if used improperly or long-term on soft tissues of the mouth can cause severe damage. The most dangerous substance is arsenic acid. It is used in the case of treatment of pulpitis by a vital method. After the application of arsenic paste, the doctor is obliged to close the tooth cavity tightly with artificial dentin. For the best effect, put a cotton ball soaked in an anesthetic solution on top of the material, and then put a temporary filling.

The patient is advised not to chew on the side of the treated tooth, at least while being in it arsenic paste. It is necessary to carefully clean teeth in this area and not to use toothpicks.

In the case of the fall out of the temporary filling, it is necessary to remove its residue from the tooth and see a doctor. To prevent burn arsenic acid should

treat the affected area with hydrogen peroxide and sprinkle with burnt magnesium. It is allowed to grease the mucous membrane of diluted iodine tincture.

A more severe complication is arsenic periodontitis. Usually the paste for the devitalization of the pulp is usually applied for no more than 48 hours, after which it must be removed. If left for a longer period, the aggressive acid will penetrate the top of the root and cause inflammation of the apical tissues. Against arsenic anhydrite there is an excellent antidote - it is a 5% solution of Unity. It helps not only to neutralize the acid, but also to partially anesthetize, as well as to have an antiseptic effect.

### Complications after pulp treatment

Even after the tooth is properly sealed, certain problems are not excluded. Their occurrence is associated not only with the doctor's mistakes, but also, for example, with the duration of the disease.

After treatment with pulpitis, the following complications may occur:

The filling drops out.

Fracture of the crown of the tooth due to the significant thinning of its carious process;

The development of periodontitis;

The formation of localized gingivitis and periodontitis due to the pressure of the overhanging filling on the soft tissue of the periodontal;

Change in the color of the enamel of the treated tooth.

Most often there is soreness after filling, especially in the first days. Up to 90% of patients make such complaints.

### Pain after filling

Unpleasant sensations can be associated with the production of filling material behind the top hole. Today, these are quite rare effects of pulpitis, as the filling takes place mainly under visual observation, using special equipment.

It is worth considering that endodontic intervention is a certain micro-operation. Tooth pulp is a living tissue rich in vessels and nerves. During its removal, these

formations are traumatized. Post-filling pains are nothing but a reaction of soft tissues to surgery.

Another reason for the pain reaction after filling can be precisely poor filling with the material of the root canal and reproduction of pathogenic microflora. The development of an inflammatory hearth may also be associated with poor antistatic treatment of the canal.

The most common is the body's reaction to the removal of pulp. In this case, there are complaints of minor soreness when biting on the tooth, during meals, the use of cold or hot drinks.

Pain reaction in many occurs when the temperature of the environment changes sharply. If a person has been in the cold for a long time, and then went into a warm room, in the tooth begin to show unpleasant feelings. Usually such phenomena persist for 14-20 days, then slowly go into decline. However, in the future do not exclude unpleasant feelings, for example, after hypothermia.

Dental tissue is a good thermal conductor. As long as there is a pulp in it, the thermal conductivity of the enamel and dentin is reduced due to the protective functions of this soft fabric. In its absence, the protection is broken, the solid tissues are quickly hypothermia and transmit this effect to the surrounding root ligament apparatus. As a result, there is a bout of nit-scarering pain.

If such problems are very worrying, it is worth seeking advice from a dentist. The doctor will help to choose the right and effective medication, and if necessary will prescribe a course of physiotherapy procedures. When there are minor unpleasant sensations, it is recommended to take simple painkillers (Analgin, Nimesulid).

Complications after the treatment of pulpitis, unfortunately, are not rare. This is not only due to errors in the work of the doctor, as is usually considered. A lot depends on the duration of the disease and the features of the structure of the maxillofacial area. The timely treatment of the patient for help in the clinic is of great importance in the success of treatment.

With long-term treatment of pulpitis, serious complications that lead to tooth loss are possible. This should also be taken into account for those who are addicted to non-traditional methods of getting rid of the problem. Effective treatment of pulpitis can only be carried out by a qualified specialist.

## **Lecture No 5**

Subject: Errors and complications in diagnostic and treatment

periodontitis diseases in children

### 1.1. Technology models by education

Class time 80 minutes	Number of students 18-36
View of the class	Introduction of news on lectures
Lecture plan Features of the current of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis permanent teeth with unformed roots	Familiarity with the peculiarities of the course of acute periodontitis in children. Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis. Features of the treatment of periodontitis permanent teeth with unformed roots
The task of the training session	The basis of treatment of acute top periodontitis. Features of the treatment of periodontitis permanent teeth with unformed roots
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of lecture sessions

Stages of work	Teacher	Student
Preparation stages (5 minutes)	1.Student performance check 2.Preparing slides on lecture material 3.Literature on the topic T.H.Safarov, I.H.Khalilov - "Bolalar Davolas	<b>Listens and records</b>

	dentistry amalia kulllanma" T-1997 y.  N.V.Kuryakina - "Therapeutic Dentistry of Childhood."	
1.Introduction (15 minutes)	<p><b>1.The</b> purpose and objectives of the lecture material: To draw students' attention to the specifics of periodontitis in children and the pathway of infection.</p> <p>To understand the peculiarities of the course of acute periodontitis in children. Give a dif. diagnosis of acute high-frequency periodontitis.</p> <p>Teach to properly treat baby teeth and permanent teeth with unformed roots.</p> <p>The task: To familiarize students with the etiology and pathogenesis of periodontitis of milk and permanent teeth.</p>	<p><b>Listen</b></p> <p><b>Answers students' questions</b></p>
2 main stage (50 minutes)	<ol style="list-style-type: none"> <li>1. 1. Introducing the topic of the slides</li> <li>2. 2. Handouts</li> </ol>	<p>Listen and write</p> <p>Listen</p>
Final stage 10 minutes	<ol style="list-style-type: none"> <li>Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	<p>Listens and records</p> <p>Writes</p>

### Lecture text

The desire to preserve the tooth in case of acute and chronic inflammation of the periodont has long led many researchers to search for perfect ways of diagnosis and therapeutic effects on the source of inflammation.

Periodontitis classification. Three groups of periodontitis - acute, chronic and exacerbated chronic - are adrift. Acute periodontitis by the nature of exudate is divided into serous and gneutic, and by localization - on appical, marginal and diffuse; chronic - on fibrous, granulomatous and granulating. This classification fully reflects the essence of the course of pathology in the periodont.

Despite the fact that the diagnosis of periodontitis is well developed, nevertheless mistakes are made when making a diagnosis. They occur when they do not differentiate the diseases of the regional (marginal) and the upper (apic) periodont; errors are usually associated with an incorrect assessment of the symptoms of

inflammation of the regional periodont. Checking one symptom (soreness in the lateral percussion of the tooth), which is not sharply expressed, the doctor does not attach importance to it. At the same time, a thorough X-ray examination, examination of dental pockets show in these cases the presence of the process at the edge of the periodontal.

In X-ray examination, it is sometimes difficult to differentiate periodontitis from periodontitis. Identification of etiology and pathogenesis of the disease, determination of tooth stability, dynamic observation allow correct diagnosis.

It is clinically difficult to distinguish primary acute periodontitis from exacerbated chronic. In this regard, there may be errors in the diagnosis of the top periodontitis. It is necessary to decide what periodontitis patient - acute or exacerbation of chronic, as their treatment is different. To establish the final diagnosis is crucial X-ray examination: if there are no pronounced changes in the bone, the process is acute and developed for the first time; if there are irregularities in bone pattern, dilution areas, dilution of periodontal slit, the chronic process is diagnosed in the stage of de-investigation. Sometimes the clinical and X-ray data are contradictory - with a sharply expressed clinical picture of the exacerbated chronic periodontitis on the X-ray of the upper hearth is poorly expressed and vice versa.

It is not easy to diagnose periodontitis of multi-root teeth. It is known that in chronic periodontitis in some roots pulp remains alive and even little altered. In such cases, combined treatments are used. In order to prevent errors in determining the condition of the pulp in chronic periodontitis of multi-root teeth, it is necessary to examine the pulp in each channel by electrometric and thermal methods, as well as to analyze X-ray data. It is necessary to conduct a very careful examination of the teeth of the upper jaw. In inflammatory processes in the maxillary sinus, the sky's may have the same symptoms as periodontitis. Only a thorough examination and the elimination of the signs characteristic of sinusitis and processes in the sky, helps to avoid errors in the diagnosis of periodontitis.

Complications of acute or exacerbated chronic periodontitis - periostitis and acute odontogenic osteomyelitis. In a number of patients, differential diagnosis between periodontitis and its complications presents significant difficulties, but it is necessary for the right choice of therapy.

Inflammatory process in periodontitis has clear boundaries; it captures the periodont of the affected tooth and the surrounding bone tissue of the alveoli, the

swelling is limited to the gum. And the periostitis of the jaw is an acute abscess-inflamed inflammation of the alveolar growth. A characteristic feature of periostitis is a pronounced collateral swelling of soft tissues, causing facial asymmetry and spreading far beyond the source of inflammation. If periostitis has developed on the vestibular surface of the upper jaw, then there is swelling of the lower eyelid, sometimes the upper, cheeks, upper lip. The localization of periostitis on the lower jaw determines the swelling of the lower lip, cheeks, soft tissues in the chin and submandibular region-x. In cases of acute gnething or exacerbated chronic periodontitis is determined only smoothing the contours of bone tissue due to reactive inflammatory changes of the bone.

Acute osteomyelitis of the jaw is determined primarily by the features of the clinical course and the characteristic X-ray pattern - the presence of rough bone lesions, leading to necrosis and sequestration of individual sites. Clinical picture is characterized by acute, drilling, shooting pain in the jaw, insomnia, lack of appetite, difficulty swallowing, high temperature, often reaching 39-40 degrees Celsius, with significant fluctuations and accompanied by chills, delirium. The face is asymmetrical due to collateral swelling, the tongue is covered, sharp soreness in several teeth, their mobility, enlarged and painful regional lymph nodes. In the blood: SOE 40-70 mm/h, leukocytosis, shift of leukocyte formula to the left, disappearance of eosinophils, reduction of lymphocytes to 10-15%, decreases the content of albumins and increases the q- and ag-globulins. The test for C-reactive protein is positive. Seven to 10

Days X-ray determines the area of bone dilution, respectively, the magnitude of the focus of osteomyelitis. With the knowledge of this symptoms and individual approach to each patient, the doctor will not make an error in differential diagnosis of acute and exacerbated chronic periodontitis and their complications - periostitis and osteomyelitis.

The top periodontitis. The upper periodont is closely related to the surrounding tissues, adjacent teeth, has an extensive network of nerve fibers and vessels, so the symptoms of periodont damage can be in a number of diseases of alveolar growth (interdental septum), adjacent teeth, soft tissues, neuralgia, etc. In difficult cases, a re-examination should be carried out in two to three days.

In order to avoid errors in diagnosis and treatment, it is necessary first of all to understand the causes of pathological tissue changes around the top of the root. All attention must be paid to the state of the pulp. It is necessary to find out where the

disease started - from the top of the root due to pulp damage or the process spread from the marginal period on the length. At the same time, it is important not to miss the inspection of the hidden cavity. Therefore, special importance should be given to such signs as reaction to cold and heat, chemical irritations, soreness in sensing, sensitivity when on cargo. The absence of such phenomena in the field of other teeth is valuable for differential diagnosis.

The dentist faces great difficulties when it is necessary to determine to what extent the top periodontitis is a hotbed of hidden infection and to what extent it does not manifest clinical symptoms at this time, but has an effect on the body. The source of infection should be understood as localized chronic inflammation, possibly exposed to medical lyon, but which can cause or determine the pathological reaction of the body or the damage of individual organs and systems. The area of infection is not only a cluster of microbes, their products of life and decay of tissue elements, which are antigens, but also a constantly reflexive hotbed of irritation of nerve receptors. In order to avoid mistakes in solving the problem of the danger of hidden infection during periodontitis, it is necessary to proceed first of all from the ability to eliminate the hearth by conservative methods and preserve the tooth.

Experience shows that in all types of periodontitis, the use of modern methods of instrumental and medical treatment of root canals and filling them at the top of the root allows to eliminate the infectious hearth. However, if after treatment there are phenomena of periodontitis, as well as leukocytosis, subfebrile temperature, elevated SEE, positive samples, the tooth should be removed.

Conservative treatment of chronic hot periodontitis is considered to be complete in cases when the cured tooth functions normally, the root canal is sealed throughout and repeated X-rays determine the signs restoring bone structure. It is very important to re-examine the patient to establish the desensitizing effect of treatment, its beneficial effect on the state of non-specific resistance of the body and permeability of capillaries.

The diagnostic tools available to the doctor allow to correctly and timely diagnose the top periodontitis and assess its importance as a hidden infectious hearth in the mouth. Despite well-developed treatments for periodontitis, instrumental and medical treatment of root canals, their filling spatients are made errors that entail various complications or the need for removal periodontitis tooth. All errors and related complications arising during the treatment stages of periodontitis can be

divided into the following groups: 1) perforation of the tooth cavity; 2) perforation of the walls of the root canal; 3) the formation of a ledge in the root canal; 4)

Aspiration or swallowing the tool; 5) the development of emphysema; 6) breaking the tool in the channel; 7) periodont irritation with potent drugs; 8) aggravation on the removal of filling material; 9) incomplete filling of the canal; 10) deep pin removal; 11) X-ray ingessed with an incorrect diagnosis.

If the cavity of the tooth tilted towards the defect of the tooth row or shifted in the lingual or cheeked direction, the perforation of the side wall of the cavity may occur. This usually occurs when the boron is not located correctly (the tooth axis is not taken into account). Perforation is not a great danger. It is eliminated at the same time as the seal. If the bottom of the tooth cavity is perforated while searching for the mouth of the root canal, after the canals are sealed, stop bleeding from the perforation hole (burn phenol, resorcine or hot dtopper), close it a piece of amalgam and a seal. It is much more difficult to eliminate a large perforation hole formed at the bottom of the cavity in the area of root bifurcation when improperly dissecting the tooth cavity or removing an unorganized, tightly soldered denticle. In this case, apply two treatment options: 1) the perforation hole is closed in the same way as when the perforation closes in the mouth of the canal, 2) produce separation (separation of roots), hemisection of one of the roots in the upper presmols or molars of the lower jaw sordo-radiodicular amputation in the molars of the upper jaw.

Perforation of the walls of the root canal can occur with incorrect instrumental processing of it (the axis of the instrument does not coincide with the axis of the root canal), which is more often observed when using a machine drill or a large-caliber tool, not channel. In addition, the perforation of the channel wall can occur near the mouth of the channel when trying to expand it with a boron or sweep to a depth of more than 3 mm. In this case, at the place of perforation, the damaged periodont usually bleeds, so the defect is clearly visible. When perforation of the root canal wall can be observed bleeding, which stops in the same way as when perforating the tooth cavity, after which the perforation hole is tightly tamponed with a small cotton ball, and the channel below the perforation hole sealed with cement or hardening paste. Then the cotton ball is removed, the mouth part of the canal with a perforation hole is filled with amalgam. When forming a false move in the middle and lower third of the channel try to find, pass, instrumentally and

savagely process the true root canal. At the moment of filling the true root canal, the filling material in condensation falls into a false course and fills it all over.

Closing the perforation hole with a silver amalgam is considered ideal, but if there is no amalgam, the perforation hole can be closed by any hardening paste (e.g., resorcine-shape-line), which is used to seal the canals .

The formation of a ledge in the root canal during its instrumental processing is a medical error. This can happen for two reasons: 1) access to the root canal was done incorrectly and the instrument was not directed to the apex in a straight line, 2) in the curved channels used straight or too thick tools. The possibility of unexpected anatomical abnormalities of the channel is also possible. When the ledge is formed, the doctor loses the sense of passage of the root canal and feels that the tip of the tool is snared and does not shift. The instrument is not jammed, it rotates freely in the channel. To determine the location of the ledge, you need to take an X-ray. It is difficult to remove such an obstacle. To this end take a thin drill or burav No. 2, the working end of the tool bends at an angle and enter into the channel so that its tip is pressed against the wall opposite the ledge. With careful swinging and rotation try to move the instrument further. If the tool passes for the entire working length, then take the next diameter tool and bring it to the apex. After that, to determine the position of the instrument make a contact X-ray, and then vertical movements grind the channel, pressing the blade of the tool to the ledge. When working in the channel, you need to constantly monitor the working end of the tool, so that it was not direct and did not rest on the ledge.

Aspiration or swallowing of the tool. If the instrument is poorly fixed or the instrumental treatment of the canal was careless, the instrument may fall out of the doctor's fingers during inhalation or swallowing during the movement of the bronchi or esophagus. Most often it occurs when working in the channels of the lower premolars and molars, as well as when the patient is sent for X-rays with a needle poorly fixed in the root canal. These complications should be constantly remembered and followed simple precautions - never any tool can be left in the tooth without fixation.

A. I. Rybakov (1976) draws the attention of doctors to the seriousness of this complication and measures to prevent it. Several cases of aspiration and swallowing of instruments describe D. Svraks and B. Dachev (1978). These complications are fraught with serious consequences beyond the competence of dentists. The dentist in such cases is obliged to immediately seek help from other specialists - an

otolaryngologist or surgeon. On the basis of X-ray examination establish the localization of the swallowed or aspirated instrument, and then choose the necessary method of treatment, up to the surgical intervention. When swallowing the tool appoint a special diet, which includes potatoes, peas, jelly, liquid porridge. These types of food increase the possibility of separating the tool from the places of fixation and advancing it along the digestive tract. Radiox monitoring is required for several days. If the X-ray images for 3-8 days the tool is in one place, then decide to intervene surgically to remove it. Of course, with such a complication, in addition to physical injuries, the patient is severely traumatized. In this regard, it should be recalled once again that the dentist should be extremely focused on the instrumental treatment of root canals, not to be distracted by conversations with patients and colleagues, and not for a moment not to let the tool out of hands.

After instrumental treatment of the root canals, air pistols are used to dry them. Compressed air with great force passes into the root channels, penetrates through the aporal hole and causes subcutaneous emphysema of the face and neck (wide aporal opening contributes to this). At the same time, with the air flow into the subcutaneous base get microbes from the tooth, there is its infection, which can lead to severe consequences, up to media- nit, so you can dry the air only impassable or previously sealed channels. During manipulations in the root channels when the wrong load on the tool, the inconsistency of the axe of the tooth and its direction can occur a breakdown of the drill, pulp extractor or root needle. Breaking the tool during the channel treatment is not a serious complication, but aspiration or swallowing of the tool is a serious complication. Therefore, measures should be taken to remove the fragment or (in some cases) to preserve it in the canal. The free-lying fragment, protruding into the cavity of the tooth, capture the beaks, tweezers, clamp or other tool and usually easily remove. But if the end of the break is below the mouth of the root canal, then it is not possible to capture it in this way. To remove from the root canal fragments of rod tools use a domestic set consisting of tongs with narrow sponges, tsang tongs and boron-trepans. The fragments wedged in the root canal are removed with the help of a tsang tool, allowing to overcome certain resistance when extracting. If it is impossible to capture the fragment with with bora-trepana drill hard tissues around the break, and then the end of the break capture tsang tongs. Instead of tsang tongs, the doctor N.F. Baking (1970) proposed to apply an injectable needle with a drill screwed into it. The cut injectable needle is put on the end of the break and screwed into it by the drill. With a small effort the drill presses the end of the break to the needle wall,

firmly wedges it and then the doctor freely removes the break. As a rule, the fragments of the tool left in the middle and upper part of the root canal cannot be extracted. If the fragmentation of the tool can not be extracted in the described ways, you can try to pass near it with a drill or a drill and twitching movements on yourself, tightly pressing the tool to the break, try to extract it. If it is not possible to extract the fragment, it is recommended that the electrophoresis of the potassium iodide (in single-root edits) or 5% of the alcoholic solution of iodine (in multi-root edits) be sealed and the passable part of the zinc-oxyegenolol-voi canal or resorcin-formalin Paste. Sometimes it is possible to pass the drill inge of the root near the fragment, to expand well and seal the root canal.

If there are clinical indications when protruding the end of the break for apex in the periapic alisneedion tissues you need to make an incision on the gum, trepanation of the jaw over the break of the tool and try through this hole to extract the break. If it cannot be removed, you need to resection the top of the root (the single-root teeth of the upper jaw). If you have a fragmentation of the tool in one of the roots of the multi-root edits and dilution in the top of this root, it is possible to perform hemisection or coronaradicular amputation. If there is a break in the root channels of the tool, the prognosis is favorable in cases of root pulp extirpation and if the tooth is depulped and there is no dilution at the top of the root, but if there was an area of dilution before treatment, the prognosis is favorable in less than 50% Patients. To prevent the break-off of tools in the channel, the doctor must follow the following rules: 1) use quality tools made of stainless or carbon steel;

2) Apply only sharp tools;

3) carefully examine the blades of the tool before, during and after work to detect deformations;

4) use pulp extractors 1-2 times, root burawas and drills - 2-5 times, root rushsaws and sweeps - 5 times or more;

5) observe the corners of the turn for pulp extractors, drills, buravs and rushsaws when working in the root channels;

6) Apply drills and drills in a strict sequence of calibers, without "jumping" through size;

7) Do not use the tool with a bend at an acute angle;

8) Do not use tools covered in rust or burnt on fire;

9) work with the tool only in a "wet environment."

A common mistake in the treatment of periodontitis is the insufficient opening of the upper hole. This is especially important in the treatment of acute periodontitis, when in the periapical tissues accumulates serous exudate or gnotobiont. Instrumental cleansing of the canal without sufficient disclosure of the upper (apic) hole not only does not bring relief, but also contributes to the spread of the process to the adjacent tissues. The appearance of gnotobiont or exudate from the canal shows that the top hole is opened. A clear mistake in opening the top hole of the tooth is a deep and sharp progress of the needle into the periapical tissue. At the same time, it is possible to push the infected contents at the top of the root, periodont trauma and dissection of the sine cavity (in the treatment of the lateral teeth of the upper jaw).

Some doctors, counting on the almighty effect of medicines, neglect the careful instrumental treatment of the canal, which is a mistake. However, even in the medical treatment of root canals make mistakes, using for their processing strong means that cause irritation of periodont (high concentrations of formalin, tricry-evil for raspberries, silver nitrate, etc.). Clinically, this complication is manifested by unsharp pain, which appears mainly when biting on a diseased tooth. In these cases, the channels should leave some substance that does not irritate the periodont (eugenol, antibiotics with enzymes), as a result the pain usually subsides and in the second or third visit the tooth is able to be snare-bheil. Currently, instead of strong drugs, it is recommended to use antibiotics with enzymes that dissolve the contents of the channels well and have a beneficial effect on periodontal tissue. When applying enzymes, such errors are possible: 1) the use of enzymes with increased sensitivity to them; 2) the use of enzymes with expired expiration date; 3) The use of enzymes when they are no longer effective; 4) simultaneous use of ferzments and potent substances.

Enzymes are very sensitive to various substances. The worst mistake is the use of enzymes together with potent substances that inactivate them. Special attention in the treatment of periodontitis should be paid to teeth that do not withstand sealed closure. Often, this condition occurs when the root canal is not fully complete. After the expansion of the root canal and its medical treatment, pain after the sealed bandage does not occur. However, sometimes the aggravation of the inflammatory process can occur in a well-passable channel, as soon as the tooth is put airtight bandage. In this case, it is necessary to assign an electrophoresis or to apply a

draining bandage. In the root canal after its antiseptic treatment on the root needle injected turundu with a medicinal substance, and then, without taking out the needle, put a bandage of artificial dentin. After hardening, the dentin is removed the root needle, and the bandage is held with a cotton swab. Drainage in the bandage can be done after its overlay, making a hole in it probe. After 1-2 days, the turunda is replaced and an airtight bandage is applied.

In single-root edits, which can not withstand sealing, it is also advisable to immediately seal the root channel with phosphate-cement with the preliminary introduction of antibiotic through the root canal or in the transitional fold (100 LLC-200 ED Ltd. penicillin, bred in Novocaine). Treatment of periodontitis is often accompanied by post-filling pain associated with the direct effects of the filling material on periapi-feces or over-breeding. As a rule, the pain is ringing or throbbing, the reaction of the tooth to percussion is sharply painful. It has been observed that the pain after filling the phosphate-cement channel is less intense and prolonged (for several days) than the pain after filling zinc-oxyegenool or rezorcin-formalin pastes, sometimes lasting up to 7-10 days. At the same time, there is soreness in the vertical feathers' and palpation, swelling of the gums, the appearance of a fistula. Some doctors make a gross mistake in trying to unseal the root canal, but remove the filling removed from the top of the tooth

Mass is impossible. To eliminate post-stilomber pain, cold rinses with herb broths (chamomile, sage, St. John's wort), physiotherapy treatment (UHR therapy, darsonvalization, fluctu-rization), novocaine blockade, injection of hydrocortisone in transitional fold in the area of the treated tooth. In cases where these means can not stop the inflammatory process and the gum shassed, it should be opened and left for 1-2 days yodoform turunda or rubber graduate (drainage). Incisions in all cases lead to the rapid elimination of the exacerbation of the inflammatory process.

Significantly less often (in cases of use of a large amount of phosphate-cement or other filling material with insignificant destruction of near-liver tissues) in patients long-term pain in palpation of the gums and sometimes pain when biting on a sealed tooth. Often on the gum in the area of such a tooth opens a svishcheving course. A severe, though rare complication, is the filling material (paste or phosphate cement) in the lower jaw canal when filling premolars and distal channels of the roots of the molars of the lower jaw. This complication leads to irritation and compression of the nerve trunk, which is accompanied by numbness of the skin of the chin and the circamblin soft tissues on the corresponding side. The prognosis in

this case is unfavorable, as physiotherapy and other anti-inflammatory treatment, as a rule, do not give the desired effect. The only appropriate treatment in this case is electrophoresis of the lining of the gum mucosa, respectively, projection of the top of the root of the treated tooth; if there is no effect, it is the removal of a foreign body.

In the treatment of periodontitis should be remembered about another error - the failure of filling material to the top hole, i.e. the incomplete filling of the root canal. To resolve the issue

an X-ray is needed to determine the extent of the canal's flat and the nature of the filling material. The most simple question is solved if in the channel non-verde-forming pastes (yodoform, zinc-glyceri- new, etc.), their removal is not a big deal. It is much more difficult to remove hardened resorcine-formalin paste from the canal of the tooth, and even more so - phosphate cement.

If the channel is sealed only on XU - 7z or less, it often manages to seal. The roots of single-root edits, sealed with cement at 2/z or 3JI length of the canal, it is advisable to recarve. In order for the canal to be sealed completely, it is necessary to seal it not with a root needle, but with a canal-filling monitor under the control of X-rays. In the treatment of periodontitis of the upper jaw, it is possible to deeply push the filling material into the maxillary sinus, which is a gross error. This can occur due to an anomaly between the relationship of teeth with the maxillary sinus, in inflammatory gunooic processes in the periodont, when the lower wall of the sinus is thinning. Pushing the filling material can also occur when the material is roughly moving through the channel. After pushing the filling material under the bone of the jaw develops a sub-bone abscess. Measuring the channel with a needle (depth meter), X-ray control, gentle work can avoid such errors.

Complications in the treatment of periodontitis may occur when misdiagnosis is made as a result of incorrect X-ray evaluation, when normal anatomical formations as a result of a botched 'projection' are superimposed on the top of the tooth root and their take for a pathological hearth. For example, the superimposing of the chin hole on the top of the root of the first or second premolar of the lower jaw or when the incisor hole is projected onto the root of the central incisor of the upper jaw.

Often low-placed maxillary sinuses are mistaken for near the top of the cyst. In order to avoid this and mistakenly not to injure the crown of a healthy tooth, it is necessary to carefully examine the clinical condition of the tooth itself, and on the X-

ray - periodontal slit all over the root of the tooth. Diagnosis of chronic periodontitis or root cyst is excluded if the background of the maxillary sinus clearly traces periodontal slit around the entire root of the tooth. In cases where there is a pathological hearth in the periodont, against the background of blackout of the maxillary sinus, an additional hearth associated with an unaltered periodontal slit is visible.

Even more gross mistake is made by those who for pathological formation (granuloma) takes the sprout area in the not fully formed top of the root of the tooth. When filling root canals with a pin, it is impossible to move the pin too deeply for the top of the tooth, as it constantly injures the near-dental tissues.

It is not acceptable to seal the root canal with one pin without phosphate cement, as the incomplete closure of the root canal and the top hole of the root is re-infection of the canal and the dental tissues, which inevitably leads to an increase in the root canal and the root. pathological hearth. In the final stage of treatment, the incorrect imposition of the filling on the contact surface of the tooth leads to papillitis or even marginal periodontitis with the resorption of the top of the alveolar septum.

In the treatment of periodontitis errors can be made in determining the indications of the limit of conservative treatment. However, after the introduction of modern treatments for periodontitis (antibiotics with enzymes, glucocorticoids, protein anabolitors, diathermocoagulation, UCV, etc.) the limits of conservative therapy have significantly expanded. However, in certain situations conservative methods are not contraindicated and their use can only compromise the method. This is especially common in single-session treatments that have their own strict readings.

The main criterion in evaluating the treatment of periodontitis are long-term results (in terms of 3 to 6 years), obtained on the basis of clinical X-ray testing. It has been established that after 3 months after the qualitative filling of the root canals there is a partial restoration of bone tissue in the upper area, after 6 months - a significant restoration of bone tissue, and after 12 months - almost complete it Recovery. Long-term outcomes (3 years to 7 years) show a significant percentage (80-90%) favorable outcomes. With the defective filling of root canals at the same time, there are significantly more cases of progression and stabilization of the pathological process and much less - bone restoration. Observations by many researchers to study the long-term results of periodontitis treatment have shown the benefits of therapeutic methods over surgical, so you need to use all existing therapeutics and only in the

case of failures to switch to surgery. Surgical treatments for periodontitis should be applied only when it is impossible to pass the channels and seal them.

In addition to these errors, which are allowed in the treatment of periodontitis, the most significant is the duration, multi-session treatment - instead of protecting the periodont from irritation and the influence of harmful factors as early as possible, the doctor with each The visit increasingly infects the canal and periodont fabrics. As a result, existing remedies are ineffective, and the tooth has to be removed soon after such "treatment."

There is various data in the literature on the given results of treatment of periapical inflammation and iria depending on the timing of treatment (number of visits). Most authors believe that the timing of endodontic treatment is not important for the restoration of the destructive hearth in the period. The timing of treatment is mainly due to the bacteriological status of the root canals, reflecting the effectiveness of the use of a certain antibacterial drug. The timing of treatment is determined by the volume of endodontic intervention per visit (per visit), the presence or absence of complications. That is why the timing of treatment does not have a significant impact on regeneration processes, but has only an indirect nature.

To finish the section I. Rybakov (1976): "Treatment of periodontitis of teeth is a great art, it should be widely introduced into the practice of dental institutions. The introduction of specialized offices for the treatment of periodontitis will only improve the state of the case of specialized care, but will also prevent errors in the treatment of periodontal diseases."

## Lecture No 6

Subject: Errors and complications in endodontic treatment

root canals of teeth in children

### 1.1. Technology models by education

Class time 80 minutes	Number of students 18-36
View of the class	Introduction of news on lectures
Lecture plan	Familiarity with the peculiarities of the course of acute periodontitis in children. Wppt. diagnosis of acute high-

Features of the current of acute periodontitis in children.  Wppt. diagnosis of acute high-frequency periodontitis. Treatment of acute seasonontitis.  Features of the treatment of periodontitis permanent teeth with unformed roots	frequency periodontitis. Treatment of acute seasonontitis.  Features of the treatment of periodontitis permanent teeth with unformed roots
The task of the training session	The basis of treatment of acute top periodontitis.  Features of the treatment of periodontitis permanent teeth with unformed roots
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2. Technology map of lecture sessions

Stages of work	Teacher	Student
Preparation stages (5 minutes)	1.Student performance check  2.Preparing slides on lecture material  3.Literature on the topic  T.H.Safarov, I.H.Khalilov - "Bolalar Davolas dentistry amalia kulllanma" T-1997 y.  N.V.Kuryakina - "Therapeutic Dentistry of Childhood."	<b>Listens and records</b>
1.Introduction (15 minutes)	<b>1.The purpose and objectives of the lecture material:</b> To draw students' attention to the specifics of periodontitis in children and the pathway of infection. To understand the peculiarities of the course of acute periodontitis in children. Give a dif. diagnosis of acute high-frequency periodontitis. Teach to properly treat baby teeth and permanent teeth with unformed roots. The task: To familiarize students with the etiology and pathogenesis of periodontitis of milk and permanent	<b>Listen</b>  <b>Answers students' questions</b>

	teeth.	
2 main stage (50 minutes)	<ol style="list-style-type: none"> <li>1. 1. Introducing the topic of the slides</li> <li>2. 2. Handouts</li> </ol>	Listen and write Listen
Final stage 10 minutes	<p>Conclusion.</p> <ol style="list-style-type: none"> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listens and records Writes

## Lecture text

### Errors and complications in endodontic treatment

#### Classification of errors and complications in endodontic treatment

##### I. Errors at the diagnostic stage:

In the presence of facial pains, irradiating in one or another tooth.

Misinterpretation of X-rays.

##### II. Errors at the therapeutic stage:

###### 1. At the preparatory stage:

(a) Infection of the root canal

Lack of adequate access to the root canal

(c) Perforation of the bottom and walls of the tooth

###### 2. In the process of mechanical processing of the root canal:

Incomplete removal of root pulp

The oxidation of the root canal lumen with dental sawdust

The formation of an apical ledge when the canal curves

Excessive lateral expansion of the middle third of the canal through the internal curvature of the root

Perforation of the root walls

Destruction of anatomical narrowing

Tool fracture in the channel

###### 3. In the process of filling the root canal

Heterogeneous, insufficient filling of the canal lumen

Removal of filling material outside the apical hole

A longitudinal fracture of the root.

Facial pains irradiating the teeth

Many doctors meet in their practice neuralgia II, III branches of the trigeminal nerve, glossalgia. Often the patient points to a "causal" tooth, requiring its treatment or removal. In such cases, the criterion for the need for treatment or removal is a

thorough clinical examination using odontometry. In case of suspected nitis, neuralgia, a consultation of a neurologist is necessary.

#### X-ray errors

Incorrect interpretation of X-rays may be associated with the imposition of contours of the maxillary sinus, incisive and mental holes. Maintaining the continuity of the periodontal slit at the top of the root indicates that this tooth is not the cause of destructive changes. The repertory is the definition of the condition of the tooth - electrodiagnosis.

#### Infection of the root canal

The penetration of microorganisms in the root canal can occur due to the merciless dissecting under pressure on the crown pulp, with careless amputation and removal of tissues from the mouth. It is possible to develop and reproduce microbes due to the reuse of tools, including, hogs, excavator. In preventing this complication, careful isolation of the operating field is of great importance. Before instrumental treatment, it is advisable to completely excise carious dentin from the walls of the cavity in order to prevent infection in the root canal.

#### Errors in creating access to root canals

The reasons for this situation are insufficient dissection of the cavity, incomplete excision of the roof of the pulp chamber, lack of control of the introduction of the ecdodontic instrument. The measure of prevention of such an error is the formation of proper access, which is characterized by the absence of overhanging edges and the directness of the walls of the cavity, which should be smooth, without roughness and chipping.

Perforation of the bottom or walls of the tooth cavity                      poor knowledge of the topography of the tooth cavity,

Inadequate opening of the tooth cavity,

The wrong choice of tool and violation of the method of its use,

Excessive expansion of the mouths,

Reducing the height of the crown due to its erasure

Treatment through an artificial crown

Perforation of the tooth cavity at the level of the neck of the incisor or fang as a result of dissection, without taking into account the position of the tooth

The perforation of the bottom of the molater's cavity in the area of bifurcation as a result of excessive boron disparagement

The perforation of the tooth wall in the cervix when trying to endodontic treatment through

Perforation of the bottom of the tooth cavity during the search for the mouth of the licked root canal

Incomplete removal of root pulp

It is allowed in cases where adequate access to the mouths of the canals is not available or the latter are not available because of the location of denticles. The reason may be a lack of extension of the mouths of the channels or incorrect definition of the work line. Anatomical features of the structure of the roots also blink to become a factor of poor channel passage for instruments. Violation of the technique, such as the removal of tissues by a pulp extractor with a ruptured vascular-nervous beam, incomplete removal of the root pulp leads to bleeding from the canal, which prevents further endodontic interventions.

The daub litamy with dentin sawdust

The cause is the accumulation of dentin sawdust in the canal and their compaction. Attempting to re-pass the canal can lead to the ejection of the products of mechanical treatment of the root canal (endolubrikants, dentin sawdust, pulp residues, etc.) outside the aporal hole, which can cause pain after endodontic treatment. Such a complication is warned by careful passage of the channel to the aporal narrowing by small instruments after each second step, as well as washing the lumen of the canal with solutions.

The formation of an appic ledge

Most often takes place in curved channels. During the processing of the channel, slipping off the tip of the tool during rotation leads to the so-called "crow-tooth" effect. The reason is the use of large inflexible files that cannot repeat the shape of the channel. It is possible to block the opening of the canal with dentin sawdust. The risk of creating an appic extension with files that have an aggressive top increases significantly. The perforation of the walls of the root canal

Careless use of tools to prepare root canals for various pin horse-powered actions by hand tools

The application of the doctor's brute force when unfilling the root canal with mechanical tools.

Mechanical processing of curved, rugged root canals using a machine rotating tool

Idiopathic root resorption.

Tool fracture in the channel

Very high in the case of file deformation, most often occurs when the narrow and curved, previously sealed channels are snouted and widened. The main reasons may be the lack of adequate access to the heart of the root canal, the violation of the sequence of the use of endodontic instruments, the use of tools without indications,

non-compliance with the mode of operation and speed of rotation, application of considerable effort in manual or machine processing, metal fatigue caused by repeated use of the tool.

Inadequate antiseptic treatment of the root canal

Hydrogen peroxide has a very weak antibacterial effect, does not dissolve organic matter, can disrupt the adhesion of the permanent

Sodium hypochlorite is extremely toxic in high concentrations

There are studies on the appearance of hypersensitivity reactions to sodium hypochlorite. INADEQUATE ROOT CANALS

Removal of filling material behind the apical hole

No root canal filling yields a significantly worse result than a slight excretion of material behind the apical opening

Phosphate cement does not provide airtight closure of the upper hole and dentin tubules, has an irritating effect on periodont tissue

The resorcine-formalin method also does not provide a guaranteed obturation of the upper hole

Wrong definition of work length

Incomplete channel inge

The method of using a guttaperdic or silver pin in channels with an oval, slit, dumbbell-shaped form

Pushing the filling material in the lower jaw canal

Pain after endodontic intervention

One of the most common complications. It can be caused by the irritating effect of the products of mechanical processing of the root canal, which are pushed out of the apex during the instrumental processing of the channel. The cause of the pain can be a root silere, bred in the tissues of the periodont. In this case, the pain is short-lived and can go away on its own without any exposure.

A particular problem is the pain that is prolonged haraeter. One of the reasons is the use of a vital method of treatment in one visit, which is associated with the impossibility of exposure to deltoid and additional canals. Poor mechanical and medical treatment leads to the movement of microorganisms during the period. Individual reaction can develop with intolerance to the components of the root filler or excessive filling.

1-Practical class

Subject: Errors and complications in formation and dissecting cavity in childhood.

## 1.1. Technology models by education

Class time 80 minutes	Number of students 7-8
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Etiology, pathogenesis of tooth decay of milk teeth. 2. Features of clinical course and differential diagnosis of tooth decay of milk teeth. 3. Oral examination.
The purpose of the training session	To study etiology, pathogenesis of tooth decay of milk teeth. Features of clinical course and differential diagnosis of tooth decay of milk teeth. Oral examination.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2 Technology map of the practice

Stage of work	Teacher	Student
Preparation stage (5 minutes)	1. Watch the office clean 2. Check students' readiness 3. Check student performance	Listen
1. Introduction to the preparation stages (5 minutes)	1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance. Brings to the attention that classes will be held using joint technologies 2. Literature on the topic N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001. T.F. Vinogradova - "Children's Dentistry"	Write down the topic and listen

	<p>1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I.Vorobev-X-ray of teeth and jaws</p> <p>1990</p> <p>K.Georgieva - "Emergency care in dentistry"</p>	
<p>2 Main Stage</p> <p>(25 minutes)</p>	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
<p>Final stage (5 minutes)</p>	<ol style="list-style-type: none"> <li>1. Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	<p>Listen to Record Conclusion</p>

## Interactive Method on the topic: "Synectics"

### Text

#### Medical error

I.V. Davydovsky to medical errors from the honest delusion of the doctor due to either the imperfection of medical science, or the lack of experience of the doctor, or the special course of the disease in a certain patient, or lack of experience and experience and doctor's knowledge.

It divides errors into two groups: subjective (incomplete examination, lack of knowledge and not caution of judgment) and objective (imperfections of medical science, excessively narrow specialty, difficulty of research).

A.I. Rybakov (1988) mistakes in dentistry divides into 4 groups:

- 1. unforeseen errors. The doctor acts correctly, but in the process of treatment there are unforeseen situations.
- 2. due to negligence or negligence of the doctor.
- 3. low training of the doctor, his inexperience.

- 4. imperfect diagnostic methods, medical equipment, devices.

Errors in the patient's questioning

It happens that the dentist, except the affected tooth, tongue or other oral organ no longer sees anything, does not ask about anything.

The doctor rarely asks about the condition of the SSS, does not always find out the presence of pathological processes in the body.

The doctor also rarely finds out in the patient on the tolerability of drugs (especially on anesthetics).

Errors in tooth pulp

The cause may be:

Not knowing the topographical features of the location of the tooth pulp depending on the grouping of teeth, especially in the treatment of deep tooth decay;

Use large hogs and high speed of their rotation;

Not complying with the basic principles of dissecting cavities;

Autopsy of the tooth cavity

(a) The autopsy site;

b) the original direction of the boron;

c) direction of boron in the second stage of tooth trepanation;

d) Expansion of the cavity after its opening;

Creating a protrusion before the aporal narrowing;

Mistaken opening of the tooth cavity

(a) Perforation at the neck level of the tooth;

b) giving the channel the wrong direction;

(c) Changing the color of the crown with insufficient cavity opening, which does not allow to remove the remnants of the pulp or its decay;

d) perforation of the root and fragmentation of the tool in the channel when the channel direction is incorrectly created;

Autopsy of the premolator cavity in/jaw

(a) Trepanation of the tooth crown in the center of the chewing surface;

b) removing sheds;

c) A cavity with good access to root canals;

Mistaken premolars in/jaw

(a) An autopsy of the tooth cavity in the pulp horn area in case of acceptance of it Behind the mouth of the canal;

b) perforation of the neck when the tooth cavity expands;

(c) Perforation or tool fragmentation in the absence of a direct approach to the root canal;

Mistaken pre-mintoy teeth n/jaw

- (a) Perforation at the neck level of the tooth;
- b) giving the wrong direction to the channel;
- (c) Changing the colour of the crown with insufficient disclosure and removal of the residue

Pulp's carpet or its disintegration;

- d) perforation of the root or fragment of the tool in the channel when creating a non-approach to it;

Mistaken dissecting of molars in/jaw

- (a) Opening the cavity of the tooth according to the horn of the pulp;
- b) weakening of the tooth crown due to excessive removal of dentin;
- c) perforation of the bottom of the tooth cavity;
- d) partial dissection of the tooth cavity;
- (d) The perforation of the root canal with insufficient opening of the tooth cavity;
- (e) The perforation of the root canal when using a large

Size with a sharp top;

Mistaken dissecting of molars n/jaw

- (a) Excessive removal of solid tooth tissue at a deep location

The slob

- b) perforation of the bottom of the cavity;
- c) perforation over - and subdesnaeuving when dissected without taking into account inclination

Tooth;

- d) the opening of the pulp's horn, mistaking it by the mouth of the canal;

- (d) The perforation of the root at the site of its spark;

Before making a final diagnosis, it is necessary:

Find out the history of life.

Find out the history of the disease;

Use diagnostic tools and various devices to clarify the diagnosis.

Leaving areas of softened dentin subsequently leads to infection of the areas below it and the development of secondary tooth decay or inflammation of the pulp - pulpitis.

If even there are no such unpleasant complications, the softened dentin absorbs pigments, changes its color, which leads to darkening of the crown of the tooth.

When secondary tooth decay occurs, the tooth tissue surrounding the filling is destroyed and it falls out.

Incorrect formation of the cavity leads to fractures of filling material or break (enamel edge) of cavity walls.

Breaking the wall of the cavity can occur during the rough lever-shaped movements of the excavator or boron, when there is excessive pressure on one of its walls.

Damage to the boron of neighboring teeth can occur when the cavity cavities located on the contact surfaces of the teeth are dissected, in cases when the rules of excretion of cavities on the chewing (palate) surface are neglected.

Damage to the gum area occurs when carious cavities are dissected, located on the contact surfaces and in the collar area of the teeth.

A number of errors and complications occur during the filling of the cavity.

When filling, it is important to choose the right filling material and prepare it.

## 2-Practical occupation

Subject: Errors and complications in filling, wrong picked up and placed fillings in childhood

### 1.1. Technology models by education

Class time 4 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Etiology and classification of diseases of non-kariotic teeth lesions of hereditary origin in children  2. Hypoplasia of the enamel.  3. Etiology, clinical forms.  Treatments
The purpose of the training session	To study etiology and classification of diseases of non-karyotic lesion scan of teeth of hereditary origin in children. Hypoplasia of the enamel. Teach clinical forms and treatment methods
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2 Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (5 minutes)	<ol style="list-style-type: none"> <li>1. Watch the office clean</li> <li>2. Check students' readiness</li> <li>3. Check student performance</li> </ol>	Listen
1. Introduction to the preparation stages (5 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <p>K. Georgieva - "Emergency Care in Dentistry" 1983</p>	Write down the topic and listen
2 Main Stage (25 minutes)	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
Final stage (10 minutes)	<ol style="list-style-type: none"> <li>1. Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listen to Record Conclusion

## Interactive Method: Apple Method

### Text

Incorrect imposition of insulating pads in medium and deep tooth decay can cause irritation or damage to the pulp by chemical, toxic or thermal stimuli of permanent filling materials.

The presence of padding on the side walls of the cavity (above the enamel-dentin compound) worsens the edge adjoining and fixation of permanent filling material, predisposes to the occurrence of secondary tooth decay and loss.

Overestimating the bite when filling the cavity causes pain or embarrassment when chewing, can limit the movements of the lower jaw.

Constant overload of the sealed tooth can lead to chronic periodont injury - the occurrence of acute or chronic periodontitis.

The absence of a contact point creates conditions for the accumulation between the teeth of food residues, which traumatize the interdental nipple, contribute to the development of tooth decay on the contact surfaces of the teeth, as well as periodontal diseases (papillitis, gingivitis, periodontitis).

The imposition of a single filling in the adjacent cavities disrupts the natural micro-tours of teeth.

This leads to:

loosening the fillings;

its slag;

Loss.

Overhanging edges of seals that protrude in the interdental lapse

injure the gum;

create conditions for the accumulation of food residues between the teeth.

Wrong choice and preparation of filling material often lead to immediate complications.

## Mistakes and complications that occur after treatment of tooth decay

A number of complications can occur at different times (after a few months or years) after treatment.

It is quite common to note:

- inflammation of the pulp;

- pulp necrosis.

Secondary tooth decay may occur as a result of insufficient preparation of the cavity, when there are areas of demineralized dentin on the walls and bottom of the cavity.

Papillitis, or inflammation of the interdental gum papilla, occurs when:

- defects in filling cavities on the contact surfaces of teeth;

- Overhanging edges of seals;

- The presence of a single filling in two adjacent cavities;

- trauma to the gums in the preparation and filling of the cavity.

Acute and chronic periodontitis usually develop after a few days (acute) or months (chronic) after treatment with tooth decay.

A common cause of periodontitis is chronic tooth overload due to increased bite filling.

Changing the color of the crown of the tooth (to gray, dark gray) may be a consequence:

- Insufficient dissection;

- Removal of necrotized dentin

- pulp necrosis;

- chronic periodontitis.

The excoriation of the gum tissue, which adjoins the filling in the neck, may be a consequence of the body's improved sensitivity to the material from which the filling is made.

Displacement, fractures and filling slack falls most often occur as a result of:

violations of the rules of cooking slab-biormaterial;  
cariious cavity formation.

The inconsistency of the color of the fillings with the color of tooth enamel is most often undetected by the patient, if it is detected on the frontal teeth and premol-rah.

As a complication or error can be considered ineffective me-diamental treatment of primary tooth decay.

This may be a consequence: the wrong choice of tactics, the copper-stone remedies, the methods of their treatment and the duration of treatment.

Errors and complications arising from the use of composite

Materials

Allow to prevent a number of complications and avoid errors:

The right choice of compositional filling material;  
careful adherence to the methodology of application.

Composite filling materials

Composites:

Organic matrix

Inorganic filler

Dyes

supplements: catalyst, inhibitor, ultraviolet stabilizer, cymofoquinone.

Classification of composite filling materials

Macro-filled macrophile composites (particle size 8-12 micro and more);

Microfilled composites. Microphiles (particle size 0.04-0.1 micro);

Hybrid composites (particle size 8-12 micro and 0.04-0.1 micro);

Microhybrid composites (particle size 1-5 microandia and 0.04-0.1 micro);

Total-executed composites. Condensed composites, postcuring (particle size 5-8 micro, 1-5 micro, 0.04-0.1 micro);

Low-modular composites. Liquid (flowing) composites.

In recent years, microhybrid composites with a large percentage of particle particles have been preferred, which largely meet the requirements for restorative materials (Tetric, Degufill, Prodigy, Arabeck, etc.).

The disadvantages inherent in these materials are:

do not possess chemical adhesion to the dentin-smooth tissues of the tooth, i.e. do not "stick";

form on the surface of seals of integrity due to differences in the abrasive resistance of the inorganic filler and the organic matrix;

have a fairly high polymer-reduction (2-5%);

have allergenicity of both the components themselves and the elements of adhesive systems.

Condensed (packed) composites have high strength and are easy to use.

They are made on the basis of modified (thick) polymer matrix.

Adhesive systems

In order to provide adhesion of the composite to the tissues of the tooth use adhesive systems, which are a mandatory composite when working with composites and consist of a primer and adhesive.

Stages:

13. Hygienic tooth brushing with special fluoride-free pastes;

Determining the colour of the filling material;

15. Preparing cavity;

16. Isolation of teeth from saliva;

17. Handling the cavity with a gun or pistol;

18. Pads are overlays;

19. Teething with acid gel;

20. Drying the cavity with an air pistol, a cotton swathe;

21. Adhesive system;

22. Making filling material;

Processing the filling;

Preventive coating of the filling.

Compomers

Compomers (glasiosites) are a combination of composite and glass-ionized cement.

They:

Easy to use

Highly aesthetic;

have adhesion to tooth tissues;

contain in its composition and excrete fluoride.

Weaknesses compared to composites:

Less strength;

Less durability;

worst polish.

Keromers, Ormokers

The keromers are a light-and-light composite.

The "Targis" material includes package, base, enamel masses of different colors, there is also a range of dyes and mass effect. Convenient consistency and unlimited working hours make it possible not to perform dental restoration.

One of the most common oshi-sides in the use of composite materials is the use of micron-full composites to restore chewing surfaces in Grade II-class cavities and cutting edges of frontal zu-bbs.

In these areas, teeth are subjected to a very significant chewing problem, which can not withstand microhybrid composites. As a result, there are fractures or breaks of reversed teeth. In order to avoid complications, microhybrid or total composite materials should be used.

A similar situation occurs when the chewing (occlusion) surface of the tooth is restored, if the thickness of the superimposed composite is less than 1 mm. This can lead to the break-up of fine restoration under the influence of chewing pressure.

Due to the drying of the surface oxygen-inhibited layer, the subsequent layers of the composite are not glued together and the restoration is broken.

The same result can be if you ignore the rule of direction of the beams of the polymerization lamp - they should go from the side of the surface to which the portion of the composite is glued.

Features of the use of glass-ion cements (GIC).

The main drawback of composite materials is their weak connection with dentin.

Benefits of the GIC:

- Good adhesion to hard tissues;

- Dense edge fit;

- The presence of fluoride in the GIC;

- Elasticity

- do not have an irritating effect on the pulp of the tooth.

The disadvantages of the GIC include:

- Fragility

- slow hardening (this applies to chemically curable materials);

- not high enough aesthetics.

That is why, in the restoration works, which involve an increased occlusion load, glass-ion cements strengthen with the power of lamination ("sandwich-technical").

Classification of Glass-Ionomer Cements (Wilson and McLean, 1988)

Type I - for fixing orthopedic and orthodontic structures ("Aquacem," "Vitremmer Juting Cement," "Fuji" etc.);

Type II - restorative cement (to repair defects in hard tooth tissue);

Type II 1 - for cosmetic work without occlusion load (Chemfil Superior, Fuji ILLC, etc.);

Type II 2 - if necessary, increased strength of seals. Kerment-cements (Ketac-Silver, She-Ion-Silver, Argiron, etc.);

Type III - linings (Styon, Base Line, "Vitre bond," "Lining Cement," "Jonoseal," "Time Line" and others).

This classification should now be supplemented by two other groups:

SIC to fill root canals (Ketac-Endo, Endion, etc.);

SIC for sealing fissures.

The need for glass pads arises when the applied composite does not contain a dentin sealant - primer.

One of the complications of large restorations in undecayed teeth was the postoperative sensitivity of them.

It can manifest itself as short-term pain caused by thermal stimuli and, in more severe cases, by acute or chronic pulpitis. The reasons for this sensitivity may be different.

They highlight the following groups:

Surgical trauma with the debridement of solid tissues;

toxic influence of compositional material;

acid etching of dentin;

poor-quality (incomplete) light polymerization of the composite;

Reducing (shrinking) the compositional material during polymerization;

micro-leakage followed by the introduction of microorganisms into the pulp;

incorrect final treatment of the restoration.

The pre-matching of hard tissues of teeth should be carried out with the observance of all the rules, after deregulation, cooling boron and hard tissues of teeth to avoid overheating of pulp.

It is necessary to remember about the cumulative effect of previous dental sparge and fillings, as ignoring this fact can cause inflammation of the pulp.

The toxic effect of composition-on-material is more pronounced when using chemical curing composites and, to a men's degree, light.

Incorrect acid etching (conditioning) of dentin can be the cause of pulp irritation.

Insufficient polymerization of the ma-terial leads to the appearance in its thickness of a surplus of non-polymerized monomers.

One of the reasons for the substandard polymerization of the composite may be the use of insulating pads from materials impervious to light, such as phosphate cement.

Reducing (shrinkment) at polyme-ritation is one of the special composites, it is possible to avoid which swarms with the right application of adhesive systems, layer-overlay and polymerization of layers no more than 1-2 mm thick, the right direction of the beams light polymerization lamp. The formation of micro-leaks, cavities, violation of sealing them occurs when the adhesive system is applied incorrectly and then ruptured during the polymerization of the main material.

A common cause of this complication may be the incorrect direction of the beam of light (perpendicular to the surface of the portion of the material) during polymerization.

Incorrect, rough, uncooled, final treatment and restoration can lead to overheating of the pulp and the development of inflammation in it.

The postoperative sensitivity of the restored tooth is a fairly common complication.

Hidden flaws of dental restorations can be manifested both in the near est and in the distant time.

This means that the guarantees of the doctor-stomatolo-ga should be extended for at least a few years.

An immediate guarantee is given to the patient for three years, with all restoration correspondence within this period at the expense of a doctor or dental institution.

In any case, after restoration, the patient is recommended to carefully care for the oral cavity, following all hygiene rules.

Particular attention is paid to the restored area, which is regularly carefully cleaned with a toothbrush and dental floss (dental floss).

The dentist should monitor the state of restoration and oral hygiene every six months.

During these visits, they are ordered to:

Professional tooth brushing;

Remove dental deposits

If necessary - polishing and

correction of restoration.

### 3-Practical class

Subject: Errors and complications in the diagnosis of non-kariosic lesions

hard tissues of teeth before erupting

#### 1.1. Technology models by education

Class time 6 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Damage of non-karyosis teeth in hereditary features. 2. Antiseptic treatment of the oral mucosa. 3. Reading R-X-ray
The purpose of the training session	To study the defeat of teeth of non-kariosic origin in hereditary features. Teach students antiseptic treatment of the oral mucosa. Reading R-X-ray
Teaching methods	Conversation, visual lectures
View of the class	common-collective

Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (10 minutes)	<ol style="list-style-type: none"> <li>1. Watch the office clean</li> <li>2. Check students' readiness</li> <li>3. Check student performance</li> </ol>	Listen
1. Introduction to the preparation stages (10 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <p>K. Georgieva - "Emergency Care in Dentistry" 1983</p>	Write down the topic and listen
2 Main Stage (90 minutes)	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and</p>

		asks questions
Final stage (10 minutes)	Conclusion. 2. Self-employed. 3. Homework.	Listen to Record Conclusion

### Interactive Method: "Hot Potato"

#### Text

Hypoplasia of the enamel is a malformation, which is the result of a violation of metabolic processes in the developing tooth and manifests itself in a quantitative and qualitative disturbance of the structure of the tooth, as a violation of mineralization in its formation. The etiological factor of emulsification hypoplasia is considered insufficient or slow-motion function of odontoblasts, which occurs due to the disruption of metabolism throughout the body under the influence of various diseases or as a result of metabolic disorders in individual follicles under influence of mechanical trauma, infection, penetrating radiation, etc. Depending on the current cause, the disorder occurs in a group of teeth forming in the same period (systemic hypoplasia); on several nearby standing teeth of one or different period of development (focal hypoplasia); on one or more teeth (local hypoplasia). Systemic hypoplasia accounts for 90.6% of this kind of lesions.

Systemic hypoplasia of enamel occurs in 2-14% of cases, characterized by impaired development of enamel in all or a group of teeth at the same time. Emuplasia is found in 12-19% of children. Clinically, hypoplasia manifests itself in the form of stains, recesses of different sizes and shapes, grooves and even the complete absence of enamel on any part of the tooth. By the localization of the area of hypoplasia can be judged on the age at which the violation of mineral exchange occurs, and the width of the site of the lesion determine the duration of the violation. According to the number of areas of hypoplasia, located parallel to the cutting edge, specify how many times there was a violation of metabolism in the child's body. It should be noted that more than 60% of hypoplasia defects develop in the first 9 months of a child's life, when compensatory and adaptive mechanisms are still mild, and any adverse factors (illness, poor nutrition) can cause disruption exchanging in the body (Diakova S,V., 1965). Therefore, hypoplasia is more common in the cutting edge of incisors, fangs and mounds of the first molars. In children's diseases during 3-4 years of life hypoplasia manifests itself in other teeth. At the same time, the crowns of teeth are affected up to the neck area, and the premolars and second molars spots can be on the chewing surface.

Hypoplasia also occurs in children who have suffered from the cnrece, who have suffered from hemolytic jaundice against the background of rhesus-conflict, rickets, tetanus, gastrointestinal diseases, having endocrine system damage, artificially fed, congenital syphilis.

Clinically, hypoplasia manifests itself in the form of spots, recesses of different Local hypoplasia is characterized by impaired tissue development of one and rarely two teeth. The cause of its occurrence is either a mechanical injury of the developing follicle of a permanent tooth, or an inflammatory process in it under the influence of biogenic amines and infection entering the follicle during chronic periodontitis of the milk tooth. There is no local hypoplasia on temporary teeth.

More often the cause of local hypoplasia is an inflammatory process that spreads from the upper root area of the temporary tooth or from the osteomyelitic hearth of the jaw. The rudiments of any permanent tooth may be involved in the inflammatory process, but it is the rudiments of premolars located between the roots of temporary molars that are more likely to suffer. As you know, temporary molars are most often affected by tooth decay, and therefore, by the top periodontitis.

As for the treatment of local hypoplasia, with a significant deformation of the crown of the tooth is shown the manufacture of an artificial crown. In the clinical defect of enamel, which does not extend to the entire vestibular surface of the tooth, should be preferred aesthetic filling materials with minimal dissecting of the hard tissues of the tooth. In hypoplasia treatment is prescribed for the whole year, controlling its results and good faith in the treatment of patients on average every 1.5-2 months. The patient must take a 3 month course of glycerophosphate

calcium, multivitamin, antioxidants with breaks of 3 months.

Children with enamel hypoplasia should be taken for medical supervision by the dentist to determine the indications for treatment by various methods (remineralizing therapy, elimination of enamel defects with filling materials) and its implementation.

To prevent the development of hypoplasia, the following preventive measures are important:

- 1) taking care of the health of a pregnant woman and then a newborn;
- Prevention of infectious and noncommunicable diseases in children;
- 3) timely and effective comprehensive treatment of the resulting somatic disease (acute infectious diseases, alimentary dystrophy, toxic dyspepsia, hypo- and avitaminosis, etc.);
- 4) strengthening dental sanitary and educational work in women's and children's consultations.

Dental enamel hyperplasia

The hyperplasia of the teeth is manifested in the excess formation of the tooth tissue, which is called enamel drops or enamel pearls. The origin of them is associated with the process of differentiation of cells of the Gertwig vagina into enameloblasts.

Enamel drops are more common in the neck swells of teeth, sometimes in the area of root bifurcation. Their size reaches 2-4 mm in diameter. Most often they are associated with the excessive formation of dentin, which is covered with enamel from the outside. Sometimes in the center of the drop find a

cavity made by a cloth similar to a pulp. In the clinic, they do not show anything and are found during the examination. In more detail studied this form of non-karyous teeth lesions A.O.Cawanha A965). He divided the enamel drops into three types: root, neck, crown. Based on microscopic studies, the author singled out 5 groups:

(a) True enamel drops;

b) enamel-dentin drops;

c) enamel-dentin drops with pulp, often associated with the cavity of the tooth;

d) Rodriguez-Ponti drops - small enamel drops (knots) in the periodont;

(d) Intradental enamel drops included in dentin crowns or roots

Tooth.

Neck enamel drops are usually found when the gums are retreated and the neck of the tooth is exposed. Root - can be seen during X-ray examination or after tooth extraction.

Meanwhile, intradental (intradentin) enamel drops are more common when the doctor when dissecting the cavity within the dentin "bumps" boron on the more rigid part of it. It is in this place and is an enamel drop, treatment is subject only to the neck enamel drops. They should be polished with diamond boron, polished and polished this area of the tooth, and then after training to give the patient a recommendation on conducting daily applications phosphate-containing toothpastes for 7-10 days.

### Endemic tooth fluorosis

Endemic fluorosis is associated with excessive intake of fluoride into the human body with drinking water and food. It is more common in areas with high concentrations of fluoride in drinking water. However, it is known that the presence of significant amounts of calcium in water reduces the development of fluorosis (Koshovskaya VA, 1975).

Fluorosis is to some extent a common disease of human and animal skeletons, but we only touch on fluorosis of teeth. Depending on the severity of tooth changes in endemic fluorosis, the following clinical forms of dental fluorosis (Patrikeev V.K.) were distinguished.

The bar shape is characterized by faintly visible melodious stripes on the enamel of the frontal teeth (the lightest form). The white color of the stripes from the center to the periphery becomes less bright and quietly passes into the normal color of the tooth.

The spotted form is manifested in the form of mellow-like spots located in different parts of the tooth crown. The intensity of the white color disappears from the center to the periphery. The surface of the enamel in the spot area is usually smooth, shiny. Sometimes there is mild light yellow pigmentation.

The meloid-speck shape is manifested in the area of all, not only the front teeth, clinically very diverse: white shiny and matte spots, areas of pigmentation of spots from light to dark brown. Spots are usually located on the vestibular surface of the frontal teeth. Sometimes there are small rounded defects of enamel - specks.

The erosive form is a more severe tooth lesion characterized by the formation of defects - erosions in the area of meloid altered enamel. The presence of at least one erosion already indicates a qualitatively new, more severe, stage of development of fluorosis.

Elimination of stains and weak pigmentation can be achieved by complex remineralizing therapy on the already described scheme. Consequently, a stroke, spotted, meloid-speckled form of generalized dental fluorosis should be treated as a spotty form of hypoplasia by courses of complex remineralizing therapy for an average of 6 months. Two years. It should be noted that the results come faster than in the hypoplasia of enamel. More complex and severe forms of fluorosis require filling of enamel defects after

pre-month course of general and local remineralizing therapy, as was the case specified earlier. At the same time, dental filling in children in these cases should be carried out

using glass-numbered cements. They can then be partially replaced with composite sealing materials.

Treatment of dental fluorosis. Treatment of fluorosis depends on the stage of tooth damage and its prevalence in the mouth. Thus, according to the recommendations of I.O. Novik A951) and G.D.Ovrutsky A962), the first stage, characterized by the appearance of subtle white spots, stripes, undulations, does not need special treatment and is considered reversible. The second and third stages are characterized by irreversible lesions of enamel and dentin, which require medical intervention. Electronic-microscopic studies of teeth fluorosis have shown that in the area of spots in the enamel expanded interprism space, reduced communication between the structural formations of enamel, which indicates a decrease in its strength. In the more severe forms of tooth damage, there was a decrease in the contours of the structural units of enamel, the smearing of the boundaries of enamel prisms and even pockets of their decay, alternating with amorphous formations in which individual crystals of hydroxyapatite are interspersed. All this is evidence of a violation of the strength and resistance of tooth enamel

(Patrikeev V.K., 1968; Leus P.A., Galchenko V.M., 1983).

The above predetermines the ways of treatment of dental fluorosis. First, it should be aimed at remineralizing tooth tissue and being general and local. Secondly, it should be restorative - to restore the shape and color of teeth. In this regard, taking into account the available morphological data should not begin treatment of teeth affected by fluorosis, using even modern composites. Their coating of teeth is fraught with great destruction of the structure of enamel and dentin and subsequent loss of filling material.

As for the direct treatment of dental fluorosis, most of the authors recommended general treatment: the appointment of phosphorus-calcium drugs and vitamins, the elimination of excess amounts of fluoride from drinking water and food.

4-Practical class

**Subject: Errors and complications in the diagnosis of non-kariosisic lesions  
hard tissues of teeth after erupting**

**1.1. Technology models by education**

Class time 6 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Anatomy and physiological functions of the pulp of teeth in children. 2. Classification of pulpitis.
The purpose of the training session	To study the anatomy and physiological functions of the pulp of teeth in children. Train the classification of pulpitis.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

**1.2. Technology map of the practice**

Stages of work	Teacher	Student
Preparation stages (10 minutes)	1. Watch the office clean 2. Check students' readiness 3. Check student performance	Listen
1. Introduction to the preparation stages (10 minutes)	1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.  Brings to the attention that classes will be held using joint technologies  2. Literature on the topic  N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.  T.F. Vinogradova - "Children's Dentistry" 1987  N.G. Pakhomov - "Primary Prevention in Dentistry"	Write down the topic and listen

	<p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I.Vorobev-X-ray of teeth and jaws</p> <p>1990</p> <p>K.Georgieva - "Emergency Care in Dentistry" 1983</p>	
<p>2 Main Stage</p> <p>(90 minutes)</p>	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
<p>Final stage (10 minutes)</p>	<ol style="list-style-type: none"> <li>1. Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	<p>Listen to Record Conclusion</p>

### Interactive Method: "Hot Potato"

The teacher should make up a few questions. From cardboard paper you need to make a ball. The teacher asks a question and throws the hot potato to the student in his hands, in turn the student answers the question and throws the potatoes back into the teacher's hands. The teacher oversees the work of the group and everyone's participation in it. The general correct option is written in the notebook. Students who gave the correct answers receive a maximum score - 100% of the theoretical part rating - 0.8b. The second-placed students are ranked 85.9%. The third place - 70.9% of the rating. Not responding or answering incorrectly 30% of the rating. The resulting score is taken into account when assessing for the current class.

### Text

#### Tooth erosion

Tooth erosion is a progressive lesion of enamel and dentin of unexplained etiology. Baume, Porte and Euler believed that erosion occurs when teeth are properly cleaned, with mechanical impact. Unfavorable factors of the production environment (acids, metallic and mineral dust, etc.) as well as surface-active substances as in the sphere of influence are attached to a certain

role. And yet, many authors do not tend to believe that the occurrence of tooth erosion is a local, purely mechanical or chemical process, but prefers to classify this problem as unresolved. D.A. Entin has seen the cause of erosion in neurodytrophic processes that cause the decalcification of hard tooth tissue. However, no one could explain why erosion sometimes occurs and sometimes wedge-shaped defects occur. Erosion is more common in older people on the vestibular surface of the central and lateral incisors of the upper jaw, they are found on fangs and premolars. Sometimes defeat is symmetrical. Their occurrence may be associated with a violation of mineral metabolism due to endocrine or other disorders in the body and, accordingly, in the pulp of the tooth. This is confirmed by the results of clinical observations and radioimmunological research, which showed the presence of clear prior and comorbidities of thyroid function in the thyroid gland patients with tooth enamel erosion. Developed erosion is a defect of rounded enamel, which is located in the oblique or transverse direction of the most convex part of the vestibular surface of the tooth enamel. Usually the bottom of erosion is smooth, shiny, solid. Gradual expansion and deepening of it can lead to a complete

loss of enamel and the exposure of dentin on the vestibular surface of the tooth. Erosion is often combined with the erasure of cutting edges of crowns, incisors and mounds of molars. Pain is often absent or mild, but there is a fairly strong hyperesthesia of dentin. E.V. Borovsky with co.au. distinguish between two stages of defeat: the initial (erosion of the enamel) and expressed (erosion of enamel and dentin). Tooth erosion is usually characterized by a chronic course, but distinguish between two clinical stages of erosion: active and stable.

For the active stage, typically progressive current and loss of tooth tissue, accompanied by hyperesthesia, the disappearance of the brilliance of the surface of erosion. In the active phase of the change in the size of erosion occur every 1.5-2 months. The remineralization index reaches 4-3 points. The stabilized form of erosion of the hard tissues of the tooth is characterized by a calmer, slower flow, the brilliant surface of the enamel on the site of the lesion is preserved. The change in its size does not occur within 9-11 months. The remineralization index does not exceed 1-1.5 points. It is possible to transfer a stable form of erosion into an active one, especially when background pathology worsens. Micro-solidity of enamel in the field of erosion is significantly reduced, there are pockets of demineralization of the surface of the enamel. At the same time, unlike tooth decay, where there is subsurface demineralization of enamel, erosion formed surface pockets of demineralization, which gradually cover the tooth enamel layered (Leus P.A., Galchenko V.M.). In the study of the ultrastructure of enamel in tooth erosion, it is noted that enamel in the area of erosion and in the surrounding areas is characterized by a reduced degree of mineralization and the presence of destructive changes: in some areas

enamel prisms are clearly visible, expressed interprism spaces, and on others they are indistinguishable because of demineralization. Hydroxyapatite crystals of various shapes. In areas adjacent to erosion, they have no clear boundaries or have the correct shape, but are larger and sometimes smaller and shorter. You can see enamel crystals with different density, which indicates uneven mineralization. In dentin, there are also distinct changes in tooth erosion: there are areas with dense arrangement of hydroxyapatite crystals, alternating with loose arrangement of crystals. Dentin canals are commonly documented and untreated. The structure of the substance that obliterates the dentin nodules is specific and close to that when erased, the close results were obtained by studying the ultrastructure of enamel and dentin. However, along with these areas of demineralization, a cluster of bacteria has been found that mask the contours of enamel prisms. SEM of the central erosion zone has also shown significant structural changes in both surface and deeper layers of damaged dental tissue. Comparative electro-microscopic analysis revealed differences in the structural organization of enamel at erosion depending on the clinical phase of the disease. The active stage of the erosion process is characterized by the loss of both the substance of enamel and dentin in large areas that have undergone destructive changes. You can see the areas of complete decay in the form of amorphous substance with large [recesses](#). The clinic of erosion of enamel is not easy, and they need to be differentiated from wedge-shaped defects, pulp decay and necrosis of teeth. Only then should a treatment plan be adopted. At the same time, it is necessary not only to organize treatment, but also to conduct a thorough examination of the patient using general diagnostic methods, clinical and paraclinical methods, including consultations of related specialists. In this case, the identification of background pathology is very important for the successful treatment of erosion. Medical interventions of a dentist and interdoctors should be combined. Particularly distinctly, the process of remineralization was manifested in areas bordered by a hotbed of active enamel atade, where you can see the space tightening in an even layer, in which single, still preserved areas are embedded.

Destruction. It appears that the alignment of the enamel surface is the result of

fill interprism spaces with mineral components and strengthening the crystalline structure of enamel prisms.

The neck area of the teeth with erosion after remineralization looked more level compared to the eroded surface to remineralizing

processing, and was quite clearly discernible. Attention was paid to the smoothness of the surfaces of both enamel and dentin. At the same time, their structure on some areas resembled such an intact surface of the tooth. as such patients make up at least 5% of all non-karyosisteeth and 9.3% of non-kariosisic teeth lesions of the 2nd group. Previously, these patients were "lost" by getting into groups of patients with erosion or necrosis of teeth, or in groups of patients with erasure, or were diagnosed with the so-called "heart demineralization of teeth." Meanwhile, it is known that some drugs, such as hormonal contraceptives, salicylates, used regularly and for a long time, can cause disorders in mineral metabolism and as a result - non-karious lesions of teeth. It is obvious that it is the salicyliats associated with rheumatism and osteochondrosis throughout their lives, contribute to an increase in the frequency of non-karious tooth lesions. At the same time, population surveys indicate that salicylates, hormonal drugs, including contraceptives, and some other long-term drug compositions adversely affect the condition of the teeth. On the other hand, there are effects of certain toxic factors in the working environment, as well as frequent individual contact with toxic substances. It is known that in recent years the use of drugs, toxic and medicinal substances in order to achieve a narcotic effect has increased in the world, including in our country. Including the purely Russian phenomenon - substance abuse, that is, the use of toxic substances by inhaling their fumes by young people, teenagers and even children. As a rule, this contingent of persons is engaged in narcologists, psychiatrists and other general practitioners. This is understandable, as it has always been believed that toxic, narcotic and similar substances act primarily on the central control, psyche and internal organs of the person. Treatment of toxic and medical disorders of the development of hard tissues of teeth is different and differs to a certain extent from the treatment of other forms of dental diseases.

Thus, in case of medicinal lesions of enamel and dentin in the first stage, therapeutic measures should consist of complex remineralizing therapy, which, incidentally, largely compensates for the negative effects of drugs (Smolyar NI, 1976, 1980; Fedorov Y.A., 1979). It consists of the following appointments:

- (a) Calcium glycerophosphate 0.5 g 3 times a day for a month;
- b) multivitamin "Kwadevite" or "Complevit" etc. 4-5 table. A day for a month.

c) "Clamin" A-2 Table.) or "Fitolon" C0 cap.) 2-3 times a day in 15 minutes. Before eating for a month;

d) training in brushing teeth and appliques of phosphates containing pastes such as Pearl, Bambi, etc. 15 minutes. Constantly, daily for the duration of treatment;

(d) Electrophoresis 2.5% calcium glycerophosphate solution - 10 sessions a day between general treatment courses;

(e) Mouthwash with Elixir "Elam" daily, after brushing teeth and eating, delaying the solution by 10-15 s. oral cavity.

The course of general remineralizing therapy is repeated 2-3 times within six months.

Reducing IR to 1.5-1.0 points indicates the possibility of moving to the next stage of treatment - filling teeth. The best option should be considered filling glass and cements or their combination with composite materials.

General and local treatment of teeth in patients with toxic lesions of enamel and dentin differs significantly primarily by additional appointment of active antioxidants (vitamin A, C, E), the timing of general therapy, details of dental restoration.

5-Practical class

Subject: Mistakes and complications in pain relief in childhood

### 1.1 Technology models by education

Class time 6 hours	Students 8-12
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1.Inflammation of the pulp of teeth in children 2.Etiology of tooth pulp 3.The pathogenesis of the pulp of the teeth
The purpose of the training session	To study the etiology and pathogenesis of tooth pulp in children
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (10 minutes)	<ol style="list-style-type: none"> <li>1. Watch the office clean</li> <li>2. Check students' readiness</li> <li>3. Check student performance</li> </ol>	Listen
1. Introduction to the preparation stages (10 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <p>K. Georgieva - "Emergency Care in Dentistry" 1983</p>	Write down the topic and listen
2 Main Stage (90 minutes)	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
Final stage (10 minutes)	<ol style="list-style-type: none"> <li>Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listen to Record Conclusion

## Interactive Method: "Apple"

### Text

Pain relief can occur a variety of complications that are common or local. Of the common complications most real in outpatient dental practice are: fainting, asthma attack, allergic reactions or poisoning associated with the introduction of anesthetic, the occurrence of epileptic seizure and some others. Common complications after the introduction of MA (fainting, collapse, allergic reactions) are observed in 0.0017%. (Ushakov). In this regard, the dental office must necessarily have a set of medicines to provide emergency care to the child and instructions regulating the actions of the doctor in a given situation.

Fainting is a short-term loss of consciousness caused by acute hypoxia of the brain. Fainting is more common in children in puberty, with increased emotional lability. Causes of fainting - fright, pain, blood type, rapid entry into the bloodstream anesthetic when the injectable needle accidentally enters the vascular lumen during anesthesia. Symptoms of fainting: weakness, dizziness, nausea, vomiting, darkening in the eyes, tinnitus. The child pales, the face is covered with cold sweat, there is a blue under the eyes, the pupils expand, the pulse increases, becomes filamentous, breathing superficial, frequent, blood pressure decreases.

The child gradually loses consciousness. Emergency care. The child should be given a horizontal position, lift the legs, free the neck and chest from the embarrassing clothes, unbutton the belt. The face is wiped with cold water, a tampon is brought to the nose with alcohol. In the absence of an effect, the subcutaneous injection of one of the drugs: caffeine, ephedrine or cordiamines in the age dosage. The duration of fainting is from a few seconds to 3-5 minutes, after which the consciousness is restored. Attack of bronchial asthma. It can be caused by emotional tension, smell of medicines, introduction of anesthetic. Clinic of asthma attack - expiring shortness of breath, often accompanied by a persistent cough, pulse increases, increased blood pressure, sweat, lip cyanosis and acrociosis. The child is restless, there may be convulsive twitches. Treatment. In the event of a asthma attack, an ambulance should be called, and before its arrival to carry out the following measures: 0) to calm the child, to withdraw from the chair, to divert his attention; 2) ventilate the room; 3) Apply hot hand baths at water temperature from

37 to 42 degrees Celsius lasting 10-15 minutes; 4) Subcutaneously introduce 0.1% adrenaline solution into

next dosage: children under 5 years - 0.2-0.3 ml, children aged 6-12 years - 0.3-0.5 ml.

If you have an inhaler with its help, you can inhale any sympathomimetics: 0.5-1% solution isadrin, 1% solution of novodrin or euspiran 0.5-1 ml on 1 inhalation; 2% solution alupentE (E-10 inhalations). Inside give antihistamines other drugs: diphenhydramine, suprastin, diazolin, tavegil in age dosages. Allergic reactions. They occur in the sensitized body for drugs used in the process of anesthesia. Allergic conditions and reactions can have a variety of clinical manifestation: severe asthma attack, multi-form erythema, swelling of the larynx type Kwink, anaphylactic shock, hyperthermia, etc.

The greatest danger to the child's life is swelling of the larynx and anaphylactic shock. The leading clinical symptom for acute swelling of the larynx is rapidly progressing respiratory failure. The child is restless, pale. Breathing is fast, noisy (difficult), the voice is hoarse. The cyanosis of the lips and nails is expressed.

The emergency therapy prior to the arrival of the ambulance crew is as follows:

1) stop the introduction of the drug, which is an allergen for the child; 2) introduce subcutaneous 0.1% adrenaline solution or 5% ephedrine solution at the appropriate age dosage; 3) intramuscularly or intravenously introduce a 2% diphenhydramine solution or 2.5% pipolfen solution; 4) intravenously slowly introduce 2.4% eufhyllin (2 mg solution per 1 kg of body weight in 5% glucose solution); 5) intramuscularly introduce prednisone - 15-30 mg and other glucocorticoids in an equivalent dose; 6) to inhale sympathomimetics (salt

tan, euspiran, izadrine, etc.), as well as ephedrine, eufhyllin. Anaphylactic shock is the most acute allergic reaction. The leading components of its initial period are spasm of smooth musculature of the bronchi, increased vascular permeability and progressive adrenal, cardiovascular and renal failure.

Clinic. Immediately after the introduction of anesthetic, which is an allergen, the child becomes restless, he appears itchy mucous membranes and skin, shortness of breath. He complains of headaches, a feeling of heat. Within a few minutes there may be a loss of consciousness, acute

respiratory, cardiovascular and adrenal insufficiency. On the skin

appear polymorphic allergic rash, swelling.

Emergency care should be provided immediately: 1) stop the introduction of anesthetic; 2) The child is laid to one side, laid with heating pads, produced

Evacuate the contents of the stomach, allow to inhale oxygen; 3) to the place of introduction

allergen anesthetic (if conditions allow) introduce 0.5 ml 0.1% of adrenaline solution;

4) every 10-15 minutes. before the child is released from the shock, subcutaneously administered

0.3-0.5 ml 0.1% adrenaline solution. If the condition deteriorates intravenously

(slowly!) Inject the following mixture of drugs: 0.1% adrenaline solution 0.3-0.5 ml;

0.2% platiphyllin solution 0.5-1 ml; 5% glucose solution - 20 ml; 5) intravenously slowly inject prednisone at the rate of 1-2 mg per 1 kg of body weight in 10-20% of the mass glucose; 10% calcium chloride solution C-5 ml); 2.4% euphyllin solution (slowly!) at 3 mg per kg of body weight in 5% glucose solution; (heart glycosides - 0.5% strophantin solution of 0.1-0.4 ml in 5% glucose solution. The dentist needs to start emergency therapy in a timely manner, and it is carried out by an ambulance doctor. Poisoning for an anesthetic overdose. In toxic doses of novocaine, trimecaine and other anesthetics after short-term arousal of the central nervous system oppress the cerebral cortex and subcortical centers up to the development of collapse, acute respiratory and heart failure. With a mild degree of poisoning, the child complains of nausea, dizziness, convulsions of the muscles of the limbs. There are paleness of the covers, increased heart rate, lower blood pressure. In severe intoxication there are tonic and clonal convulsions, signs of pulmonary and cardiovascular failure. The development of the most severe signs of poisoning varies from a few minutes to many hours. With a mild form of intoxication, the child is given a horizontal position, given to inhale several times vapors of washing alcohol, moisturized oxygen. Intramuscularly injected 5% solution ephedrine, subcutaneously -10-20% caffeine solution in the age dosage. When the signs of poisoning increase, the urgent hospitalization of the child is shown.

Epileptic seizure. A large seizure of epilepsy is characterized by loss of consciousness, tonic and clonal convulsions that come after the aura. Emergency

care is to prevent injuries. To do this, when the first signs of epilepsy from the child's mouth remove tampons, in the mouth injected a spatula wrapped in gauze, to prevent the bite of the tongue. During a seizure, do not bring the child to the senses, and even more so pour into the mouth any drugs. It should be placed on its side to prevent saliva and vomit aspiration. Usually the seizure goes away on its own. In a prolonged seizure, you can carry intramuscular magnesium sulfate 25% by 0.2 ml per 1 kg

body mass.

It is not advisable to continue dental treatment after a seizure (except for acute inflammatory diseases).

Complications of local anesthesia. These complications are associated with errors in anesthesia technique, substandard tools and less often - with unpredictable individual anatomic-topographical features of the maxillofacial area.

Blood vessel injury is the most common complication during injectable anesthesia. In the absence of small vessels, the injectable canal bleeds; When entering large vessels formed intra-tissue hematomas, which, developing gradually, may not be noticed by the doctor. Careful choice of the place of injection, the correct method of anesthesia with hydraulic tissue vapor when promoting the needle can reduce the frequency of this complication. If a complication is detected, capillary bleeding is stopped by squeezing the tissues at the injection site for a few minutes. When a growing hematoma is detected (in the area of the hill of the upper jaw, in the wing-jaw space) carry out a finger press in the hematoma zone for 3-5 minutes. Outside, a bubble with ice is applied for re-reflex spasm of vessels. Taking into account modern requirements, antibiotics are prescribed to prevent infectious and inflammatory complications, and then - physiotherapy (UHF, microwave). Rare complications include needle failure. To prevent this complication is quite simple: you can not use faulty needles rotating in the cannula; it is impossible to promote the needle in the tissue to the cannula, which, unfortunately, is often done by doctors when performing intraoral anesthesia in the lower jaw hole with short needles; you can't drastically change the position of a needle deeply immersed in the fabric.

To prevent infectious-inflammatory complications (abscesses, phlegmons, contractures), it is necessary to observe the rules of aseptics and antiseptics, to process the area of injection with bacteriostatic solutions, not to touch the tip of the needle to the teeth.

In literature (V.P. Vaskevich) draws attention to a rare, difficult to diagnose complication of local anesthesia - the development of infiltration due to tissue infection with fungi (mycotic granuloma). Clinical manifestations are as follows: the general condition is satisfactory, body temperature is normal, in clinical blood tests and general urine tests there are no deviations from age norms. On an external inspection of facial asymmetry due to swelling in the cheek area. When you examine your mouth, you can see the smoothness of the transitional fold. Palpatory is determined

bumpy painless or slightly painless infiltration with dense

inclusions that involve most of the cheek tissue. Against the background of the unmodified

in the color of the mucous membrane, respectively, the denser areas of the infiltration were determined by the yellow-colored inclusion of a diameter of 0.1 to 0.3 cm, as if translucent through the mucous membrane.

Clinical data and data from the morphological study of the postoperative material allow to diagnose limited inflammatory infiltrations, which were caused by infection of the tissues of the cheek by fungal bodies *Mucor* and *Naecardia*. Such fungal associations support a long phase of productive tissue reaction leading to the development of mycotic granuloma. Both mushrooms are attributed to mold. These are very common in nature saprophytes, which under certain conditions can cause diseases of mucous membranes. Mould lesions can occur endogenously, when fungi turn from saprophytes into pathogenic or

penetrate into the human body from the outside. The appearance of patients with moldy mycosis a number of authors explain the very wide and disorderly use of antibiotics, which contributes to the development of dysbacteriosis in the child's body and creates conditions for reproduction and increase virulence of mold fungi. In the treatment of mold lesions effective are iodine preparations (potassium or sodium iodide, iodine tincture with milk inside, potassium iodide ionophoresis on infiltration). It is also recommended the appointment of nystatin and levorin in age dosages, immunostimulators, vitamins A, C, group B. Development of a pathological hearth at the site of needle injection allows to conclude that the infection of patients occurred at the time of injection Anesthetic.

When the peripheral branches of the trigeminal nerve (often the lower jaw nerve) are damaged, children experience paresthesia (numbness, burning sensation, etc.).

It should be made clear that this complication is temporary. The child is prescribed warm rinses, physiotherapy (UHF, microwave), anti-anxiety drugs (valerian), multivitamin, dibazole.

With the injection of anesthetic in the area of the lower jaw hole, it is possible to injure the wing-shaped muscles, clinically manifested by difficulty opening the mouth. In these cases, prescribed physiotherapy (warm rinses, UHF, ultrasound), rational mechanotherapy, antibiotics.

Mistaken introduction of solutions is unacceptable, but, unfortunately, still occurring a complication. The reasons for its occurrence are negligence of medical personnel and poor organization of work. If a "foreign" solution is inserted into the tissues (alcohol, hydrogen peroxide, formalin, hypertensive solution) and this is detected by a doctor, it should be immediately introduced into the anesthesia area a few milliliters 0.25% of the solution of novocaine with the addition of a few drops adrenaline solution to reduce the resorptive action of the mistakenly introduced solution. After that, you can cut the mucous membrane, bluntly stratify the soft tissues to be, rinse the wound with neutral solutions. The child should be hospitalized. Each case of erroneous introduction of unintended means should be investigated by the medical and control commission. Timely measures are needed to avoid such complications, such as the use of special dark vials, clear markings, inspection

anesthetic to taste, proper organization of the workplace of a doctor and nurse.

## 6-Practical class

Subject: Errors and complications in the diagnosis of pulpitis.

### 1.1. Technology models by education

Class time 4 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Anatomy and physiological functions of the pulp of teeth in children. 2. Classification of pulpitis.
The purpose of the training	To study the anatomy and physiological functions of the pulp of teeth in

session	children. Train the classification of pulpitis.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2. Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (10 minutes)	<ol style="list-style-type: none"> <li>1. Watch the office clean</li> <li>2. Check students' readiness</li> <li>3. Check student performance</li> </ol>	Listen
1. Introduction to the preparation stages (10 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <p>K. Georgieva - "Emergency Care in Dentistry" 1983</p>	Write down the topic and listen
2 Main Stage		Divided into small

(90 minutes)	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>groups, watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
Final stage (10 minutes)	<ol style="list-style-type: none"> <li>1. Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	Listen to Record Conclusion

### Interactive Method: "Apple"

#### Text

What is pulpitis? The root cause of pain is hidden behind a recurrent inflammatory process or a banal trauma of the dental element. The dentist can remove near the top of the dental root vascular-nervous bundle, and at the same time damage the near-root tissue. During the anesthesia and after a while on the fact of completion of the procedure there is no soreness. But, after a few hours, the patient may feel discomfort in the causal tooth. Not only tissue damage can be caused by painful sensations, but also by exposure to medications. This means that during dental activities, the dental canal is washed by antiseptic agents, causing subsequent soreness due to irritable exposure. Additional causes of pathology can be many. The most common are: Tooth injury (breaking the fragment, as a result of which the pulp is bare). A large number of pathogenic bacteria (as a result of tooth decay and poor oral hygiene). Chemical effects on enamel. Poor and poor nutrition (in this case, the teeth do not receive the necessary amount of "building material"). Tooth decay. Wrongly selected teething products. Inflammatory processes in the gastrointestinal and oral cavity. Infectious diseases in the body. Wrong treatment of tooth decay. However, these reasons are not the only one. Pathology can develop due to the incorrect physiological structure of teeth, demineralization of enamel, problems with calcium absorption and other factors. Pulpitis is an inflammatory disease of the pulp of the tooth, which is a vascular-nervous bundle of the tooth (or nerve, as it is called), as well as cells of connective tissue. The pulp is located under the dentin, which in turn is covered with tooth enamel. Pulpitis is responsible for nourishing the teeth from the inside out. Pulpitis is often a complication of another

tooth disease - tooth decay, and therefore, the main cause of pulpitis, as well as tooth decay, is an infection, for example - streptococcus. Thus, the prevention of pulpitis means the protection of teeth from infection - proper care of teeth and oral cavity. According to statistics, up to 20% of patients complaining of toothache are possessing pulpitis. Children, who usually find a milk tooth pulpitis, are especially frequent guests of the dentist. The development of pulpitis As you can see, dear readers, that at the beginning of tooth damage, it appears plaque, which is the remains of food (which eventually begin to rot) and various microflora, most often pathogenic. If you do not brush your teeth, infectious microorganisms, in the course of their life, produce acid, which together with rotting particles of food begin to eat tooth enamel, which is a superficial, or protective layer of the tooth. Defeat of tooth enamel is called tooth decay. The more time passes without proper oral care, the faster the pathological processes of tooth destruction take place. The third stage of pulpitis development is to get an infection under the tooth enamel, and the defeat of dentin infection. Dentin is a solid and the main part of the tooth, in fact - it is a bone. This is the last step of the infection before it is reaching the pulp - the soft tissues of the tooth that are right under the dentin. In the pulp there are blood vessels and nerve endings. This is the reason for the appearance of severe pain in pulpitis. The fourth stage is actually a pulpitis, in which the infection reaches the pulp, causing its inflammation. The onset of pulpitis is accompanied by toothache, often throbbing, increased sensitivity of the tooth to temperature changes, as well as a painful reaction of the tooth to cold or hot food/drink. Toothache in pulpitis can spread to several nearby teeth, and the entire jaw, over time to pass even in a headache. It is also worth noting that the course of pulpitis can be asymptomatic. But still, you can independently determine the presence of pulpitis can be on the presence of gray enamel frequent bleeding, dark holes or overgrown tissue in the hole from the tooth decay, as well as increased sensitivity of the tooth when chewing. The consequence of pulpitis in many cases is the loss of a tooth, but if this inflammatory process is not given due attention, it can pass on to the jaw tissue, and then to sepsis, which is quite a dangerous complication. Pulpitis is called painful inflammation of the pulp - a beam of vessels and nerves that feeds the tooth. It is located in the pulp chamber of the crown part of the tooth or in its channels. Nerve endings with branched blood vessels pierce the dental tissues, passing into the pulp. Nerve cells inside the tissue are a huge variety, so their irritation as a result of inflammation and compression of tissues causes very severe pain. Depending on the degree of destruction, chronic and acute forms of the disease vary. See in the video below for more details about what pulpitis is. The pain of the teeth when the pulpitis is

affected is very strong, as the pulp tissue is permeated with nerves and blood vessels. Inflammatory reaction is accompanied by swelling and overgrowth of the pulp as a result of which nerve fibers begin to squeeze. In the neglected forms, the dental nerve is closed by a layer of carious plaque deposits. Often in chronic forms of disease development, when pain syndrome may not be sufficiently pronounced, the carious chamber is combined with the pulp chamber. The patient in this case faces unbearable tooth pain only after the tartar is hit by pulp in the pulp chamber or when it is clogged with food. Due to compression and increasing the size of the swelling begins to deaden the nerve. In the chronic form of the disease, part of the crown tissue, located in the canals, remains alive. Inflammation of the pulp requires special attention on the part of the patient. Remember that the sooner you go to the dentist, the easier, cheaper and painless will be dental treatment.

Causes of pulpitis - the doctor does not take into account the position of the pulp chamber when changing the position of the tooth. The doctor's ignorance of the anatomy of the location of the mouths of the root canals. Curved, narrow and licked channels - with the application of greater force for their passage can be perforated the root wall. The cause of inflammation of the pulp of the tooth is always an infection, mainly of a bacterial nature - staphylococcus, streptococcus, lactobacillus. As we have already said, the infection, in the course of its life, produces acid, which in conjunction with the remains of food destroys the integrity of the tooth enamel, after which the dentin, and then begins to affect the pulp itself. However, it is an infection inside the tooth through the crown, i.e. the visible part of the tooth, but there is also another way of infection - through the apical hole of the tooth, which is the source of the root of the tooth, through which the tooth is brought to the blood vessels and nerve endings. Let's look at how the integrity of the dental "camera" is violated and infection: Caries; Violation of the integrity of the tooth in the wrong actions of the doctor (poor filling, tooth bypass, surgery in the jaw); Gingivitis, which can affect the upper teeth; Breaking the crown or root of the tooth, especially often break the front teeth of children; Increased tooth erosion, often facilitated by diseases such as diabetes or osteoporosis; Wrongly selected and installed braces; Other causes of pulpitis include: Non-compliance with personal oral care rules; Overheating of pulp in the treatment of the tooth; Wrong method of dental treatment, including tooth decay; Toxic exposure to the tooth filling material; Use of substandard materials in the treatment of teeth; The presence of an infection in the blood. Acute pulpitis is provoked by a variety of stimuli. Classification of pulpitis. There is a certain classification of pulpitis. For example, by the localization of the inflammatory process, you can distinguish such types of disease: crown; Root; Total.

In addition, it is possible to classify the pathology by the nature of the current: chronic; Sharp; gangrene. This classification of pulpitis is the most common and most accurate. Sharp pulpitis. Characterized by an acute course of inflammation with severe irradiative pain, increasing at night or when the tooth comes into contact with hot or cold. The acute form of pulpitis is divided into the following subspecies: Serous is the initial stage of pulp inflammation, without the formation of pus exudate; Hot pus is the second stage of pulp inflammation, in which pus exudate is formed in the dental cavity, and the pain sometimes passes when the tooth comes into contact with a cold substance; Diffuse pulpitis. Chronic pulpitis. Usually is a continuation of the development of acute pulpitis. Characterized by weakened pain with frequent aggravations. Sometimes it occurs with minimal symptoms, but pathological processes at the same time continue to destroy the tooth. The chronic form of pulpitis is divided into the following subspecies: Fibrous is the initial stage of chronic pulpitis, which is characterized by the growth of connective tissue of the pulp, with inflammation almost asymptomatic; Hypertrophic (proliferation) - is an extension of fibrous pulpitis, in which the tissue of the pulp grows through the cavity of the tooth, forming a fibrous polyp; Gangrenous - characterized by the decay of the tissues of the pulp. There is also a retrograde pulpitis, which is characterized by infection to the tissues of the pulp through the apical hole of the tooth. Acute Chronic Fire is the initial stage. Fibrous is the result of acute form. Diffuse is a complicated form. Hypertrophic - characterized by the appearance of polyp on the pulp. Gnoite - accompanied by the presence of a hotbed of gout in the tissues of the tooth. Gangrenous is the most dangerous stage. For all forms of acute category of pulpitis, there will be bouts of pain, increasing by about 21:00 pm. Forms and stages In today's medicine distinguish the following acute forms of pulpitis: infectious / aseptic pulpitis - by etiology; reversible/irreversible pulpitis - by outcome; root / total / crown pulpitis - by location; diffuse / focal - on morphological and clinical grounds. The focal form of the acute partial pulpitis it is the initial period of inflammation occurring in the dental pulp. It takes about two days for the duration. At the same time, the hearth is usually located in the area of the pulp, which is closest to the cavity of tooth decay. The process of development of pulp inflammation of pulp is associated with complex changes in biochemical, structural and functional nature. The intensity of the disease, first of all, is determined by the state of reactivity of the body. In addition, the nature of the irritant, the effects of toxins and products of the decay of microorganisms that have biochemical activity, have a sufficient effect on the course of the inflammatory process. The variety of clinical signs and the outcome of the disease depends on these factors. The peculiarity of pulpitis is that

the pathological process takes place in a confined space - a pulp chamber - limited on all sides by solid tooth tissues. It is for this reason that this disease leads faster to the compression of the pulp, breaking of the trophics, venous stagnation and necrosis. But, regardless of the causes of the inflammatory process, pulpitis develops according to the following: Alteration - primary change and damage to the tissues of the dental nerve. Exudation is a violation of blood flow in a microcirculatory channel. Proliferation is the reproduction of cellular elements. Root (part of the pulp, located in the root part of the tooth) and crown (part of the pulp, located in the crown part of the tooth) pulp departments, due to the features of the structure, react to inflammation in different ways: in the crown part more pronounced exudative phenomena, and in the root - the processes of proliferation. At the very beginning of the disease, fluid stagnation in the pulp is compensated by increased outflow of venous blood, but gradually vascular permeability becomes too pronounced, plasma and blood cells seep into the tooth cavity. Against the background of the appearance of inflammatory reaction of the pulp there is a decrease in acidity, which further accelerates the development of the pathological process. As a result, the cells of the dental nerve are damaged, irreversible denaturation (disintegration) of proteins occurs. Exudate, at the beginning of the disease is serous, quickly turns into a gummy separated. Swelling tissues, pneumatic content and severe hypoxia lead to severe pain and gradual death of the pulp. The outcome of the acute stage of pulpitis can be different, depending on whether the process will be resolved by the gummy melting of the vascular-nervous beam, necrosis or the transition to a chronic stage. But, chronic pulpitis has the ability to develop independently, bypassing the acute stage. The patient may not even know about its presence, and the disease is detected when contacting the dentist in order to cure tooth decay. Signs of the disease If you have pulpitis, the symptoms you feel not immediately. Only a regular dental check-up will help identify and fix the problem at an early stage of development. The disease can manifest itself in different symptoms: Pain sensations (they may have different intensity and type). The inability to eat hot dishes, cold water. Discomfort in the mouth. The ability to detect a hole in the tooth with your tongue. If you have acute pulpitis, symptoms are felt almost immediately. Therefore, you will have to make an appointment with the doctor very quickly, and in some cases home tooth anaesthesia may not succeed. In addition, the pathology can develop under the seal, and in this case, you can not do anything on your own. If you

have chronic pulpitis, the symptoms may be slightly different. Naturally, there are pain sensations, but the patient does not always turn to the doctor, and they can eventually pass. In this case, the signs of pathology may disappear, but the damage to the teeth remains. Most often the patient complains of a little discomfort during the meal, as well as a short pain while eating hot or cold dishes. If you have fibrous pulpitis, symptoms also include an formation on the gum, which may be of different sizes. In addition, the pathology can be accompanied by bleeding, unpleasant rotten smell, destruction of enamel.

Symptoms Feeling the "failure" of the tool. Pain in sensing (if the patient is treated without local anesthesia). Bleeding from the place of perforation.

Prevention consists of analyzing the X-ray before endodontic treatment of the tooth in order to identify the features of the location and direction of the channels. Excretion of the material at the top of the root is a frequent complication, but the danger can only be the presence of a large amount of filling material, as well as its excretion in the maxillary sinus (in the treatment of the upper premolars and molars). Such situations can lead to inflammation of the sinus mucous (sinusitis), and it may be necessary to remove the tooth with sinus cleansing from infection. If the patient has no complaints, in most cases such teeth are dynamically observed.

Post-filling pain is a common complication, which can be caused by the introduction of the material behind the apical opening, poor filling, and the reaction of periodont tissues to intervention. The latter option is most common. With an adequately sealed canal of the patient's tooth may be bothered by soreness when biting on it. Within two weeks of endodontic treatment (filling channels) pain of varying intensity may be present, mainly when pressed on the tooth. Usually these sensations take place within a few days, but in some cases they prescribe painkillers (e.g. nimesulid) and physiotherapy. We advise you to study: granulating periodontitis - clinical picture, diagnosis, treatment of [stom4you.ru](http://stom4you.ru)

Tooth pain in pulpitis is the main sign of this disease. By nature, the pain in pulpitis usually is pulsating, often the tooth hurts so much that the patient seems as if the head hurts half of the head. Increased pain usually occurs at night, as well as when exposed to the affected tooth cold or hot air or food, temperature changes, chewing food. When the tooth is insensitive or insensitive. Other signs of pulpitis are: The graying enamel of the affected tooth; Open tooth cavity; Bleeding from the tooth; Insomnia; Increased irritability. Complications of pulpitis If pulpitis is not treated, it can lead to

the following complications; Recognize pulpitis is not difficult, but it is difficult to determine what form of the disease is present in the patient. Symptoms of inflammation of pulp, periodontal and periodontitis have a certain similarity, which makes the diagnosis more confusing. The methods of objective research are also used: Inspection; Percussion; Palpation; Sensing; Thermometry; Electroodontodiagnosis; Radiography. During the first visit, the doctor, during the survey, finds out the nature of pain, history (current) of life and disease, as well as the general well-being of the patient. The history of life is necessary to determine the factors that can contribute to the development of pulpitis. The survey allows us to present an approximate course of development of the pathological condition in a certain person. Objective methods of research confirm and clarify the diagnosis made by the doctor, and depending on the form of pulpitis and the nature of its course, treatment is prescribed. Diagnosis of pulpitis includes the following methods of examination: Collection of history; Visual examination of teeth; A patient's survey of the nature of pain that is needed for differential diagnosis of pulpitis; Teeth X-rays. Only a dentist can diagnose the disease, having studied the history, after the examination of the oral cavity with the help of tools, electro-odontodiagnosis of a disturbing tooth, X-ray.

## 7-Practical occupation

Subject: Errors and complications during the treatment of pulpitis in children

### 1.1. Technology models by education

Class time 4 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	<ol style="list-style-type: none"> <li>1. Mechanical expansion of root canals in acute pulpitis.</li> <li>2. Chemical expansion of root canals</li> <li>3. Medical treatment of root canals.</li> <li>4. Stop bleeding from the root canals. Drying, filling root canals.</li> </ol>

The purpose of the training session	Teach students the mechanical and chemical expansion of root canals in acute pulpitis.  Train the drug treatment of root canals. Teach students how to stop bleeding from the root canals.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

## 1.2. Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (10 minutes)	<ol style="list-style-type: none"> <li>1. Watch the office clean</li> <li>2. Check students' readiness</li> <li>3. Check student performance</li> </ol>	Listen
1. Introduction to the preparation stages (10 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <p>• K. Georgieva - "Emergency Care in Dentistry" 1983</p>	Write down the topic and listen

<p>2 Main Stage (90 minutes)</p>	<ol style="list-style-type: none"> <li>1. Dividing students into two small subgroups, asking questions on the topic;</li> <li>2. Using slides and multimedia;</li> <li>3. conducts medical work;</li> <li>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</li> </ol>	<p>Divided into small groups, watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
<p>Final stage (10 minutes)</p>	<ol style="list-style-type: none"> <li>1. Conclusion.</li> <li>2. Self-employed.</li> <li>3. Homework.</li> </ol>	<p>Listen to Record Conclusion</p>

Interactive Method: "Bee hive"

Text

Pulpitis is an inflammatory process of soft tissues in the tooth cavity. They secrete the acute and chronic course of the disease. If left untreated, the inflammatory process progresses and there are complications of pulpitis such as periodontitis, periostitis, abscesses and phlegmons, osteomyelitis and amyloidosis. The causes of pathology are most often not cured deep tooth decay, a chipped tooth crown or a closed pulp injury.

Acute forms are characterized by periodic pain attacks, which most often occur at night. They are amplified by various stimuli. The time of the pain attack is from 20-30 minutes to several hours.

Chronic forms are characterized by aching pains. They can also be enhanced by cold, hot, salty or sweet foods. If there is no treatment in the future will need more complex therapeutic intervention, and in some cases, the removal of the diseased tooth. Inflammatory hearth can move to neighboring areas and cause severe pathologies with serious consequences.

The most common complications of pulpitis

Inflammatory process at first affects only the crown pulp. In the future, it moves through the root channels and goes beyond the apex. Inflammation behind the top

hole is called periodontitis. This is a major complication of the course of acute and chronic pulpitis. If periodontitis progresses and the person does not seek dental care, there are already more serious problems:

The flux. Pathological lesion of the alveolar bone. Characterized by the appearance of deformation of the gum or the formation of a fistula.

Osteomyelitis. This disease is always preceded by periostitis. Osteomyelitis is a granulomatous-necrotic lesion of the bone of the jaw.

The phlegmon. A severe complication on the maxillofacial area. It occurs as a result of the penetration of a purulent exudate into the soft tissues of the face. In a severe course of phlegmon can cause death.

An abscess. It is a limited inflammatory process of soft tissues. It can precede phlegmon. Symptoms of the abscess are not as severe as in the purulent inflammation.

Septic shock or blood poisoning.

Amyloidosis. The disease develops due to chronic poisoning of the body by the products of the decay of the inflammatory focus. The clinical picture is a sharp disruption of the work of various organs and systems.

Errors and complications in the treatment of pulpitis

The tooth is a complex anatomical formation. Due to limited access to the pathological center, it is difficult to carry out quality treatment. A very fine toolkit is required. Most often, errors and complications in the treatment of pulpitis occur just during endodontic intervention.

The root channels of the teeth are difficult to access for mechanical and medical treatment. Of course, modern dental equipment allows you to view the features of the structure of root canals under X-rays or ultrasound radiation. But this does not exclude the occurrence of some complications.

Tool break

This is a common situation in endodontia. The reason for the breakdown is mainly that the channels are narrow or curved. A doctor's error is often associated with the wrong endodontic toolkit.

For example, during mechanical processing, files or drillbors are not selected in size and are used in stages. The toolkit breaks off in the work space. At the root channel remains either the top of the file, or 1/3 of the part. These areas are most worn out and have less strength. For mechanical processing to be successful, a good approach to the root canal must be provided. During the manipulation, the doctor is obliged to observe the entire frequency of the technique, especially when it comes to the treatment of a tooth with warped roots.

If there is a breakdown of the toolkit, there are several ways to solve the problem:

First of all, you should try to extract everything from the root canal. In most cases, this can be done, even if the roots are slightly warped and previously sealed.

When part of the tool is left in the upper hole area, but closes it well, the root canal is further sealed. The passable part is filled with material with an antiseptic effect, and then put a permanent filling. The patient must be advised to explain the situation and recommend physiotherapy for preventive purposes.

When a tool breaks with perforation, it is recommended to be removed in all possible ways. Despite high-quality antiseptic treatment and special filling material, the risk of soft tissue infection increases at this complication.

#### Perforation of the tooth cavity

In fact, this complication after treatment of pulpitis refers to the doctor's mistakes. The perforation of the bottom or wall in the cavity is due to the excessive removal of hard tooth tissue. The dentist tries to remove the affected enamel and dentin by dissecting the boron as possible. Treatment recommendations require the removal of solid tissue to apparently healthy areas. Therefore, the doctor struggles to do his job qualitatively.

The consequence of the treatment of pulpitis in the form of perforation of the wall of the cavity - not so serious complication. The hole is sealed with solid materials, and treatment continues further. However, the crown can be perforated even during the examination, for example, by a dental probe due to the fact that the enamel is severely thinned from the carious process. In this case, the perforation is eliminated after the removal of the crown pulp.

It is more dangerous to create a hole in the area of bifurcation or trifurcation of the root system. In this case, the risk that the tooth will simply burst in half during further use increases. In addition, it is possible to injure soft tissues located under

the bottom of the tooth cavity. If this happens, the inflammatory process develops due to infection with the pathogenic microflora of periodontal tissues. This complication is possible for several reasons:

A medical error. The doctor did not take into account the anatomical features of the location of the mouths of the root canals.

Slopes of teeth. During treatment, it is necessary to take into account the position of the pulp chamber, especially if the placement of teeth has changed due to abnormalities in the structure of the maxillofacial area.

Obliteration of root canals. In certain cases, they can grow on their own. The doctor during the dissection tries to find the mouth of the canal. As a result, with a long drilling there is a proviating outside the cavity.

Strong curvature of the roots. This pathology leads to a change in the shape of the crown part. That's why X-ray examination before treatment is so important.

Removing filling material behind the apoque hole

Sealing a treated tooth with pulpitis is no less important than dissecting. The outcome of treatment depends on its quality. Withdrawal of the material for apex, unfortunately, is a frequent complication. In this case, after treatment, pulpitis is prescribed physiotherapy procedures and antibacterial drugs. If they do not help, the tooth has to be removed.

It is especially dangerous when some groups of teeth on the upper jaw are sealed. This applies mainly to pre-prayers. Their roots can be located very close to the sinus. If the filling material is over-inflated, it can get into it and cause inflammation - sinusitis. Treating the disease is extremely difficult, often have to perform additional surgery.

Burn of periodontal tissues with chemicals

Many dental drugs if used improperly or long-term on soft tissues of the mouth can cause severe damage. The most dangerous substance is arsenic acid. It is used in the case of treatment of pulpitis by a vital method. After the application of arsenic paste, the doctor is obliged to close the tooth cavity tightly with artificial dentin. For the best effect, put a cotton ball soaked in an anesthetic solution on top of the material, and then put a temporary filling.

The patient is advised not to chew on the side of the treated tooth, at least while being in it arsenic paste. It is necessary to carefully clean teeth in this area and not to use toothpicks.

In the case of the fall out of the temporary filling, it is necessary to remove its residue from the tooth and see a doctor. To prevent burn arsenic acid should treat the affected area with hydrogen peroxide and sprinkle with burnt magnesium. It is allowed to grease the mucous membrane of diluted iodine tincture.

A more severe complication is arsenic periodontitis. Usually the paste for the devitalization of the pulp is usually applied for no more than 48 hours, after which it must be removed. If left for a longer period, the aggressive acid will penetrate the top of the root and cause inflammation of the apical tissues. Against arsenic anhydrite there is an excellent antidote - it is a 5% solution of Unity. It helps not only to neutralize the acid, but also to partially anesthetize, as well as to have an antiseptic effect.

Complications after pulp treatment Even after the tooth is properly sealed, certain problems are not excluded. Their occurrence is associated not only with the doctor's mistakes, but also, for example, with the duration of the disease.

After treatment with pulpitis, the following complications may occur:

The filling drops out.

Fracture of the crown of the tooth due to the significant thinning of its carious process;

The development of periodontitis;

The formation of localized gingivitis and periodontitis due to the pressure of the overhanging filling on the soft tissue of the periodontal;

Change in the color of the enamel of the treated tooth.

Most often there is soreness after filling, especially in the first days. Up to 90% of patients make such complaints.

Pain after filling

Unpleasant sensations can be associated with the production of filling material behind the top hole. Today, these are quite rare effects of pulpitis, as the filling takes place mainly under visual observation, using special equipment.

It is worth considering that endodontic intervention is a certain micro-operation. Tooth pulp is a living tissue rich in vessels and nerves. During its removal, these formations are traumatized. Post-filling pains are nothing but a reaction of soft tissues to surgery. Another reason for the pain reaction after filling can be precisely poor filling with the material of the root canal and reproduction of pathogenic microflora. The development of an inflammatory hearth may also be associated with poor antistatic treatment of the canal.

The most common is the body's reaction to the removal of pulp. In this case, there are complaints of minor soreness when biting on the tooth, during meals, the use of cold or hot drinks.

Pain reaction in many occurs when the temperature of the environment changes sharply. If a person has been in the cold for a long time, and then went into a warm room, in the tooth begin to show unpleasant feelings. Usually such phenomena persist for 14-20 days, then slowly go into decline. However, in the future do not exclude unpleasant feelings, for example, after hypothermia.

Dental tissue is a good thermal conductor. As long as there is a pulp in it, the thermal conductivity of the enamel and dentin is reduced due to the protective functions of this soft fabric. In its absence, the protection is broken, the solid tissues are quickly hypothermia and transmit this effect to the surrounding root ligament apparatus. As a result, there is a bout of nit-scarering pain.

If such problems are very worrying, it is worth seeking advice from a dentist. The doctor will help to choose the right and effective medication, and if necessary will prescribe a course of physiotherapy procedures. When there are minor unpleasant sensations, it is recommended to take simple painkillers (Analgin, Nimesulid).

Complications after the treatment of pulpitis, unfortunately, are not rare. This is not only due to errors in the work of the doctor, as is usually considered. A lot depends on the duration of the disease and the features of the structure of the maxillofacial area. The timely treatment of the patient for help in the clinic is of great importance in the success of treatment.

With long-term treatment of pulpitis, serious complications that lead to tooth loss are possible. This should also be taken into account for those who are addicted to non-traditional methods of getting rid of the problem. Effective treatment of pulpitis can only be carried out by a qualified specialist.

## 8-Practical class

Subject: Mistakes and complications in the diagnosis and treatment of diseases  
periodontitis in children

### 1.1. Technology models by education

Class time 4 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Features of the clinical course of chronic pulpitis in children. 2. Filling root canals with canal fillers.
The purpose of the training session	To study the features of the clinical course of chronic pulpitis in children. Teach students to seal root canals with canals.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of the practice

Stages of work	Teacher	Student
Preparation stages (10 minutes)	1. Watch the office clean 2. Check students' readiness 3. Check student performance	Listen

<p>1.Introduction to the preparation stages (10 minutes)</p>	<p>1.Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance. Brings to the attention that classes will be held using joint technologies</p> <p>2.Literature on the topic</p> <p>N.V.Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I.Vorobev-X-ray of teeth and jaws 1990</p> <p>K.Georgieva - "Emergency Care in Dentistry" 1983</p>	<p>Write down the topic and listen</p>
<p>2 Main Stage (90 minutes)</p>	<p>1. Dividing students into two small subgroups, asking questions on the topic;</p> <p>2. Using slides and multimedia;</p> <p>3. conducts medical work;</p> <p>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</p>	<p>Divided into small groups, watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
<p>Final stage (10 minutes)</p>	<p>Conclusion.</p> <p>2. Self-employed.</p> <p>3. Homework.</p>	<p>Listen to Record Conclusion</p>

Interactive Method: "Bee hive"

Text

The desire to preserve the tooth in case of acute and chronic inflammation of the periodont has long led many researchers to search for perfect ways of diagnosis and therapeutic effects on the source of inflammation.

Periodontitis classification. Three groups of periodontitis - acute, chronic and exacerbated chronic - are adrift. Acute periodontitis by the nature of exudate is divided into serous and gneutic, and by localization - on appical, marginal and diffuse; chronic - on fibrous, granulomatous and granulating. This classification fully reflects the essence of the course of pathology in the periodont.

Despite the fact that the diagnosis of periodontitis is well developed, nevertheless mistakes are made when making a diagnosis. They occur when they do not differentiate the diseases of the regional (marginal) and the upper (apic) periodont; errors are usually associated with an incorrect assessment of the symptoms of inflammation of the regional periodont. Checking one symptom (soreness in the lateral percussion of the tooth), which is not sharply expressed, the doctor does not attach importance to it. At the same time, a thorough X-ray examination, examination of dental pockets show in these cases the presence of the process at the edge of the periodontal.

In X-ray examination, it is sometimes difficult to differentiate periodontitis from periodontitis. Identification of etiology and pathogenesis of the disease, determination of tooth stability, dynamic observation allow correct diagnosis.

It is clinically difficult to distinguish primary acute periodontitis from exacerbated chronic. In this regard, there may be errors in the diagnosis of the top periodontitis. It is necessary to decide what periodontitis patient - acute or exacerbation of chronic, as their treatment is different. To establish the final diagnosis is crucial X-ray examination: if there are no pronounced changes in the bone, the process is acute and developed for the first time; if there are irregularities in bone pattern, dilution areas, dilution of periodontal slit, the chronic process is diagnosed in the stage of de-investigation. Sometimes the clinical and X-ray data are contradictory - with a sharply expressed clinical picture of the exacerbated chronic periodontitis on the X-ray of the upper hearth is poorly expressed and vice versa.

It is not easy to diagnose periodontitis of multi-root teeth. It is known that in chronic periodontitis in some roots pulp remains alive and even little altered. In such cases, combined treatments are used.

In order to prevent errors in determining the condition of the pulp in chronic periodontitis of multi-root teeth, it is necessary to examine the pulp in each channel by electrometric and thermal methods, as well as to analyze X-ray data. It is necessary to conduct a very careful examination of the teeth of the upper jaw. In inflammatory processes in the maxillary sinus, the sky's may have the same symptoms as periodontitis. Only a thorough examination and the elimination of signs characteristic of sinusitis and processes in the sky helps to avoid errors in the diagnosis of periodontitis.

Complications of acute or exacerbated chronic periodontitis - periostitis and acute odontogenic osteomyelitis. In a number of patients, differential diagnosis between periodontitis and its complications presents significant difficulties, but it is necessary for the right choice of therapy.

Inflammatory process in periodontitis has clear boundaries; it captures the periodont of the affected tooth and the surrounding bone tissue of the alveoli, the swelling is limited to the gum. And the periostitis of the jaw is an acute abscess-inflamed inflammation of the alveolar growth. A characteristic feature of periostitis is a pronounced collateral swelling of soft tissues, causing facial asymmetry and spreading far beyond the source of inflammation. If periostitis has developed on the vestibular surface of the upper jaw, then there is swelling of the lower eyelid, sometimes the upper, cheeks, upper lip. The localization of periostitis on the lower jaw determines the swelling of the lower lip, cheeks, soft tissues in the chin and submandibular region-x. In cases of acute gnething or exacerbated chronic periodontitis is determined only smoothing the contours of bone tissue due to reactive inflammatory changes of the bone.

Acute osteomyelitis of the jaw is determined primarily by the features of the clinical course and the characteristic X-ray pattern - the presence of rough bone lesions leading to necrosis and sequestration of individual areas. Clinical picture is characterized by acute, drilling, shooting pain in the jaw, insomnia, lack of appetite, difficulty swallowing, high temperature, often reaching 39-40 degrees Celsius, with significant fluctuations and accompanied by chills, delirium. The face is asymmetrical due to collateral swelling, the tongue is covered, sharp soreness in several teeth, their mobility, enlarged and painful regional lymph nodes. In the blood: SOE 40-70 mm/h, leukocytosis, shift of leukocyte formula to the left, disappearance of eosinophils, reduction of lymphocytes to 10-15%, decreases the content of albumins

and increases the  $\alpha$ - and  $\gamma$ -globulins. The test for C-reactive protein is positive. Seven to 10

Days X-ray determines the area of bone dilution, respectively, the magnitude of the focus of osteomyelitis. With the knowledge of this symptoms and individual approach to each patient, the doctor will not make an error in differential diagnosis of acute and exacerbated chronic periodontitis and their complications - periostitis and osteomyelitis. The top periodontitis. The upper periodont is closely related to the surrounding tissues, adjacent teeth, has an extensive network of nerve fibers and vessels, so the symptoms of periodont damage can be in a number of diseases of alveolar growth (interdental septum), adjacent teeth, soft tissues, neuralgia, etc. In difficult cases, a re-examination should be carried out in two to three days.

In order to avoid errors in diagnosis and treatment, it is necessary first of all to understand the causes of pathological tissue changes around the top of the root. All attention must be paid to the state of the pulp. It is necessary to find out where the disease started - from the top of the root due to pulp damage or the process spread from the marginal period on the length. At the same time, it is important not to miss the inspection of the hidden cavity. Therefore, special importance should be given to such signs as reaction to cold and heat, chemical irritations, soreness in sensing, sensitivity when on cargo. The absence of such phenomena in the field of other teeth is valuable for differential diagnosis.

The dentist faces great difficulties when it is necessary to determine to what extent the top periodontitis is a hotbed of hidden infection and to what extent it does not manifest clinical symptoms at this time, but has an effect on the body. The source of infection should be understood as localized chronic inflammation, possibly exposed to medical lyon, but which can cause or determine the pathological reaction of the body or the damage of individual organs and systems. The area of infection is not only a cluster of microbes, their products of life and decay of tissue elements, which are antigens, but also a constantly reflexive hotbed of irritation of nerve receptors.

In order to avoid mistakes in solving the problem of the danger of hidden infection during periodontitis, it is necessary to proceed first of all from the ability to eliminate the hearth by conservative methods and preserve the tooth.

Experience shows that in all types of periodontitis, the use of modern methods of instrumental and medical treatment of root canals and filling them at the top of the root allows to eliminate the infectious hearth. However, if after treatment there are

phenomena of periodontitis, as well as leukocytosis, subfebrile temperature, elevated SEE, positive samples, the tooth should be removed. Conservative treatment of chronic hot periodontitis is considered to be complete in cases when the cured tooth functions normally, the root canal is sealed throughout and repeated X-rays determine the signs restoring bone structure. It is very important to re-examine the patient to establish the desensitizing effect of treatment, its beneficial effect on the state of non-specific resistance of the body and permeability of capillaries.

The diagnostic tools available to the doctor allow to correctly and timely diagnose the top periodontitis and assess its importance as a hidden infectious hearth in the mouth.

Despite well-developed treatments for periodontitis, instrumental and medical treatment of root canals, their filling spatients are made errors that entail various complications or the need for removal periodontitis tooth. All errors and related complications arising during the treatment stages of periodontitis can be divided into the following groups: 1) perforation of the tooth cavity; 2) perforation of the walls of the root canal; 3) the formation of a ledge in the root canal; 4)

Aspiration or swallowing the tool; 5) the development of emphysema; 6) breaking the tool in the channel; 7) periodont irritation with potent drugs; 8) aggravation on the removal of filling material; 9) incomplete filling of the canal; 10) deep pin removal; 11) X-ray ingessed with an incorrect diagnosis.

If the cavity of the tooth tilted towards the defect of the tooth row or shifted in the lingual or cheeked direction, the perforation of the side wall of the cavity may occur. This usually occurs when the boron is not located correctly (the tooth axis is not taken into account). Perforation is not a great danger. It is eliminated at the same time as the seal. If the bottom of the tooth cavity is perforated while searching for the mouth of the root canal, after the canals are sealed, stop bleeding from the perforation hole (burn phenol, resorcine or hot dtopper), close it a piece of amalgam and a seal. It is much more difficult to eliminate a large perforation hole formed at the bottom of the cavity in the area of root bifurcation when improperly dissecting the tooth cavity or removing an unorganized, tightly soldered denticle. In this case, apply two treatment options: 1) the perforation hole is closed in the same way as when the perforation closes in the mouth of the canal, 2) produce separation (separation of roots), hemisection of one of the roots in the upper presmols or molars of the lower jaw sordo-radiodicular amputation in the molars of the upper

jaw. Perforation of the walls of the root canal can occur with incorrect instrumental processing of it (the axis of the instrument does not coincide with the axis of the root canal), which is more often observed when using a machine drill or a large-caliber tool, not channel. In addition, the perforation of the channel wall can occur near the mouth of the channel when trying to expand it with a bur or sweep to a depth of more than 3 mm. In this case, at the place of perforation, the damaged periodont usually bleeds, so the defect is clearly visible.

When perforation of the root canal wall can be observed bleeding, which stops in the same way as when perforating the tooth cavity, after which the perforation hole is tightly tamponed with a small cotton ball, and the channel below the perforation hole sealed with cement or hardening paste. Then the cotton ball is removed, the mouth part of the canal with a perforation hole is filled with amalgam. When forming a false curve in the middle and lower third of the channel try to find, pass, instrumentally and savagely process the true root canal. At the moment of filling the true root canal, the filling material in condensation falls into a false course and fills it all over.

Closing the perforation hole with a silver amalgam is considered ideal, but if there is no amalgam, the perforation hole can be closed by any hardening paste (e.g., resorcine-shape-line), which is used to seal the canals .

The formation of a ledge in the root canal during its instrumental processing is a medical error. This can happen for two reasons: 1) access to the root canal was done incorrectly and the instrument was not directed to the apex in a straight line, 2) in the curved channels used straight or too thick tools. The possibility of unexpected anatomical abnormalities of the channel is also possible. When the ledge is formed, the doctor loses the sense of passage of the root canal and feels that the tip of the tool is snared and does not shift. The instrument is not jammed, it rotates freely in the channel. To determine the location of the ledge, you need to take an X-ray.

It is difficult to remove such an obstacle. To this end take a thin drill or bur No. 2, the working end of the tool bends at an angle and enter into the channel so that its tip is pressed against the wall opposite the ledge. With careful swinging and rotation try to move the instrument further. If the tool passes for the entire working length, then take the next diameter tool and bring it to the apex. After that, to determine the position of the instrument make a contact X-ray, and then vertical movements grind the channel, pressing the blade of the tool to the ledge. When

working in the channel, you need to constantly monitor the working end of the tool, so that it was not direct and did not rest on the ledge.

Aspiration or swallowing of the tool. If the instrument is poorly fixed or the instrumental treatment of the canal was careless, the instrument may fall out of the doctor's fingers during inhalation or swallowing during the movement of the bronchi or esophagus. Most often it occurs when working in the channels of the lower premolition and molars, as well as when the patient is sent for X-rays with a needle poorly fixed in the root canal. These complications should be constantly remembered and followed simple precautions - never any tool can be left in the tooth without fixation. A. I. Rybakov (1976) draws the attention of doctors to the seriousness of this complication and measures to prevent it. Several cases of aspiration and swallowing of instruments describe D. Svraks and B. Dachev (1978). These complications are fraught with serious consequences beyond the competence of dentists. The dentist in such cases is obliged to immediately seek help from other specialists - an otolaryngologist or surgeon. On the basis of X-ray examination establish the localization of the swallowed or aspirated instrument, and then choose the necessary method of treatment, up to the surgical intervention.

When swallowing the tool appoint a special diet, which includes potatoes, peas, jelly, liquid porridge. These types of food increase the possibility of separating the tool from the places of fixation and advancing it along the digestive tract. Radiox monitoring is required for several days. If the X-ray images for 3-8 days the tool is in one place, then decide to intervene surgically to remove it. Of course, with such a complication, in addition to physical injuries, the patient is severely traumatized. In this regard, it should be recalled once again that the dentist should be extremely focused on the instrumental treatment of root canals, not to be distracted by conversations with patients and colleagues, and not for a moment not to let the tool out of hands.

After instrumental treatment of the root canals, air pistols are used to dry them. Compressed air with great force passes into the root channels, penetrates through the aporal hole and causes subcutaneous emphysema of the face and neck (wide aporal opening contributes to this). At the same time, with the air flow into the subcutaneous base get microbes from the tooth, there is its infection, which can lead to severe consequences, up to media- nit, so you can dry the air only impassable or previously sealed channels .During manipulations in the root channels when the wrong load on the tool, the inconsistency of the axe of the tooth and its

direction can occur a breakdown of the drill, pulp extractor or root needle. Breaking the tool during the channel treatment is not a serious complication, but aspiration or swallowing of the tool is a serious complication. Therefore, measures should be taken to remove the fragment or (in some cases) to preserve it in the canal. The free-lying fragment, protruding into the cavity of the tooth, capture the beaks, tweezers, clamp or other tool and usually easily remove. But if the end of the break is below the mouth of the root canal, then it is not possible to capture it in this way. To remove from the root canal fragments of rod tools use a domestic set consisting of tongs with narrow sponges, tsang tongs and boron-trepans. The fragments wedged in the root canal are removed with the help of a tsang tool, allowing to overcome certain resistance when extracting. If it is impossible to capture the fragment with with bora-trepana drill hard tissues around the break, and then the end of the break capture tsang tongs. Instead of tsang tongs, the doctor N.F. Baking (1970) proposed to apply an injectable needle with a drill screwed into it. The cut injectable needle is put on the end of the break and screwed into it by the drill. With a small effort the drill presses the end of the break to the needle wall, firmly wedges it and then the doctor freely removes the break. As a rule, the fragments of the tool left in the middle and upper part of the root canal cannot be extracted.

If the fragmentation of the tool can not be extracted in the described ways, you can try to pass near it with a drill or a drill and twitching movements on yourself, tightly pressing the tool to the break, try to extract it. If it is not possible to extract the fragment, it is recommended that the electrophoresis of the potassium iodide (in single-root edits) or 5% of the alcoholic solution of iodine (in multi-root edits) be sealed and the passable part of the zinc-oxyegenolol-voi canal or resorcin-formalin Paste. Sometimes it is possible to pass the drill inge of the root near the fragment, to expand well and seal the root canal. If there are clinical indications when protruding the end of the break for apex in the periapic alisneedion tissues you need to make an incision on the gum, trepanation of the jaw over the break of the tool and try through this hole to extract the break. If it cannot be removed, you need to resection the top of the root (the single-root teeth of the upper jaw). If you have a fragmentation of the tool in one of the roots of the multi-root edits and dilution in the top of this root, it is possible to perform hemisection or coronaradicular amputation. If there is a break in the root channels of the tool, the prognosis is favorable in cases of root pulp extirpation and if the tooth is depulped and there is

no dilution at the top of the root, but if there was an area of dilution before treatment, the prognosis is favorable in less than 50% Patients.

To prevent the break-off of tools in the channel, the doctor must follow the following rules: 1) use quality tools made of stainless or carbon steel;

2) Apply only sharp tools;

3) carefully examine the blades of the tool before, during and after work to detect deformations;

4) use pulp extractors 1-2 times, root burawas and drills - 2-5 times, root rushsaws and sweeps - 5 times or more;

5) observe the corners of the turn for pulp extractors, drills, buravs and rushsaws when working in the root channels;

6) Apply drills and drills in a strict sequence of calibers, without "jumping" through size;

7) Do not use the tool with a bend at an acute angle;

8) Do not use tools covered in rust or burnt on fire;

9) work with the tool only in a "wet environment."

A common mistake in the treatment of periodontitis is the insufficient opening of the upper hole. This is especially important in the treatment of acute periodontitis, when in the periapical tissues accumulates serous exudate or gnome. Instrumental cleansing of the canal without sufficient disclosure of the upper (apic) hole not only does not bring relief, but also contributes to the spread of the process to the adjacent tissues. The appearance of gnome or exudate from the canal shows that the top hole is opened. A clear mistake in opening the top hole of the tooth is a deep and sharp progress of the needle into the periapical tissue. At the same time, it is possible to push the infected contents at the top of the root, periodont trauma and dissection of the sine cavity (in the treatment of the lateral teeth of the upper jaw).

Some doctors, counting on the almighty effect of medicines, neglect the careful instrumental treatment of the canal, which is a mistake. However, even in the medical treatment of root canals make mistakes, using for their processing strong means that cause irritation of periodont (high concentrations of formalin, tricry-evil

for raspberries, silver nitrate, etc.). Clinically, this complication is manifested by unsharp pain, which appears mainly when biting on a diseased tooth. In these cases, the channels should leave some substance that does not irritate the periodont (eugenol, antibiotics with enzymes), as a result the pain usually subsides and in the second or third visit the tooth is able to be snare-bheil. Currently, instead of strong drugs, it is recommended to use antibiotics with enzymes that dissolve the contents of the channels well and have a beneficial effect on periodontal tissue. When applying enzymes, such errors are possible: 1) the use of enzymes with increased sensitivity to them; 2) the use of enzymes with expired expiration date; 3) The use of enzymes when they are no longer effective; 4) simultaneous use of ferzments and potent substances. Enzymes are very sensitive to various substances. The worst mistake is the use of enzymes together with potent substances that inactivate them.

Special attention in the treatment of periodontitis should be paid to teeth that do not withstand sealed closure. Often, this condition occurs when the root canal is not fully complete. After the expansion of the root canal and its medical treatment, pain after the sealed bandage does not occur. However, sometimes the aggravation of the inflammatory process can occur in a well-passable channel, as soon as the tooth is put airtight bandage. In this case, it is necessary to assign an electrophoresis or to apply a draining bandage. In the root canal after its antiseptic treatment on the root needle injected turundu with a medicinal substance, and then, without taking out the needle, put a bandage of artificial dentin. After hardening, the dentin is removed the root needle, and the bandage is held with a cotton swab. Drainage in the bandage can be done after its overlay, making a hole in it probe. After 1-2 days, the turunda is replaced and an airtight bandage is applied.

In single-root edits, which can not withstand sealing, it is also advisable to immediately seal the root channel with phosphate-cement with the preliminary introduction of antibiotic through the root canal or in the transitional fold (100 LLC-200 ED Ltd. penicillin, bred in Novocaine). Treatment of periodontitis is often accompanied by post-filling pain associated with the direct effects of the filling material on periapi-feces or over-breeding. As a rule, the pain is ningling or throbbing, the reaction of the tooth to percussion is sharply painful. It has been observed that the pain after filling the phosphate-cement channel is less intense and prolonged (for several days) than the pain after filling zinc-oxyegenool or rezorcinal formalin pastes, sometimes lasting up to 7-10 days. At the same time, there is soreness in the vertical feathers' and palpation, swelling of the gums, the

appearance of a fistula. Some doctors make a gross mistake in trying to unseal the root canal, but remove the filling removed from the top of the tooth

Mass is impossible. To eliminate post-stilomber pain, cold rinses with herb broths (chamomile, sage, St. John's wort), physiotherapy treatment (UHR therapy, darsonvalization, fluctu-rization), novocaine blockade, injection of hydrocortisone in transitional fold in the area of the treated tooth. In cases where these means can not stop the inflammatory process and the gum shassed, it should be opened and left for 1-2 days yodoform turunda or rubber graduate (drainage). Incisions in all cases lead to the rapid elimination of the exacerbation of the inflammatory process.

Significantly less often (in cases of use of a large amount of phosphate-cement or other filling material with insignificant destruction of near-liver tissues) in patients long-term pain in palpation of the gums and sometimes pain when biting on a sealed tooth. Often on the gum in the area of such a tooth opens a svishcheving course.

A severe, though rare complication, is the filling material (paste or phosphate cement) in the lower jaw canal when filling premolars and distal channels of the roots of the molars of the lower jaw. This complication leads to irritation and compression of the nerve trunk, which is accompanied by numbness of the skin of the chin and the circamblin soft tissues on the corresponding side. The prognosis in this case is unfavorable, as physiotherapy and other anti-inflammatory treatment, as a rule, do not give the desired effect. The only appropriate treatment in this case is electrophoresis of the lining of the gum mucosa, respectively, projection of the top of the root of the treated tooth; if there is no effect, it is the removal of a foreign body. In the treatment of periodontitis should be remembered about another error - the failure of filling material to the top hole, i.e. the incomplete filling of the root canal. To resolve the issue

an X-ray is needed to determine the extent of the canal's flat and the nature of the filling material. The most simple question is solved if in the channel non-verde-forming pastes (yodoform, zinc-glyceri- new, etc.), their removal is not a big deal. It is much more difficult to remove hardened resorcine-formalin paste from the canal of the tooth, and even more so - phosphate cement.

If the channel is sealed only on XU - 7z or less, it often manages to seal. The roots of single-root edits, sealed with cement at 2/z or 3JI length of the canal, it is advisable

to recarve. In order for the canal to be sealed completely, it is necessary to seal it not with a root needle, but with a canal-filling monitor under the control of X-rays.

In the treatment of periodontitis of the upper jaw, it is possible to deeply push the filling material into the maxillary sinus, which is a gross error. This can occur due to an anomaly between the relationship of teeth with the maxillary sinus, in inflammatory gunooc processes in the periodont, when the lower wall of the sinus is thinning. Pushing the filling material can also occur when the material is roughly moving through the channel. After pushing the filling material under the bone of the jaw develops a sub-bone abscess. Measuring the channel with a needle (depth meter), X-ray control, gentle work can avoid such errors.

Complications in the treatment of periodontitis may occur when misdiagnosis is misdiagnosed as a result of incorrect X-ray evaluation, when normal anatomical formations as a result of a failed 'projection are superimposed on the top of the tooth root and taken as a pathological hearth. For example, the superimposing of the chin hole on the top of the root of the first or second premolar of the lower jaw or when the incisor hole is projected onto the root of the central incisor of the upper jaw.

Often low-placed maxillary sinuses are mistaken for near the top of the cyst. In order to avoid this and mistakenly not to injure the crown of a healthy tooth, it is necessary to carefully examine the clinical condition of the tooth itself, and on the X-ray - periodontal slit all over the root of the tooth. Diagnosis of chronic periodontitis or root cyst is excluded if the background of the maxillary sinus clearly traces periodontalInss slit around the entire root of the tooth. In cases where there is a pathological hearth in the periodont, against the background of blackout of the maxillary sinus, an additional hearth associated with an unaltered periodontal slit is visible.

Even more gross mistake is made by those who for pathological formation (granuloma) takes the sprout area in the not fully formed top of the root of the tooth.

When filling root canals with a pin, it is impossible to move the pin too deeply for the top of the tooth, as it constantly injures the near-dental tissues. It is not acceptable to seal the root canal with one pin without phosphate cement, as the incomplete closure of the root canal and the top hole of the root is re-infection of the canal and the dental tissues, which inevitably leads to an increase in the root

canal and the root. pathological hearth. In the final stage of treatment, the incorrect imposition of the filling on the contact surface of the tooth leads to papillitis or even marginal periodontitis with the resorption of the top of the alveolar septum.

In the treatment of periodontitis errors can be made in determining the indications of the limit of conservative treatment. However, after the introduction of modern treatments for periodontitis (antibiotics with enzymes, glucocorticoids, protein anabolitors, diathermocoagulation, UCV, etc.) the limits of conservative therapy have significantly expanded. However, in certain situations conservative methods are not contraindicated and their use can only compromise the method. This is especially common in single-session treatments that have their own strict readings.

The main criterion in evaluating the treatment of periodontitis are long-term results (in terms of 3 to 6 years), obtained on the basis of clinical X-ray testing. It has been established that after 3 months after the qualitative filling of the root canals there is a partial restoration of bone tissue in the upper area, after 6 months - a significant restoration of bone tissue, and after 12 months - almost complete it Recovery. Long-term outcomes (3 years to 7 years) show a significant percentage (80-90t)i favorable outcomes. With the defective filling of root canals at the same time, there are significantly more cases of progression and stabilization of the pathological process and much less - bone restoration.

Observations by many researchers to study the long-term results of periodontitis treatment have shown the benefits of therapeutic methods over surgical, so you need to use all existing therapeutics and only in the case of failures to switch to surgery. Surgical treatments for periodontitis should be applied only when it is impossible to pass the channels and seal them.

In addition to these errors, which are allowed in the treatment of periodontitis, the most significant is the duration, multi-session treatment - instead of protecting the periodont from irritation and the influence of harmful factors as early as possible, the doctor with each The visit increasingly infects the canal and periodont fabrics. As a result, existing remedies are ineffective, and the tooth has to be removed soon after such "treatment."

There is various data in the literature on the given results of treatment of periapical inflammation and iria depending on the timing of treatment (number of visits). Most authors believe that the timing of endodontic treatment is not important for the restoration of the destructive hearth in the period. The timing of treatment is mainly

due to the bacteriological status of the root canals, reflecting the effectiveness of the use of a certain antibacterial drug. The timing of treatment is determined by the volume of endodontic intervention per visit (per visit), the presence or absence of complications. That is why the timing of treatment does not have a significant impact on regeneration processes, but has only an indirect nature. To finish the section I. Rybakov (1976): "Treatment of periodontitis of teeth is a great art, it should be widely introduced into the practice of dental institutions. The introduction of specialized offices for the treatment of periodontitis will only improve the state of the case of specialized care, but will also prevent errors in the treatment of periodontal diseases."

## 9-Practice class

Subject: Errors and complications in endodontic treatment  
 root canals of teeth in children

### 1.1. Technology models by education

Class time 4 hours	Students 8-10
View of the class	A practical lesson on deepening, expanding and implementing knowledge.
Plan	1. Changing the structure of periodont tissues in childhood and their role in the clinical course of periodontitis.  2. Features of clinical course, differential diagnosis in acute periodontitis.
The purpose of the training session	To study changes in the structure of periodont tissues in childhood and their role in the clinical course of periodontitis.
Teaching methods	Conversation, visual lectures
View of the class	common-collective
Visual tutorials on the topic	Textbook, lecture material, projector, computer
The setting for the class	Methodical equipped audience
Monitoring and evaluation criteria	Oral poll

### 1.2. Technology map of the practice

Stages of work	Teacher	Student
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Preparation stages (5 minutes)	<p>1. Watch the office clean</p> <p>2. Check students' readiness</p> <p>3. Check student performance</p>	Listen
1. Introduction to the preparation stages (5 minutes)	<p>1. Announces the topic, the purpose of the class plan of educational results, substantiates their importance and relevance.</p> <p>Brings to the attention that classes will be held using joint technologies</p> <p>2. Literature on the topic</p> <p>N.V. Kuryakina - "Therapeutic Dentistry Childhood" N. Novgorod 2001.</p> <p>T.F. Vinogradova - "Children's Dentistry" 1987</p> <p>N.G. Pakhomov - "Primary Prevention in Dentistry"</p> <p>E.V. Borovsky - "Therapeutic Dentistry" 1997.</p> <p>Y.I. Vorobev - X-ray of teeth and jaws 1990</p> <ul style="list-style-type: none"> <li>• K. Georgieva - "Emergency Care in Dentistry" 1983</li> </ul>	Write down the topic and listen
2 Main Stage (25 minutes)	<p>1. Dividing students into two small subgroups, asking questions on the topic;</p> <p>2. Using slides and multimedia;</p> <p>3. conducts medical work;</p> <p>4. Combines all the information on a given topic, actively participating students will be cheered and generally evaluated.</p>	<p>Divided into small groups,</p> <p>watching, participating, listening.</p> <p>The student gives his opinion to complements and asks questions</p>
Final stage (5 minutes)	<p>Conclusion.</p> <p>2. Self-employed.</p> <p>3. Homework.</p>	Listen to Record Conclusion

Interactive Method: "Bee hive"

The questions on the topic:

## Text

### Errors and complications in endodontic treatment

#### Classification of errors and complications in endodontic treatment

#### Errors at the diagnostic stage:

In the presence of facial pains, irradiating in one or another tooth.

Misinterpretation of X-rays.

#### ii. Errors at the therapeutic stage:

##### 1. At the preparatory stage:

Infection of the root canal

Lack of adequate access to root canal

(f) Perforation of the bottom and walls of the tooth

##### 2. In the process of mechanical processing of the root canal:

Incomplete removal of root pulp

The oxidation of the root canal lumen with dental sawdust

The formation of an apical ledge when the canal curves

Excessive lateral expansion of the middle third of the canal through the internal curvature of the root

Perforation of the root walls

Destruction of anatomical narrowing

Tool fracture in the channel

##### 3. In the process of filling the root canal

Heterogeneous, insufficient filling of the canal lumen

Removal of filling material outside the apical hole

A longitudinal fracture of the root.

Facial pains irradiating the teeth

Many doctors meet in their practice neuralgia II, III branches of the trigeminal nerve, glossalgia. Often the patient points to a "causal" tooth, requiring its treatment or removal. In such cases, the criterion for the need for treatment or removal is a thorough clinical examination using odontometry. In case of suspected nitis, neuralgia, a consultation of a neurologist is necessary. X-ray errors

Incorrect interpretation of X-rays may be associated with the imposition of contours of the maxillary sinus, incisive and mental holes. Maintaining the continuity of the periodontal slit at the top of the root indicates that this tooth is not the cause of destructive changes. The repertory is the definition of the condition of the tooth - electrodiagnosis.

Infection of the root canal

The penetration of microorganisms in the root canal can occur due to the merciless dissecting under pressure on the crown pulp, with careless amputation and removal of tissues from the mouth. It is possible to develop and reproduce microbes due to the reuse of tools, including, hogs, excavator. In preventing this complication, careful isolation of the operating field is of great importance. Before instrumental treatment, it is advisable to completely excise

carious dentin from the walls of the cavity in order to prevent infection in the root canal.

Errors in creating access to root canals

The reasons for this situation are insufficient dissection of the cavity, incomplete excision of the roof of the pulp chamber, lack of control of the introduction of the ecdodontic instrument. The measure of prevention of such an error is the formation of proper access, which is characterized by the absence of overhanging edges and the directness of the walls of the cavity, which should be smooth, without roughness and chipping.

Perforation of the bottom or walls of the tooth cavity

poor knowledge of the topography of the tooth cavity,

Inadequate opening of the tooth cavity,

The wrong choice of tool and violation of the method of its use,

Excessive expansion of the mouths,

Reducing the height of the crown due to its erasure

Treatment through an artificial crown

Perforation of the tooth cavity at the level of the neck of the incisor or fang as a result of dissection, without taking into account the position of the tooth

The perforation of the bottom of the molater's cavity in the area of bifurcation as a result of excessive boron disparagement

The perforation of the tooth wall in the cervix when trying to endodontic treatment through

Perforation of the bottom of the tooth cavity during the search for the mouth of the licked root canal

Incomplete removal of root pulp

It is allowed in cases where adequate access to the mouths of the canals is not available or the latter are not available because of the location of denticles. The reason may be a lack of extension of the mouths of the channels or incorrect definition of the work line. Anatomical features of the structure of the roots also blink to become a factor of poor channel passage for instruments. Violation of the technique, such as the removal of tissues by a pulp extractor with a ruptured vascular-nervous beam, incomplete removal of the root pulp leads to bleeding from the canal, which prevents further endodontic interventions.

The daub litamy with dentin sawdust

The cause is the accumulation of dentin sawdust in the canal and their compaction. Attempting to re-pass the canal can lead to the ejection of the products of mechanical treatment of the root canal (endolubrikants, dentin sawdust, pulp residues, etc.) outside the aporal hole, which can cause pain after endodontic treatment. Such a complication is warned by careful passage of the channel to the aporal narrowing by small instruments after each second step, as well as washing the lumen of the canal with solutions.

The formation of an appic ledge

Most often takes place in curved channels. During the processing of the channel, slipping off the tip of the tool during rotation leads to the so-called

"crow-tooth" effect. The reason is the use of large inflexible files that cannot repeat the shape of the channel. It is possible to block the opening of the canal with dentin sawdust. The risk of creating an apical extension with files that have an aggressive top increases significantly.

The perforation of the walls of the root canal

Careless use of tools to prepare root canals for various pin horse-powered actions by hand tools

The application of the doctor's brute force when unfilling the root canal with mechanical tools.

Mechanical processing of curved, rugged root canals using a machine rotating tool

Idiopathic root resorption.

Tool fracture in the channel

Very high in the case of file deformation, most often occurs when the narrow and curved, previously sealed channels are snouted and widened. The main reasons may be the lack of adequate access to the heart of the root canal, the violation of the sequence of the use of endodontic instruments, the use of tools without indications, non-compliance with the mode of operation and speed of rotation, application of considerable effort in manual or machine processing, metal fatigue caused by repeated use of the tool.

Inadequate antiseptic treatment of the root canal

Hydrogen peroxide has a very weak antibacterial effect, does not dissolve organic matter, can disrupt the adhesion of the permanent

Sodium hypochlorite is extremely toxic in high concentrations

There are studies on the appearance of hypersensitivity reactions to sodium hypochlorite.

## INADEQUATE ROOT CANALS

Removal of filling material behind the apical hole

No root canal filling yields a significantly worse result than a slight excretion of material behind the apical opening

Phosphate cement does not provide airtight closure of the upper hole and dentin tubules, has an irritating effect on periodont tissue

The resorcine-formalin method also does not provide a guaranteed obturation of the upper hole

Wrong definition of work length

Incomplete channel filling

The method of using a guttaperdic or silver pin in channels with an oval, slit, dumbbell-shaped form

Pushing the filling material in the lower jaw canal

Pain after endodontic intervention

One of the most common complications. It can be caused by the irritating effect of the products of mechanical processing of the root canal, which are pushed out of the apex during the instrumental processing of the channel. The cause of the pain can be a root abscess, bred in the tissues of the periodont. In

this case, the pain is short-lived and can go away on its own without any exposure.

A particular problem is the pain that is prolonged character. One of the reasons is the use of a vital method of treatment in one visit, which is associated with the impossibility of exposure to deltoid and additional canals. Poor mechanical and medical treatment leads to the movement of microorganisms during the period. Individual reaction can develop with intolerance to the components of the root filler or excessive filling.

## Glossary

Hypocalcification of enamel is a soft, not completely calcified enamel. Externally, the opacity of the enamel, brown or yellowish spots on it. The treatment consists of the use of methods of aesthetic dentistry, the use of composite fillings and veneers. Often occurs when taking tetracyclines, especially the mother during pregnancy, which is reflected on the child's teeth (tetracycline teeth).

Hypoplasia of the enamel is a poor formation of tooth enamel, which leads to incomplete coverage of the enamel of the crown of the tooth. In this case, the affected tooth is usually yellow, and the surface of the tooth is not smooth and easily exposed to enamel erosion. Causes of enamel hypoplasia: eating disorders, lack of vitamins (A, C and D), systemic diseases, pathology of the central nervous system, nephrotic syndrome, allergies, lead poisoning, local infection, tooth injury.

Hypoplasia enamel neonatal - two-thirds of the processes of enamel hypoplasia develop between birth to the first year of life. In the development of neonatal, infant hypoplasia enamel are most often responsible for the lack of vitamins A, C and D, as well as calcium and phosphorus. The presence of systemic diseases plays a significant role, which leads to a decrease in the activity of ameloblasts and disruption of the development of enamel.

Dentist - dentist, dentist. He is engaged in the diagnosis, prevention and treatment of dental and oral diseases. Separate specialties are dentist-therapist, dentist-surgeon, pediatric dentist.

The virtual amputation of the pulp is a surgical method of pulp amputation, in which the pulp is killed by special medicines before its removal. This makes it easier to remove. This technique is used in the case of acute pulpitis to reduce pain when removing pulp, as well as in case of individual insensitivity to anesthesia.

Demineralization of teeth - depletion of tooth enamel with mineral ions. The main minerals in the enamel are calcium and fluoride. With the loss of these minerals, the enamel weakens, teeth become sensitive, especially to hot and cold. If the process of demineralization is not treated, it will lead to the formation of cavities. Demineralization of the acid enamel contained in food (especially in citrus and fruit juices). The presence of bacterial plaque on the teeth is also affected. Dentin is one of the four main components of the teeth, which make up the main part of the tooth. On the surface of the dentin is dental

enamel. The formation of dentin (dentinogenesis) begins before the formation of enamel and is initiated by the odontoblasts of pulp. Unlike enamel, dentin continues to form throughout life. Dentin is a red bone of yellowlike color, 76% composed of inorganic materials, 20% organic matter, 10% protein compounds and 10% water.

Dentina aplasia is a disease that combines the signs of both imperfect dentinogenesis and imperfect amelogenesis. It is observed on milk teeth, which are practically devoid of enamel, and the dentin of these teeth is painted in a red dish. At the same time there are defects and in the pulp of the tooth, it is degenerated, the pulp chamber has unnaturally large sizes. The aplasia of the dentin of permanent teeth is manifested in the fact that their enamel after erupting is very thin and gray.

Dentin hypoplasia is the slow development or underdevelopment of dentin. At an early age, the cause can be all childhood diseases, both acute and chronic: imperfect osteogenesis (bone fragility), congenital syphilis, rubella, hypovitaminosis. The mother's illness esbes during pregnancy, as well as the impact on her body of negative environmental factors (infections, radiation, poisoning, etc.) play a big role.

Dentina dysplasia is a rare genetic disorder that affects both milk and permanent teeth. At the same time there is a change in the shape of the tooth cavity, and the roots of the teeth are abnormally short. It has two forms - root and crown.

Dentinitis is an inflammation of the dentin tubules.

Dentinogenesis is the process of dentin formation. It is carried out with the help of odontoblasts - a special type of biological cells. The formation of dentin continues throughout a person's life. The formation of dentin passes several stages: first formed the mantle of dentin, then the primary dentin, then - secondary and, finally, tertiary.

Dentinogenesis is an imperfect disease, manifested in the improper development of dental dentin (both dairy and permanent). It mainly affects people of white age of English or French origin. The severity of the damage depends on the age and location of the teeth. First of all, incisors and the first permanent molyars suffer. Second motryars and wisdom teeth are less often struck. Dentin is very quickly depleted, teeth are very dark.

Dentoma (odontoma) is a benign periodontal tumor. It is more common in children and adolescents during the development of permanent teeth. Grows slowly, is detected on an X-ray. The danger of the dentoma is that it can lead to bone thinning with the formation of a svishcheving course and the development of periostitis.

Dentoscope is a dental mirror used by the dentist in various dental manipulations. Allows you to expand the field of view of the treated area.

Depulption - removal of the nerve of the tooth in the development of the inflammatory process in the tooth. Sometimes depulption is done in such a way that removes a healthy nerve if the tooth is prepared for prosthetics. After

depulpation, the tooth stops feeding, which causes it to become brittle. After removing the nerve, the root canal of the tooth is sealed.

Dental floss is an addition to a toothbrush to maintain oral hygiene. Allows you to remove food residues from interdental gaps where the toothbrush is not effective. This reduces the risk of gingivitis, tooth decay, periodontitis. Floss is made from plastic (nylon, teflon or polyethylene) or silk.

The dental plate is an orthodontic device to correct minor bite disorders. They are removable and unremovable.

A toothbrush is a device for brushing your teeth on a daily basis in order to maintain proper oral hygiene. It is advisable to use a toothbrush at least twice a day: in the morning after breakfast and in the evening before going to bed.

Dental plaque, plaque, tartar - stages of development of plaque. First, the breeding of pathogenic bacteria from the substrate of saliva proteins begins with the formation of micro-colonies. Then other types of bacteria begin to become more activated. All these bacteria begin to form an organic matrix that will protect them from the effects of the external environment. If you do not remove the resulting growths by brushing teeth, they will continue to develop, gradually mineralize and form a tartar. At this stage, neither antiseptics nor brushing toothpastes are ineffective. Thus, plaque can be removed with a toothbrush, and tartar - only in the dentist's chair with special techniques.

The tooth pocket is the space created between the tooth and the gum during periodontal disease. The depth of the pocket is measured from the top of the gum edge and the place of epithelial attachment (the place of attachment of the gum to the tooth). In the absence of pathology, there is a small gap between the upper part of the gum and the place of epithelial attachment (1-3 mm). With gingivite, this space will increase either as a result of swollen gums or as a result of a disturbance of attachment. When periodontitis, the depth of the pocket increases even more. The bacteria of plaque are responsible for the formation of pockets. Without special treatment, the problem can not be solved, as bacteria in pockets become anaerobic, that is, more pathogenic. Pockets are cleaned (by a dentist), treated with a laser.

Immobilization of the tooth - the tooth can become mobile as a result of inflammation of the periodontal ligament (for example, in injury). In this case, it is necessary to immobilize the tooth by attaching it to the adjacent teeth. One way to do this is to splendor or join with wire.

Invagination is one of the malformations of teeth ("tooth in the tooth"). In this case, the tooth enamel or its dentin grow as if inside the tooth. This anomaly requires immediate treatment, as the invaginad tooth is highly susceptible to tooth decay.

Ingallation anesthesia is a method of anesthesia in which anesthetic (in the form of a mixture of gases) is injected directly into the patient's airways with special devices that are securely attached to the patient's mouth and nose. Inturbators are also used when the tube through which the anesthetics enter directly into the trachea. An intact tooth is a whole, unscathed, healthy tooth.

The intrusion of the milk teeth is the movement of the milk tooth inside the hole, which is often the case with an alveolar crack. Clinical signs: the visible part of the tooth becomes shorter or it is not visible at all, there is spontaneous pain and metallic sound when biting. The situation is complicated by the fact that it inflicts an injury to the rudiments of permanent teeth.

Infection of the pulp of the tooth (pulpitis) - inflammation of the nerve and blood vessels of the tooth, cells of connective tissue. Signs of pulpitis: severe pain (especially on hot and cold), pain at night, headache, severe pain when chewing, bleeding from the gums. Pulpitis is not necessarily accompanied by an infection, so antibiotics are not always required. Causes of pulpitis: deep restoration of teeth, deep tooth decay, tooth injuries, bite problems. Immediate treatment is needed to avoid tooth loss or even sepsis.

Infiltration is a kind of seal that occurs when blood, lymph, rot, cell elements accumulate in the tissue. Infiltrations are always painful. Infiltrations are divided into inflammatory (trauma, infection) and tumor (cancer, myoma, sarcoma). In the case of inflammatory infiltration, phlegmon occurs, which requires immediate surgery.

Infiltration anesthesia is a method of anesthesia by injecting anesthetic with an injection into a certain area. The method most commonly used in dentistry. In this case, the anesthetic acts directly on the nerve endings. The method of infiltration anesthesia is used in both surgical and therapeutic dentistry. Introduction of anesthetic can be carried out under the gum, periapical (near the root of the tooth).

Caries - a pathological process in the tooth (in hard tissues), leading to the appearance of a cavity in the tooth, which gradually develops under the influence of bacteria that destroy the hard tissues of teeth (enamel, dentin and cement). Acid, sugars in food residues on the surface of the teeth. Tooth decay is one of the major oral health problems in most industrialized countries (affects 60-90% of schoolchildren and the vast majority of adults). The beginning of the carious process is a small area of demineralized enamel on the surface of the tooth or in between teeth. The process then extends to the dentin, located under the enamel, the cavity appears and the tooth gradually collapses. Caries can also reach the roots of teeth in a gum recession (often in old age).

Bottle caries are a form of tooth decay that occurs in infants who are artificially fed from a bottle. An extremely dangerous form of tooth decay, because it occurs and develops rapidly on the dairy teeth immediately after their erupting. This is especially helpful for a child with a bottle containing a milk mixture, fruit juices or sweet water. There is a bottle tooth decay, as a rule, first on the upper incisors, and then (in the absence of treatment) can affect fangs and molyars.

Carice of milk teeth - develops very often, because the enamel of milk teeth is very thin, much thinner than permanent teeth. Caries in the first years of life can have a severe impact on the health of the child, can cause pain, disrupt sleep, disrupt speech and the process of chewing food. Carice of milk teeth must be treated, because under the infected baby teeth are the rudiments of

permanent teeth, which can easily spread the infection, and permanent teeth will be affected by tooth decay already at the cutting.

Caries (cervical) - tooth decay, localized in the neck of the tooth as a result of accumulation in this area of plaque and hard dental deposits, in which large quantities there are pathogens. Localized cavity is most often on the front teeth. The appearance of this type of tooth decay is also facilitated by the fact that in this part of the tooth enamel is the most thin, easily eroded, which leads to the baring of the neck of the tooth, on which tooth decay develops.

Early childhood caries is a severe form of tooth decay in preschool children. This is a real problem of pediatric dentistry due to the rapid development of this form of tooth decay and the effect on the overall condition of the child. The rapid development of such tooth decay is associated with the immaturity and porosity of the enamel, which is extremely susceptible to the action of acids in food. The onset of the disease with such tooth decay is sudden and rapidly progressing, often leading to the almost complete destruction of the baby teeth. In addition, early tooth decay leads to serious complications: pulpitis, pulp necrosis.

Periodontal pocket is a periodontal pocket, a space created between the tooth and the gum in periodontal diseases. The depth of the pocket is measured from the top of the gum edge to the place where the gums are attached to the tooth. In the absence of pathology, the pocket depth is 1-3 mm. With the development of gingivitis, the depth of the pocket increases either as a result of swollen gums or, more often, as a result of loss of attachment.

Composites are materials made of two or more composite materials with significantly different physical and chemical properties. In dentistry, composite materials are used for filling and cosmetic restoration of teeth. As a rule, the composition of composites are minerals in an organic matrix. The advantage of composites is their high strength and the ability to select a wide color scheme in the restoration of teeth. Molars are the back teeth on the tooth arc. A man has 12 molars, six on each of his jaws. Wisdom teeth are the third molars. Molars play a major role in chewing and biting off food. The most prone to tooth decay, because they have many holes and recesses.

The root of the tooth is the invisible part of the tooth, located in the alveolar process. The root has the shape of a cone and ends with the top (apex). The root is the foundation of the tooth attached to the alveolar bone using a periodontal ligament. The tooth may have one or more roots.

Milk teeth - the first rudiments of milk teeth appear during the embryonic development. The first baby teeth are cut at the age of about 6 months. The loss of the first milk tooth occurs in about 6 years. The health of the baby teeth requires the most attention, because under them are the rudiments of permanent teeth, which can spread the infection if it is present on the milk teeth.

Necrosis of the common tissues of the tooth is the process of deadening the tissues of the tooth under the influence of any external factors. In necrosis there is a complete destruction of the cellular structure. A chemical injury can cause necrosis of tooth tissues (e.g. composite materials used in very deep tooth

decay). Another cause may be a physical injury to the tooth (e.g. in a fall or a heavy impact), as well as in deep drilling. Often dental necrosis does not appear externally, but there is a change in the color of the tooth, which becomes opaque and can react to the hot. Severe forms of necrosis can be caused by infection in the root canal.

Pulp necrosis - when the pulp is dead, the signs of the tooth's vitality disappear: it does not react to hot, cold, acid, or contacts. The tooth turns gray in a darker shade. In necrotized pulp, apexification is carried out, which stimulates the process of closing the top of the root, which was disturbed by the pulp necrosis. In this procedure, the remnants of necrotized pulp are removed, the canal is dried, the medicine is put into it, and after a while sealing.

Obturation - filling the root canals of teeth, closing the cavity in the tooth. In addition to filling the channels with filling materials, tabs and pins inserted into the root channels to give special strength are also used. Before the detour, the canal is carefully dissected, removing the affected tissues, antiseptic treatment and drying. Odonite is an inflammation of the pulp (pulp) of the tooth, the main cause of which is infection.

Odontoblasts are the cells responsible for the formation of dentin. Odontoblasts develop from the mesenchyma of dental papillae. There are odontoblasts on the edge of the pulp, on the border with dentin.

Odontogenesis - the process of tooth development from the formation of the rudiments of milk teeth (in the 6th week of embryonic development) to the cutting of the last permanent teeth (after 20 years). Odontogenesis includes the creation of a dental plate, the formation of enamel, the formation of a crown of the tooth, the cutting of milk teeth, the formation of the root of the tooth, the development of periodontal, the loss of milk teeth, the cutting of permanent teeth.

Odontogenesis is imperfect - a violation of the formation of tissues of teeth. It can take a variety of forms: from the absence of baby teeth to violations of the structure of enamel.

Odontogenic cysts are benign tumors that make up 3 to 7% of all odontogenic tumors. It comes either from the remnants of a dental record or from the epithelium of the enamel organ. Striking in the main young patients from 10 to 20 years. It occurs mainly in the lower jaw area. More often in female patients. It is usually asymptomatic and is detected by accident during X-rays. In 75% of cases, such cysts are found on retinized (uncut) teeth.

Teeth whitening is a set of techniques for restoring the white color of tooth enamel, which loses its color with age and becomes grayish-yellow. Special abrasive substances are used to whiten teeth to remove stains from the surface of the teeth. Abrasive materials should be used with caution so as not to cause severe damage to tooth enamel. Another way is chemical bleaching using products containing hydrogen peroxide. Vital bleaching is carried out on "living" teeth stained with food or tobacco. Devital bleaching is carried out on the "dead teeth" from the inside out. You can wear caps containing bleach every day for hours. You can brush your teeth with special whitening pastes.

Swelling (flus, odontogenic periostitis) is an active hyperemia, an inflammatory inflammation process that has developed as a result of an untreated carious process in the tooth. Sometimes the cause of the flus can be a tooth injury or the development of an inflammatory process in the tooth pocket. The gnone process, starting at the top of the tooth root, passes through the bone tissue into the bone. Treatment of periostitis is exclusively surgical, when through the incision release accumulated gnone, and then make drainage. Next, antibacterial therapy is needed.

Open bite - incomplete close teeth of the upper and lower jaws.

Delayed teething is a process in which the cutting of milk teeth occurs a little later than the generally accepted norms. In most cases, don't worry. Often this delay in teething is inherited. In some cases, this may be the result of poor nutrition, lack of vitamins A, C and D and calcium. The delay in teething is also influenced by hypothyroidism. It is necessary to see a doctor, if the child by 13 months has not cut through any teeth, so that the doctor determined the nature of this phenomenon.

Periodont is the connective tissue between the root of the tooth and the alveolar plate. This connective tissue consists mainly of collagen fibers (proteins and polysaccharides) and is located in a slit space (periodontal slit) with an average width of 0.2-0.25 mm.

Periodontitis is an inflammation of the periodont. The cause is the penetration of infection from the root canal, as well as in tooth decay. Periodontitis is characterized by severe pulsating pain, inability to touch the tooth. May swell the gums, there is a mobility of the tooth. Periodontitis - the disease is extremely dangerous, because it is fraught with a number of complications: osteomyelitis of the jaw, sepsis, pus inflammation of soft tissues.

Tooth pigmentation is quite common in both children and adults. Pigmentation is the staining of teeth in a particular shade of color. The fact that the enamel of the tooth is translucent, so through it you can see and painted deep layers. In addition, the porosity of enamel contributes to the fact that it easily absorbs various dyes. Causes of tooth coloring can be: smoking, drinking strong tea and coffee, the presence of persistent plaque, the use of some medications, lack or, on the contrary, excess of fluoride in the body and more. White opaque color of teeth indicates a violation of the formation of enamel, yellow - often occurs after the depulcation of the canal, gray - with pulp necrosis, red - appears almost instantly after the tooth disformement.

Teething - the appearance of teeth through the gum and the setting of them in the dental row. First, there is a cut of milk teeth (age from 6 months to 6 years). Then, between the ages of 6 and 13 (except for wisdom teeth that may appear between the ages of 16 and 25 years) there is a cut through of permanent teeth.

The tooth pulp is a connective tissue that fills the cavity of the tooth. It hosts many nerve endings, blood vessels and lymph vessels. In the pulp are also odontoblasts, cells involved in the formation of dentin. Pulp is divided into two parts: crown pulp and root pulp. Nerves in the pulp transmit pain signals in tooth diseases (e.g. tooth decay). Blood vessels provide vascularization of

odontoblasts that synthesize dentin. Tooth pulp is easily damaged as a result of tooth injury or bruxism, which can lead to deadening (devitalization) of the tooth. Pulp chamber is the cavity in which the crown part of the pulp of the tooth is located.

Pulpitis is an inflammation of the pulp of the tooth. Causes of pulpitis: bacterial infection (usually a result of progressive tooth decay), tooth injury, poor oral hygiene, sometimes the presence of systemic diseases (diabetes). Pulp is an extremely vulnerable part of the tooth because it is in a closed cavity. Pulpitis can be acute and chronic. Acute pulpitis causes micro-abscesses, which will eventually lead to pulp necrosis. In chronic pulpitis, pain is less pronounced, there is a fibrosis of pulp tissues. To prevent the development of pulpitis, tooth decay should be treated even in the initial stages. In the case of irreversible pulpitis, the tooth is devitalized and the pulp removed.

Pulpotomy (pulp amputation) - removal of part of the pulp, its affected tissues. It is used mainly on teeth with unfinished formation of the top of the root.

Hyperemia pulps are the initial form of pulpitis. This inflammation is reversible. It occurs in the development of tooth decay, when the dentin canal products of decay fall into the pulp. There are painful sensations, especially when eating hot or cold food, which disappear when the irritant is removed.

Pulp devitalization - is used when the patient has an allergic reaction to local anesthetics or when the use of such anesthetics does not lead to complete anesthesia. In this case, the pulp is first killed by a devitalizing substance (e.g. arsenic paste). This method is not suitable for the gangrenous forms of pulpitis, with pulp necrosis.

Pulpectomy (pulp extirpation) is a vital removal of pulp by pulp extractor, carried out in one visit under local anesthesia. It is used in all kinds of pulpitis inflammation.

Early teething - can be observed when early were artificially removed milk teeth (for example, in case of severe damage to their tooth decay).

Early development of the primary baby teeth - it happens that the baby is already born with the front milk teeth (so-called neonatal teeth). Most often, this phenomenon has a genetic nature. Sometimes some environmental factors play a role.

The incisors are the front teeth in a person's tooth row. There are 8 incisors in the human jaw: two upper central, two lower central, two upper lateral and 2 lower lateral. Cutters play an important aesthetic role, as well as a major role in the process of biting and chewing food. The cutters always have one root.

Restoration of the tooth - restoration of the anatomical shape of the destroyed tooth, its chewing function and appearance. There are various materials (amalgams, composite resins, porcelain, ceramics, zirconium oxide, etc.) and techniques for tooth restoration. Restoration of milk teeth crowns - if milk incisors and canines are severely damaged by tooth decay, they can be restored with stainless steel crowns. This violates the aesthetics, but allows you to preserve the baby teeth. To improve the aesthetics, such crowns can be covered

with veneers on the vestibular surface. Another way to restore milk teeth with crowns is the use of celluloid caps.

Oral sanitization is a procedure that helps to achieve maximum hygienic purity of the oral cavity. This will help keep your teeth and gums healthy. Professional sanitization is carried out in the dentist's office. First of all, it is a deep cleaning of periodontal pockets, removal of all dental deposits.

Super-complex teeth (hyperdontia) - the most common anomaly of the tooth row more often during the development of permanent teeth. However, there are also super-complete milk teeth. In the latter case, they prevent the cutting of permanent teeth. Mostly super-complete teeth appear in the area of the incisors of the upper jaw. Not always a super-complete tooth completely comes out of the gum, often it can be found under the gum on the X-ray. There are several theories explaining the cause of this anomaly, but the most recognized is the hyperactivity of the plaque, the division of the dental organ, the increased proliferation of cells. Genetics also plays a role. In this case, super-complex teeth are more likely to appear in men than in women.

Light-affirming composites - single-component paste or liquid flow material represent the primary form of such composites. Under the influence of the photo-initiator of the curing, which absorbs blue light with a wavelength of 400-500 nm, the process of curing the composite material takes place. Before the photopolymerization process, the composite material is soft, so it makes it easy to get the desired form of filling. After the process of photopolymerization under the influence of an ultraviolet lamp, the filling becomes strong.

Fistula is one of the main complications of a strong infectious process in the tissues of the tooth. The thing is a kind of channel through which there is an outflow of rot from the place of defeat. On the face, chin or gum there is a small hole through which the gnotobiont will come out. The given thing is formed with unruly tooth decay, inflammation of the cyst, with a poorly sealed tooth, with perforation of the root of the tooth. The onset of the disease is characterized by a pulling pain in the causal tooth. Lack of treatment can lead to other signs: swelling, shortness of breath, difficulty swallowing. These signs may indicate the beginning of the formation of a flux. The basis of fistula treatment is antibacterial therapy (antibiotics), painkillers (e.g. paracetamol). Further surgical treatment is needed to help the rot. Tetracycline teeth - darkening of teeth caused by the use of the antibiotic tetracycline, which affects the enamel of teeth, causing the appearance of gray or brown stripes. The use of tetracyclines by pregnant women can cause the first baby teeth to darken, as their development begins already in the womb. It is also undesirable to use tetracycline antibiotics in young children. The only solution to this problem is the use of aesthetic dentistry techniques (e.g. the installation of veneers).

Trauma of the rudiments of permanent teeth - occurs in a child who has suffered an injury of milk incisors due to the close location of the tops of the roots of the milk teeth and the rudiments of the corresponding permanent teeth.

This can manifest itself in the form of hypocalcification and hypoplasia, the development of reparative dentin, splitting a permanent tooth when injected or shifted frontal milk teeth.

Tooth injury is most common in children and adolescents. Young children have impaired coordination of movements, which contributes to the fact that they often hit different objects with their teeth. Older children put their teeth at risk by riding bikes, skateboards, roller skates, playing football. Dental injuries come in the following. A bruise in which a broken tooth does not occur, but may inflame the pulp. Cracks on the enamel without losing part of the tooth. At the same time, the tooth can become sensitive. A fracture that can touch the crown of the tooth, as well as its root. Disrupted tooth. Displacement when the tooth moves into the bone. The tooth is completely out of the hole. It's a tooth swathe. When the tooth reacts to the injury can occur the following unpleasant phenomena: pain, internal hemorrhage, internal resorption, external resorption of roots, necrosis of pulp, ankylosis (damage to the periodont ligament apparatus).

A language injury is a tongue injury that causes a wound or bruise on the tongue. If a patient is severely injured, when the patient is unconscious, there may be a build-up of blood in the throat. A tooth transplant is a transplantation (moving) of a tooth taken from another person into the hole of a previously removed tooth.

Treme is a cosmetic defect, a gap between the teeth (not the front). In the case of a gap between the front incisors, they talk about diastome. It occurs due to improper development of the jaw (too large) or because of too small teeth

Tooth cracks - occur on the hard tissues of teeth (on enamel or dentina) in the presence of bad habits, for example, when chewing hard objects. Tooth cracks can be small on the surface of the enamel. At the same time, endodontic treatment is not required, you can do with aesthetic restoration. Deep vertical cracks can damage the roots of teeth and pulp. In this case, the use of endodontic treatment can help to preserve the tooth or part of it.

Floss, floss is a cord of thin threads used to remove food residues and plaque from the interdental space in places where the use of a toothbrush does not lead to the desired results.

Fluocal is a special gel for the prevention of tooth decay. Contains sodium fluoride, phosphoric acid. It is used locally to cover tooth enamel.

Fluorosis is an extremely common disease characterized by demineralization of tooth enamel caused by eating or drinking water with high fluoride content. This changes the color of teeth, and in some cases there is damage to tooth enamel. The severity of the lesion depends on the dose, the duration of the meal, as well as the age of the person. Fluorosis-affected teeth can have a surface in speckled. When severe, the teeth turn brown. Interestingly, people with fluorosis are relatively resistant to tooth decay, which has a bacterial nature.

Flus is a non-inflammatory disease of the maxillofacial region. It occurs most often as a complication from poorly cured tooth decay. Currently, the term flux

is always associated with the occurrence of periostitis. The nature of the flux is always infectious when the gnotobiont from a sick tooth passes into the bone tissue. Externally, the flux is characterized by a strong swelling of the cheek, pain, temperature.

Tooth fluoridation - is done by applying a special varnish to the surface of the teeth in order to prevent tooth decay. Applying fluorolaccan allows you to protect your teeth for up to six months. Erosion of enamel is a non-karyosis lesion of tooth enamel. When erosion occurs demineralization of enamel, manifested in the form of stains of different shapes of dim color. The frontal (front) teeth are most often affected. At first, the stain appears to be limited in size, but can then gradually grow, striking the entire tooth enamel. Enamel lesions are usually symmetrical (i.e. they strike the same teeth on both sides). Often the disease is accompanied by lesions and deeper layers of tissues of the tooth, in particular, dentin. There is also a erosion of the cutting edge of the teeth. There are several reasons for the erosion of enamel: mechanical damage to the toothbrush, abrasive pastes and powders, the effect of acidic products (citrus), endocrine diseases.

Extirpation is the complete surgical removal of an organ.

Enamel aplasia - complete absence of tooth enamel on some areas of teeth, a severe form of enamel hypoplasia.

Enamel hyperplasia is a non-karyosis lesion of teeth, excessive formation of dental tissues, in particular, enamel. On the surface of teeth (often in the neck of the tooth) are formed specific formations, similar to drops or pearls. In the center of each drop are cavities. Often this leads to hyperemia and bleeding gums. Such formations are most often detected only by X-rays. Treatment consists of grinding enamel drops followed by therapy for remineralization of teeth.

Enamel hypoplasia is an underdevelopment of tooth enamel, a violation of mineralization and the structure of enamel. The process can begin at the stage of dental development and continue after teething. Experts are still arguing about the causes of this phenomenon. It is believed that the main factors of systemic underdevelopment of enamel are: various disorders of the central nervous system, disorders of the thyroid and parathyroid glands, hemolytic jaundice, congenital allergy to water composition disorders, rickets, congenital syphilis, gastrointestinal diseases, use of certain drugs (vitamin D2 or tetracycline), metabolic disorders of mineral metabolism in the fetus in the womb, mother's diseases during pregnancy (e.g., rubella). Systemic hypoplasia affects all teeth at once. Sometimes hypoplasia is local in nature, that is, one or more teeth are affected. Affect the local hypoplasia also infection of the rudimentary permanent tooth, tooth injury.

Enamel and dentin dysplasia - a violation of the development of tissues of both milk and permanent teeth, which has a genetic nature. It is manifested in the form of imperfect amelogenesis, imperfect dentinogenesis. Forms of dysplasia are different: change in the color of enamel, transparent enamel, transparent dentin with translucent dental cavity, severe tooth decay, root dysplasia with

full blockage, dentin outcrop, chalky enamel, easily traumatized pulp, etc. Currently, the most effective methods of eliminating dysplasia are methods of aesthetic dentistry (tooth restoration). Vitamin therapy is also needed. But getting rid of dysplasia as a disease is almost impossible.

Endodontia is a section of dentistry aimed at studying and treating endodont (pulp and dentin). Endodontic treatment involves treatment of tooth cavity and root canals. This eliminates the infection, removes infected pulp tissue, uses medicines in the root channels, removes nerves, prepares root canals for filling.

**DOMIA HIGH AND SPECIAL EDUCATION  
MINISTRY OF HEALTH  
BUKHARA STATE MEDICAL INSTITUTE  
ABU A'AI IBN SINO**

## CHILDREN'S CHILDREN

Registered No \_\_\_\_\_ 2019

The training department

"The Year" is "The Year"

Vice-Chancellor for Educational  
and Educational Work

G.J. Grillkasinova

### РАБОЧАЯ ПРОГРАММА

Mistakes and complications in pediatric therapeutic dentistry

Area of Knowledge - 500,000 Health and Social Security

Education - 510,000 "Health"

Direction of education - 5510400 "Stomatosology"

Hours - 72

Including:

Lectures - 12

Practice sessions - 16

Clinical classes-26

Self-employed – 18

Bukhara – 2019

The working curriculum of the subject is based on the curriculum  
and the work curriculum.

Compiler:

Yarieva O.O.- Md. Of the Department of Pediatric Dentistry

Reviewer:

Khabibova N.N., Md. Department of Therapeutic Dentistry

The working program is based on the curriculum and curriculum for the direction of 5510400 - Dentistry, discussed and approved at the cathedral meeting.

The Protocol of No. \_\_\_\_\_

Head of the department,

Mr. Kamalova F.R.

\_\_\_\_\_ (signed)

Chairman of the FMC, Dean of the Faculty of Dental Sciences,

K.M. Khabibova N.N. \_\_\_\_\_ (signed)

The working program is based on the curriculum and curriculum for the direction of 5510400 - Dentistry, discussed and approved by the scientific methodical Council of the Bukhara State Medical Institute.

The Protocol of No.

Methodist: Sh.B. Jumaeva

(signed)

\_\_\_\_\_

## 2. Training load

Semester	Total hours	Classroom hours	Lecture	Practical lessons	Clinical classes	Self Work	Kind of control		
							Rating		
							Current	Intermediate	Final
Cycle	72	-	12	16	26	18			

## 3. Lecture course

### 4.1. Thematic plans for lecture sessions

No		Watch
----	--	-------

1	Errors and complications in the formation and disparagement of cavity in childhood.	2ч
2	Mistakes and complications in fillings, incorrectly selected and placed fillings in childhood	2ч
3	Errors and complications in the diagnosis of pulpitis.	2ч
4	Errors and complications during the treatment of pulpitis in children	2ч
5	Errors and complications in diagnostic and treatment of periodontitis diseases in children	2ч
6	Errors and complications in endodontic treatment of root canals of teeth in children	2ч

## 5. Practical/seminary

### 5.1. Thematic plans for practical/seminary sessions

τ/ρ	Topics of practice	Prak. Classes	Wed ge classes	Just
1.	Errors and complications in the formation and disparagement of cavity in childhood.	2	2	4
2.	Mistakes and complications in filling, incorrectly picked up and placed flat would be in childhood	2	2	4
3.	Errors and complications in diagnosing non-kariosic lesions of hard tissues of teeth before erupting	2	4	6
4.	Errors and complications in diagnosing non-kariosic lesions of hard tissues of teeth after erupting	2	4	6
5	Errors and complications in pain relief in childhood	2	4	6
6.	Errors and complications in the diagnosis of pulpitis.	2	2	4
7.	Errors and complications during the treatment of pulpitis in children	2	2	4
8.	Errors and complications in the diagnosis and treatment of periodontitis diseases in children	1	3	4
9.	Errors and complications in endodontic treatment of root canals of teeth in children	1	3	4

## 6. Independent work of students

### 6.1. Thematic plans for students' self-employment

№	The topic of self-study	Watch
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1.	Methods of cavity formation in children	2
2	Application of filling methods in pediatric dentistry	2
3	Treatments for local and systemic hypoplasia	2
4	Stages of treatment of fluorosis	2
5	Methods of treatment of pulpitis in children	2
6	Treatment of periodontitis in children	2
7	The importance and role of endodontia in pediatric dentistry	2
8	First aid in pediatric dentistry	2
9	Physiological treatments in pediatric dentistry	2

Tests

2 -

1. What pathology leads to a short frenulum of the tongue?  
The mispronunciation of the sounds

Atrophic gingivitis

- diastema
- progenies

2. What changes are observed in the difficulty of nasal breathing?

Narrow nasal slits

Deep arch of the sky

- diastema
- Trems

3. At what age does the teeth erupt?

2.5 years

20-30 months.

- 3 years
- 4 years

4. What tissue does the baby teeth develop from?

Mesenchyme

Epithelial tissue

- Connective tissue
- muscle tissue

What indices are used to determine changes in periodontal tissues?

RMA

Schiller-Pisarev's sample

- Federov-Voldkina index
- KPUI

6. How do dental deposits be determined?

Visually

The dyeing method

- thermometry
- X-ray

7. Under what conditions do oral bacteria acquire cariogenic properties?

Low pH

High sucrose content

High pH

- low sucrose content

8. What does the increased saliva buffer capacity indicate?

Predisposition to tooth decay

"Flowering tooth decay"

- about poor nutrition
- to tooth hypoplasia

9. Pellicula functions:

Protection from external factors

Participation in the permeability of enamel

- participates in teething
- stimulates the growth of enamel

10. Mineralized dental deposits include:

The toothbrush

The gum

- tooth plaque
- plaque

11. Pellicula functions:

Protection from external factors

Participation in enamel diffusion processes

- contributes to the dissolution of plaque
- cleans tooth enamel

12. Phases of tartar formation:

"Creating an organic matrix"

"crystallization"

The formation of an inorganic matrix

- demineralization

Hygiene indices for plaque detection:

Fedorova-Voldkina

Greene to Vermiliona

- RMA

- CPITN

14. What factors are taken into account when determining plaque?

The size of the plaque area

The thickness of the plaque

- height of plaque

- the colour of plaque

15. Well-known tooth decay prevention programmes

"Karlstad model"

"Nexo"

- "Xident"

- "Parodontax"

16. What fluoride is found in abrasive polishing pastes?

NaF

Na<sub>2</sub>PO<sub>3</sub>F

- CaF<sub>2</sub>

- KF

17. Children's toothbrushes are:

Soft

Very soft

- medium stiffness

- Tough

18. Tooth-cleaning squiers are made from:

The tree

Plastics

- synthetic fiber

- natural bristles

19. What movements the brush makes when cleaning teeth by Leonard:

On the upper jaw - on top

On the lower jaw - from the bottom up

- on the upper jaw - left to right

- on the lower jaw - right to left

20. How a toothbrush is installed when brushing your teeth with Stillmann:

In the area of chewing teeth at an angle of 45°

In the frontal area - vertically

- in the area of chewing teeth - horizontally

- in the frontal area - perpendicular

21. For what purpose multi-atomic alcohols are introduced into toothpaste:

To get a homogeneous mass

"contribute to the preservation of moisture"

- increases tooth resistance

- to improve taste

22. Choose the correct characteristic of gel toothpastes:

High foaming capacity

It tastes good.

High cleansing capacity

- contain a chalky foundation

23. Easily fermented carbohydrates:

Sugar

Starch

- sorbitol
- mannitol

24. Carbohydrates consumed:

Sugar, starch

Sugar substitutes

- amylase
- Proteins

25. Lukomsky's pasta:

(fluoride Na)

Glycerin

- tin fluoride
- solution of alcohol

26. Fluoride-containing gels

are used to prevent tooth decay:

1 every two months

Once every half a year

- 1-2 times a month
- 1 every 3 months

27. Foods rich in phosphorus:

Fish

Meat

- cottage cheese
- halva

28. Forms of wick release:

Powder

The tablets

- drizh
- alcohol solution

29. How fluoride compounds are used:

"Systemic"

Local

- Common

Population

30. Forms of fluorinated milk production:

Liquid

Powdered

Condensed

- solid

31. Sealization of fissures is recommended:

"Immediately after erupting"

Within a year of erupting

- within 2 years of erupting
- during the erupting period

32. Types of fissure sealing:

Invasive

"Non-invasive"

Open

Closed

33. Patients with high blood pressure are injected into the premedication:

Tranquilizers

Spasmolytics

- sulfanilamides
- desensitizers

Pre-medication is supervised:

The doctor

The nurses

Parents

- the sickest

35. Features of a child with a negative behavior:

He's sitting tensely in the chair.

The teeth are tightly closed.

- opens his mouth but with a cry

Answers questions

The main differences between the surface layer of enamel and the deep layers:

Micro-solidness

Resistance to tooth decay

- lower fluoride concentration
- Less mineralization

### 37. Types of plaque

Brown

Soft white

- Blue
- Green

### 38. Fluoride solutions used to prevent tooth decay:

3% Solution Remodent

2% solution of fluoride Na

- 2% sodium solution monofluorophosphate
- 10% Solution Remodent

### 38. Fluoride-containing varnishes:

Duraphat

Fluor Protector

- Bevosita
- Invaziv

### 39. The effect of which fluoride-containing drugs is based on the diffusion of fluoride through saliva and from it into the teeth:

Fluodrill gel

1-2% NaF gel

- Lukomsky pasta
- fluorocort

### 40. Will you choose the stage of preventive inspection?

External inspection

Oral examination

- tomography
- R - graph

### Select supplemental research methods.

"EDI"

R - graphs

- palpation
- percussion

### 42. Select tooth decay levels:

Very low

Low

- Very average
- normal

### 43. Select hygiene levels when determining the Fedorov-Volodkina index:

It's good.

Satisfactory

- Very good
- average

### 44. Choose oral fluid function?

"Bactericide"

"Oral cleansing"

- stimulating
- homeopathic

### What factors influence saliva composition?

The general state of the body

The speed of saliva secretion

- tooth powders
- one-off

### 46. Soft plaque:

White blood cells

The epithelium

- lye
- ions

### Factors that contribute to plaque formation:

The position of the teeth

Hyposalyvation

- Oral sanitization

(pN)7.0

Factors contributing to plaque formation

"Substance disorder"

"Wrong bite"

Oral hygiene

- normal metabolism

49. Soft plaque includes:

The epithelium

Food leftovers

- agranulocytes

- cement-regionals

To determine the hotbeds of demineralization, they use:

R-R of nitrogen-acid silver

R-R fuchsina

- 2% chloramine

- 5% Dr CaCl<sub>2</sub>

51. Basic treatments for tooth enamel demineralization:

Remtherapy

Vanicia 0.2% NaF

- UCH

- Image caption Metrogill - denta

What does professional hygiene include?

Learning to brush your teeth

Local use of fluoride

- Definition of KPUCP

Definition of RMA

53. What factors determine the interval of professional brushing?

"Parents' Interest"

"Children's interests"

- pH saliva

ESTIMATES of the RMA index

Additional hygiene products include:

Toothpicks

The dental floss

- polyr

- fluorolak

55. Degrees of stiffness of toothbrushes:

"Tough"

It's very tough.

- weakly tough

- weakly soft

56. Methods of brushing teeth:

The Fones method

Pakhomov's method

- Fedorov method

Kurland's method

57. What dyes determine the quality of brushing teeth:

Fuchsin

Red blood

- ascorbic acid

- Metrogill

The main components of toothpastes:

Abrasive filler

The binder

- hydrates

- solution of alcohol

59. Anti-carizous additives in toothpastes:

Sodium fluoride

Tin fluoride

- Al hydrooxis

- chalk

60. Nutrition specifics that contribute to tooth decay:

High in food carbohydrates

Increased frequency of meals

Increased intake of solid food

- high in food vitamins

61. Micronutrients that help reduce the incidence of tooth decay in children:

F fluoride

"Sa"

- Ni

- Cu

The value of the F element: increases tooth resistance to tooth decay

Good crystallization of hard tissues of teeth

- reduces the resistance of enamel

Promotes the formation of tartar

62. Fluoride drugs:

"Fluorolak"

"Na" fluoride solution

- Gluconate Sa

- pomarin

63. Choose mineral

preparations that do not contain fluoride but have an anti-cariogenic effect:

GlukanatSa

LactateS

Vitamin K

- chlorine Sa

64. Foods Rich Sa:

Milk

The curd

- tomatoes

- meat

65. Endogenous intake of fluoride:

With water

With salt

- in solutions

- in a jelly form

66. Factors contributing to the demineralization of tooth enamel:

Streptococcus

Soft plaque

- high F content in water

- eating solid food

67. Light-affirming sealants:

Fissurlayt-LC

Fissurlayt

- Silar

- dentin

68. Contradictions to hermitization:

The fissures are wide

The presence of cavities

- full teething

- deep, narrow fissures

69. Pre-medical tasks:

Creating mental and emotional peace

-- relief of introduction to anesthesia

Normalization of the SSS

- increases hyperkinesia

70. Painkillers are prescribed with:

The masses

"Age"

- heart rate

- breathing rate

Additional survey methods:

Microbiological research

Thermodiagnosis

-Percussion

-Palpation

The main methods of the survey are:

"Inspection"

"Inquiries"

- EDI

Biochemical research

Select pairontal indices:

RMA

Schiller-Pisarev's sample

- CPU

- index kp

74. What dyes are used to detect plaque:

Schiller-Pisarev's solution

iodine solution

- chlorfilipt

- ascorbic acid

75. Normal oral microflora?

Streptococci

Staphylaxccci

- Acteroids

- Fusphacterium

76. Saliva proteins:

Sistocin

It's a

- Glycosamineglycan

- Lizozim

77. Methods of cleaning teeth?

The Phones Method

Leonard's method

- Nikolaev

- Chains

78. Features of enamel:

The hardest fabric

Covers the crown of the tooth

- Pigment

- Cellular

79. Name subjective examination methods for preventive examination.

Complaints

Poll

- tomography

- CT

80. Name periodontal functions.

"Support"

"Holding"

- chemical

- lyc

81. What tooth tissues are created by the izmederms?

Pulpit

Dentin

Periodont

- gum

82. Name the differences between young enamel and mature.

More organic matter

More water content

- less water content

- more alkaline content

83. Select Parodont indices

RMA

Schiller-Pisarev's sample

- KPU index

- CPU

Identify oral hygiene indexes:

Simplified Hygiene Index

Green Vermilion Index

- CPIN index

- KPUI

67. Светоотверждаемые герметики:

+ Fissurlayt-LC\*

+ Fissurlayt\*

- Silar

- дентин

68. Противопоказания к герметизации фиссур:

+ фиссуры широкие\*

+ наличие кариозных полостей\*

- полное прорезывание зуба

- глубокие, узкие фиссуры

69. Задачи

премедикации:

+ создание психического и эмоционального покоя\*

+ облегчение введения в наркоз\*

- нормализация ССС

- увеличивает гиперкинезию

70. Обезболивающие

препараты назначают с

учетом:

+ массы\*

+ возраста\*

- частоты сердечных

сокращений

- частоты дыхания

71. Дополнительные

методы обследования:

+ Микробиологические

исследования\*

+ Термодиагностика\*

- Перкуссия

- Пальпация

72. Основные методы

обследования:

+ Осмотр\*

+ Расспрос\*

- ЭОД

- Биохимические исследования

73. Выберите

пародонтальные индексы:

+ РМА\*

+ проба Шиллера-Писарева\*

- индекс КПУ+кп

- индекс кп

74. Какие красители

используют для выявления

зубного налета:

+ раствор Шиллера-

Писарева\*

+ раствора йода\*

- хлорфилипт

- аскорбиновая кислота

75. Нормальная

микрофлора полости рта?

+ Стрептококки\*

+ Стафилакокки\*

- Бактероиды

- Fusphacterium

76. Белки слюны:

+ Систоцин\*

+ Муцин\*

- Гликозамингликан

- Лизоцим

77. Методы очистки

зубов?

+ метод Фонеса\*

+ метод Леонарда\*

- Николаев

- Цепов

78. Особенности эмали:

+ Самая твердая ткань\*

+ Покрывает коронку зуба\*

- Пигментный

- Клеточный

79. Назовите субъективные методы обследования при проведении профилактического осмотра.  
+ жалобы\*  
+ опрос\*  
- томография  
- КТ
80. Назовите функции пародонта.  
+ опорная\*  
+ удерживающая\*  
- химическая  
- литическая
81. Какие ткани зуба образуются из мезодермы?  
+ пульпит\*  
+ дентин\*  
- периодонт  
- десну
82. Назовите отличия молодой эмали от зрелого.  
+ большее содержание органических веществ\*  
+ большее содержание воды\*  
- меньшее содержание воды  
- большее содержание щелочей
83. Выберите индексы пародонта  
+ РМА\*  
+ проба Шиллера-Писарева\*  
- индекс КПУ  
- индекс КПУ+кп

84. Определите индексы гигиены полости рта:  
+ упрощенный индекс гигиены\*  
+ индекс Грин-Вермиллеона\*  
- индекс CPIN  
- КПУ+кп
85. What is the protective factor of saliva?  
Antibodies  
Gamma globulins  
- Ions Of Na  
- Mg ions
- What is mixed saliva?  
The secret of the salivary glands  
White blood cells  
- fluoroappate  
- hydroxyappate
87. Tooth pellicula determined?  
"Coloring"  
With the help of a probe  
- EDI  
- Kulazhenko's sample
88. Which dyes are used to detect plaque:  
Schiller-Pisarev's solution  
iodine solution  
- chloramine  
- chlorfilipt
89. For the prevention of tooth decay, applications are used:  
NaF  
10% gluconate  
- glycerin  
- methyluracil

90. Micronutrients with anti-karyosy effect?

"Mo"

"Cu"

- Mg

- Cd

91. For the purpose of retherapy,:

"Na fluoride"

The Gluconat Sa

- Sage

- Copper sulfate

92. The main differences between the surface layer of enamel and the deep:

Resistance to tooth decay

"Great mineralization"

- Low resistance to tooth decay

- Lower concentration of fluoride

The Carlstad Model

prevention programme includes:

Nutrition recommendations

Local use of fluoride

- use of floss

Use chewing gum

94. Principles of professional hygiene

The teeth are dyed.

"Training in brushing your teeth"

Prescribing Sa drugs

Use of elixiers

95. Types of floss:

"Waxed"

The unwaxed

- abrasive

- jagged

96. Lack of natural toothbrushes:

The presence of a middle channel

The difficulty of hygienic content

- ease of rigidity

- the ability to process the ends of bristles

97. Under what methods of brushing teeth a toothbrush is installed at an angle of 45o:

Pakhomov's method

Stillmann method

- Vinogradova method

- Reitmethod

98. The necessary movements of toothbrushes when brushing teeth:

"Sweeping"

"Circular"

- undulating

- rubbing

99. Abrasive substances that are part of toothpastes:

"chemically besieged chalk"

"Dicalcy phosphate"

- calcium phosphate

- silicon oxide

Requirements for toothpastes:

It's good to remove plaque

"Be pleasant to taste"

- reduce the reseence of enamel

- increase the rate of salivation

101. Sugars include:

Sucrose

(fructose)

- linaz
- rosehip

102. In order to reduce the cariogenic capacity of nutrition, it is necessary to:

- Reducing total sugar intake
- Reducing the frequency of sugar intake
- Replacing sugar substitutes with sugar
- Reducing dairy consumption

103. Vitafluoro contains:

- Sodium fluoride
- Vitamin A
- Vitamin B
- GlukanatSa

104. Fluoro-containing gels:

- Fluodent
- Fluodrill
- Fluorodent
- Vitafluoro

105. Sa drugs:

Regulates the activities of the CNS

"Generally strengthening"

- improves vision
- prevents F deposition

106. Vitamin B1 is rich in foods:

- The croup
- Yeast
- meat
- milk

107. Endogenous tooth decay prevention is carried out:

- GlukanatSa
- Fitin
- toothpaste
- fluorolak

108. Exogenous use of fluoride:

- Solutions
- Gels
- drizh
- with milk

109. In what time frame are the control of the staging of sealant:

- A week
- A month
- 2 months
- 5 years

110. Composite materials used as sealant:

- PrismaFil
- Silar
- Fissurit-F
- Akvion

111. Conditional characteristics of pain:

- "Sensory"
- "Psycho-emotional"
- mental
- Psychological

112. Amid anesthetics:

- Trimecaine
- Lidocaine
- Septonist
- analgin

In the treatment of tooth decay, an important component is:

- Oral care
- "Reducing carbohydrate intake"
- Electoral dental suphering
- Holding an open tour

Mineral components for general treatment of tooth decay:

Calcium gluconate

Calcium lactate

- Silver nitrate

- Silants

The risk of tooth decay reduces:

"Effective brushing of teeth"

"Normal salivation"

-Frequent sugar intake

-The presence of common diseases

The probe makes it possible to determine:

The depth of the cavity

The condition of the hard tissues of the tooth

- tooth mobility

- electroexcitability of tooth pulp

117. X-ray examination

methods determine:

Hidden cavity

The overhanging edges of the fillings

- tooth color

Inflammation of the pulp of the tooth

In the case of primary tooth decay, there is:

The presence of a chalky spot

Spot size - a few millimetres

Number of spots - four or more

- the presence of night pain

119. Name non-subjective examination methods for preventive examination.

Tomography

CT

Complaints

- Poll

The periodontal function does not include:

Chemical

The cast

- support

- holding

121. Which tooth tissues are not formed from mesoderm?

Gums

Periodont

- dentin

- pulp

122. Fluoride-free drugs include:

The phytin

Calcium gluconate

- toothpaste

- fluorolac

123. What does not apply to parodont indices:

The KPI index

THE CPI's index

- RMI

- Schiller-Pisarev's sample

As for oral hygiene indices:

Simplified hygiene index

Green Vermilion Index

- CPI index

- KPI

125. Are the protective factors of saliva included?

Antibodies

Gamma globulins

- Ions Of Na

- Mg ions

126. What are not part of mixed saliva?

"fluoroapatite"

"Hydroxyapatite"

- secret of salivary glands

-leukocytes

127. What does not apply to the methods of determining tooth pellicula?

"EDI"

Kulazhenko's sample

Probe

- coloring

128. No plaque is used to detect plaque:

Chloramine

chlorfilipt

- Schiller-Pisarev solution

Iodine solution

No use for the prevention of tooth decay for the purpose of application is not:

Glycerin

Methyluracil

- 1 - 2% Dr NaF

- 10% mr. gluconate Sa

The main similarities of the surface layer of enamel with the deep:

Low resistance to tooth decay

Lower concentration of fluoride

Resistance to tooth decay

- Big mineralization

The Carlitad Model

prevention programme does not include:

Use of floss

The use of chewing gum

Nutrition recommendations

Local use of fluoride

The principles of professional hygiene include:

"The prescribing of SA' drugs

Use of elixiers

- teeth dye

Learning to brush your teeth

133. Flossspecies include:

"Waxed"

The unwaxed

- abrasive

- jagged

134. Inherent elements to artificial toothbrushes:

The ease of stiffness

The ability to process the ends of the bristles

The presence of a mid-channel

The difficulty of hygienic maintenance

135. Under what methods of brushing teeth toothbrush is not installed at an angle 45o:

The Vinogradova Method

Reitmethod

- Pakhomov's method

- Stillmann method

136. Optional movements of toothbrushes when brushing teeth:

"Wavy"

"rubbing"

- sweeping

- circular  
Abrasive substances do not include:  
Calcium phosphate  
Silicon oxide  
- chemically besieged chalk  
- diocalcium phosphate  
The Vitafluoro does not include:  
Vitamin B  
GlukanatSa  
- sodium fluoride  
Vitamin A  
139. Will you select the stage of preventive inspection?  
External inspection  
Oral examination  
- tomography  
- R - graph  
Choose more research methods.  
"EDI"  
R - graphs  
- palpation  
- percussion  
141. Select tooth decay levels:  
Very low  
Low  
- Very average  
- normal  
142. Select hygiene levels when determining the Fedorov-Volodkina index:  
It's good.  
Satisfactory  
- Very good  
- average  
143. Choose oral fluid function?

"Bactericide"  
"Oral's leaving"  
- stimulating  
- homeopathic  
What factors influence the composition of saliva?  
The general state of the body  
The speed of saliva secretion  
- tooth powders  
- one-off  
The composition of the soft plaque:  
White blood cells  
The epithelium  
- lye  
- ions  
Factors that contribute to plaque formation:  
The position of the teeth  
Hyposalyvation  
- Oral sanitization  
(pN)7.0  
147. Factors contributing to plaque formation  
"Substance disorder"  
"Wrong bite"  
Oral hygiene  
- normal metabolism  
The soft plaque includes:  
The epithelium  
Food leftovers  
- agranulocytes  
- cement-regionals  
To determine the hotbeds of demineralization,:  
R-R of nitrogen-acid silver  
R-R fuchsina  
- 2% chloramine  
- 5% Dr CaCl<sub>2</sub>

150. Basic treatments for tooth enamel demineralization:

Remtherapy

Vanicia 0.2% NaF

- UCH

- Image caption Metrogill - denta

What does professional hygiene include?

Learning to brush your teeth

Local use of fluoride

- Definition of KPUCP

Definition of RMA

152. What factors determine the interval of professional brushing?

"Parents' Interest"

Children's interest

- pH saliva

ESTIMATES of the RMA index

Additional hygiene products include:

Toothpicks

The dental floss

- polyr

- fluorolak

154. Degrees of stiffness of toothbrushes:

"Tough"

It's very tough.

- weakly tough

- weakly soft

155. Methods of brushing teeth:

The Fones method

Pakhomov's method

- Fedorov method

Kurland's method

156. What dyes determine the quality of brushing teeth:

Fuchsin

Red blood

- ascorbic acid

- Metrogil

The main components of toothpastes:

Abrasive filler

The binder

- hydrates

- solution of alcohol

158. Anti-carizous additives in toothpastes:

Sodium fluoride

Tin fluoride

- Al hydrooxis

- chalk

159. Nutritional characteristics that contribute to tooth decay:

High in food carbohydrates

Increased frequency of meals

Increased intake of solid food

- high in food vitamins

Micronutrients that reduce the incidence of tooth decay in children:

F fluoride

"Sa"

- Ni

- Cu

The value of the F element: increases tooth resistance to tooth decay

Good crystallization of hard tissues of teeth

- reduces the resistance of enamel

Promotes the formation of tartar

162. Fluoride drugs:

"Fluorolak"

"Na" fluoride solution

- Gluconate Sa

- pomarin

163. Choose mineral

preparations that do not contain fluoride but have an anti-cariogenic effect:

GlukanatSa

LactateS

Vitamin K

- chlorine Sa

164. Foods Rich Sa:

Milk

The curd

- apple

- meat

165. Endogenous intake of fluoride:

With water

With salt

- in solutions

- in a jelly form

Factors contributing to the demineralization of tooth enamel:

Streptococcus

Soft plaque

- high F content in water

- eating solid food

167. Light-curable sealants:

Fissurlyt-LC

Fissurlyt

- Silar

- dentin

168. Contradictions to hermitization:

The fissures are wide

The presence of cavities

- full teething

- deep, narrow fissures

Pre-medication tasks:

Creating mental and emotional peace

-- relief of introduction to anesthesia

Normalization of the SSS

- increases hyperkinesia

170. Painkillers are prescribed with:

The masses

"Age"

- heart rate

- breathing rate

Additional survey methods:

"Microbiological research"

"Thermodiagnosis"

-Percussion

-Palpation

The main methods of the survey are:

"Inspection"

"Inquiries"

- EDI

Biochemical research

Select parental indices:

RMA

Schiller-Pisarev's sample

- CPU

- index kp

174. What dyes are used to detect plaque:

Schiller-Pisarev's solution  
iodine solution

- chlorfilipt
- ascorbic acid

175. Normal oral microflora?

Streptococci

Staphylaxccci

- Acterooids
- Fusphacterium

176. Saliva proteins:

Sistocin

It's a

- Glycosamineglycan
- Lizozim

177. Methods of cleaning teeth?

The Phones Method

Leonard's method

- Nikolaev
- Chains

Features of enamel:

The hardest fabric

Covers the crown of the tooth

- Pigment
- Cellular

179. Choose the necessary tools for preventive oral examination?

The mirror

Probe

- excavator
- ironing

180. Mucous membrane is normal:

Pale pink

Wet

- Blue

- Raspberry

181. What nipples are available on the tongue?

Mushroom-like

Filamentous

- finger-shaped
- acupuncture

182. Name the features of baby teeth:

Milky-blue color

The roots of the teeth are short and wide-spaced.

- dentin canals narrow
- the roots of the teeth are long

What about additional survey methods?

X-ray

Electro-odontodiagnosis

- inspection
- Poll

184. Name the types of percussion:

"Horizontal"

Vertical

- medial
- distal

185. A 7-year-old child should have:

12 molars

The cutter

- 8 molars
- 6 incisors

186. A 10-year-old child should have:

8 molars

4 premolar

- 12 molars

- 8 premolars

187. What is the right statement?

The central milk cutter is cut for 6-8 months.

8-10 months of lateral milk cutter erupts

- the central milk cutter is cut for 9-10 months

- at 12-14 months the side milk cutter is cut through

188. What is the timing of the teeth ingling?

6-20 months. \*

7-25 months. \*

- 4-10 months.

- 10-20 months.

189. At what time does permanent teeth erupt?

6-15 years old

5.5-16 years old

- 8-12 years old

- 6-10 years old

190. Which parts of the oral mucosa are painted when determining the RMA index?

The nipple of the tooth

Marginal edge of the tooth

- cheek area

- lip area

191. Dyes are used to determine oral hygiene:

"Fuchsin solution"

The solution of erythrosina

- furacillin solution

- chlorhexidine

192. Which indices are used to determine oral hygiene?

Federova-Volodkina index

Green Vermilion index

- RMA

- KPUI

Select indices that determine the intensity of tooth decay:

The COMMUNIST Party

The COMMUNIST Party

- KPI

- RMA

194. Schiller-Pisarev's trial determines:

The presence of inflammation in the gums

Increased glycogen content in the gums

The presence of dental deposits

- periodontosis

195. Which teeth are stained when determining the Green Vermilion index?

11.31 teeth

16.26 teeth

- 16.26 teeth

- 35.45 teeth

196. What are the methods of saliva examination in point to the risk of tooth decay?

The pH of saliva

Determining the viscosity of saliva

Determining blood viscosity

Determining the biochemical composition of saliva

197. Name saliva buffer systems:

Bicarbonate

Phosphate

- calcium

- alkaline

198. What is the result of increased carbohydrate intake?

Hyperglycemia

hyposalyvalia

- remineralization of enamel

- raising F in saliva

199. What is the result of a decrease in saliva secretion?

Increase in tooth decay

Feeling dry

Reducing tooth decay

- growth of microorganisms

200. Name organic compounds in saliva?

Squirrels

Carbohydrates

- acids

- salt

201. Micronutrients that balance the balance between enamel and saliva:

"Sa"

"RJ"

- Mg

- Fe

202. What contributes to plaque formation?

Excessive consumption of soft food

Orthodontic machines

- increase in saliva secretion

- eating solid food

203. Favorite plaque localization:

Over the gum

The neck area

- crown neck

- cutting edge

Select unmineralized dental deposits:

The pellicula

The plaque

- nade tartar

- gumtar

205. Medications that promote the dissolution of the tooth plaque:

fluoride drugs

"Enzymes"

- Drugs Sa

- Mg drugs

206. Soft plaque removal methods:

"Rinse with water"

Using toothpicks

- scaler

- polishing pastes
207. Favorite tartar localization:  
The ducts of the parotid gland  
Vartanova's ducts
- necks of premolars
  - in the area of teeth diastemia

208. To increase tooth decay, tooth enamel is prescribed:

Fitin

"Vitafluoro"

- lactobacterin
- methylation

209. Drugs that have anti-plaque cleansing properties:

(F)

"Enzymes"

- sulfanilamides
- vitamins

210. What are the indicators of the kariesogenic situation in the mouth?

The pH of saliva

Hygiene index

- EDI - diagnosis
- R - graph

211. By what indicators of oral fluid can be defined as a carieogenic situation?

(pH) - saliva

Viscosity

- micronutrient composition

Biochemical research

What trace elements contribute to tooth decay?

Se

"Mg"

- P

- F

What trace elements have an anti-cariogenic effect?

"F"

"P"

- Se

- Mg

214. Methods for diagnosing focal demineralization

Visual method

The method of vital enamel coloring

- R - graph

- EDI

215. "Risk zones" of newly cut teeth

The fissures

The necks of the teeth

- tooth bumps

- cutting edge

216. To detect carious spots, the method of staining is used:

R.R. Schiller - Pisareva

Erythrosine

- R-r potassium permanganate

- Furacilin

217. Methods for determining plaque

Visual

Instrumental

Physical

- Palpation

To prevent focal demineralization,:

"Applecacin 3% R

Remodenta"

Caloscopy 20 ml r-r-r-moderent

- Applications of Vit.A

- Rinse 20 ml r r furasilin

219. What vitamins are used to prevent the demineralization of enamel

Wit B1  
Vit SJ

- Wit RR  
- Wit B12

220. How is controlled tooth brushing assessed?

Hygiene index  
Green-Vermilion Index

- RMA  
- KPU

Indications for occupational hygiene:

Soft plaque  
The nuptage tartar

- Gingivite

- Hypoplasia of the enamel

222. Types of plaque

White  
Brown

- Blue  
- Red

223. Methods for removing plaque:

Mechanical  
"Physical"

- Radiological  
- With antibiotics

224. Types of electric skiter:

Sound  
"Ultrasonic"

- tone  
- acid

Tools for removing dental deposits:

"The set of zags"

"Kyureta"

- ironing  
- tweezers

In the form of toothpicks are:

Triangular  
Flat

- Oval  
- diamond-shaped

Dental elixirs have an effect:

Anti-carizous  
Anti-inflammatory

- cleansing  
- polishing

228. Indications for the use of soft fiber toothbrushes:

Paradont disease  
Mucosa disease

- artificial prostheses  
- metal crowns

The main components of dental elixirs:

Infusions of herbs  
Alcohol

- abrasives  
- antibiotics

To improve the quality of the floss,:

"Waxing"  
"Fluoridation"

- Soaking CaCL2  
- soaking with antibiotics

231. Individuals with healthy periodonts can be recommended toothbrushes:

Average  
"Tough"

- soft  
- very soft

232. What segments the dental row is divided into when brushing teeth by Pakhomov's method:

The molyars

Premolyars

-fangs

- incisors

233. What movements are used to clean teeth when brushing your teeth using Pakhomov's method:

"horizontal"

"Circular"

- vibrating

- perpendicular

Select pairontal indices:

RMA

Schiller-Pisarev's sample

- KPU index

- CPU

235. What dyes are used to detect plaque:

Schiller-Pisarev's solution

iodine solution

- chloramine

- chlorfilipt

236. Normal oral microflora?

Streptococci

Staphylaxccci

- Peptostreptococcus

- Acteroids

237. Saliva proteins:

Sistocin

It's a

- Fructosa

- Glycosamineglycan

238. Methods of brushing teeth:

The Fones method

Pakhomov's method

- Borisov method

- Fedorov method

Features of enamel:

The hardest fabric

Covers the crown of the tooth

- Porous

- Pigment

According to the topographical classification, tooth decays distinguish:

The average

In the spot stage

-Secondary

-Circular

241. With average tooth decay differentiate:

Chronic fibrous periodont

Deep tooth decay

-Acute diffuse pulp

-The Tooth of Fournier

In the treatment of tooth decay, an important component is:

Oral care

Reducing carbohydrate intake

-Electoral dental

-Open tour

Mineral components for general treatment of tooth decay:

Calcium gluconat

Calcium lactate

-Amalgam

-Silver nitrate

The risk of tooth decay reduces:

Effective brushing of teeth

Normal salivation

-Frequent sugar intake

-The presence of common diseases

Reducing the risk of tooth decay contributes to:

Use of fluoride-containing additives on display

Effective brushing of teeth

-Non-use of fluoride

toothpastes

-Frequent sugar intake

246. Non-kariious lesions that occur during the formation of the tooth are:

Hypoplasia

Hyperplasia

-Erosion

-Necrosis, injury

The following forms of hypoplasia are different:

"Spotted, wavy"

"Cup-shaped"

-Flat

-The bar

The following forms of fluorosis are different:

"Styde, spotted"

"Melo-shaped speckled"

-Simple

-Deep

249. Marble disease:

Bone spraws in the bones of the skull

It occurs in both men and women.

-enamel not changed

There are no changes on the X-ray

250. For imperfect

deninogenesis is

characteristic:

Partial loss of tooth tissue

(relates to hereditary diseases)

-enamel not changed

All answers are correct

251. Imperfect amelogenesis:

(relates to hereditary diseases)

It is transmitted along the

male and female lines

-enamel not changed

-teeth intact

Hereditary dental disorders include:

"Imperfect deninogenesis"

Capdepoon Dysplasia

-Fluorosis

-Deep tooth decay

253. Capdepon dysplasia is

characteristic:

"Watery gray color of teeth"

(undetected pathogenesis)

-enamel not broken

-dentin not broken

Clinical picture in pathological erasure:  
"Reducing the height of the lower face"

Changes from the temporal-lower jaw joint  
-Root fracture  
-Pink tooth

255. Non-karyosic tooth lesions that occur after erupting:  
"Hyperesthesia of teeth"  
"Tooth injury"  
-The Tooth of Fournier  
-Hypoplasia

Clinical picture in pathological erasure:  
"Pain from temperature stimuli"  
"Pain from eating sweets"  
-Crowding teeth  
-Wedge-shaped defect

The following factors lead to pathological erasure:  
"Straight bite"  
"Incorrectly constructed prostheses"  
-Open bite  
-Timely dental treatment

Clinical manifestation of pathological tooth erasure is:  
"Increased sensitivity to temperature stimuli"  
"Increased sensitivity to chemical stimuli"

-Reduced sensitivity to mechanical stimuli  
-Reduced sensitivity to all types of irritants

259. Non-karyosic tooth lesions that occur after erupting:  
"Necrosis of the enamel"  
"Pathological erasure"  
-Marble disease  
-Hyperplasia

Types of tooth erosion:  
"Professional"  
"Determined by diet"  
-Secondary  
-Bull

261. In the treatment of hyperesthesia of hard tissues of teeth widely used pastes, in the composition of which includes:  
Sodium hydrocarbonate  
Sodium carbonate  
-formalin  
-alcohol

General treatment for hypoplasia:  
"Prevention of Infectious Diseases"  
"Treatment of common diseases"  
-Filling channels  
-Imposing arsenic paste

Sensing makes it possible to identify:

"The depth of the cavity"

The state of the hard tissues of the tooth

-tooth mobility

-electroexcitability of tooth pulp

The X-ray method of examination determines:

"Hidden cavity"

"Hanging edges of fillings"

-tooth color

Inflammation of the pulp of the tooth

In the case of primary tooth decay, there is:

The presence of a chalky spot

Spot size - a few millimetres

Number of spots - four or more

-presence of night pain

In order to be diagnosed, the initial tooth decay must be known:

The teeth are dense when sensing

"Percussion is painless"

-palpation is painful

-thermodiagnosis is painful

The initial tooth decay is typical:

"Typical for tooth decay localization"

The spot appears after the teething

Only baby teeth are affected

All answers are correct

In order to be diagnosed, superficial tooth decay is necessary to know:

The defect appears after teething

"Characteristically progressive current"

-No correct answers

There are no changes on the X-ray

269. Clinical picture in acute pulp inflammation:

"Self-involuntary pain"

"Night pains"

-swelling of soft tissues

-tooth is painted pink

270. With acute diffuse pulpitis:

Deep cavity

The cavity is not reported with the cavity of the tooth.

-presence of a subvital stroke

-electroexcitability of pulp over 100 mcA

271. In chronic fibrous pulpitis:

"Brown cavity of large sizes"

"Increased sensitivity to cold"

Pulp hypertrophy

-electroexcitability of pulp 2-6 mcA

272. In chronic fibrous pulpitis:  
"Deep cavity, which communicates with the cavity of the tooth"  
"Deep cavity filled with altered dentin"  
-presence of an intact tooth  
Asymptomatic current

In the treatment of chronic hypertrophic pulpitis:  
"Amputation"  
"Anesthesia"  
-coverage with fluoride varnish  
-removal of filling material behind the top of the root

Complaints of patients with chronic gangrenous pulpitis:  
"Bad breath"  
"Hot pain"  
The color of the tooth has not been changed  
-cavities are not reported with the cavity of the tooth

275. On an objective examination of a patient with chronic gangrenous pulpitis:  
Deep sensitivity  
Deep cavity  
-You can see the bleeding pulp  
-cavities are not reported with the cavity of the tooth

Infiltration anesthesia is performed in the treatment of teeth:

It's not a  
It's a  
-48  
-42

Infiltration anesthesia is performed in the treatment of teeth:

It's a  
It's a  
-48  
-34

Infiltration anesthesia is performed in the treatment of teeth:

It's a  
It's 21  
-48  
-35

When performing anesthesia, you need to know:

Duration of anesthesia  
Novocaine 30 minutes  
"Diacain for superficial anesthesia is used as a 3% solution"  
-Lidocaine for conductor anesthesia is used in the form of 25%  
-There are no correct answers

280. Septodont tooth devitalization drugs:  
"Kaustiner swicly"  
"Fast-acting Caustiner"

-Septonst  
-ubistezin

In the biological treatment of pulpitis, you should know:  
(strong drugs do not use)  
The method is used in case of accidental exposure of the tooth cavity.

-Method is more often used in old age

Method is used in the treatment of chronic gangrenous pulpitis

282. For successful treatment of pulpitis by biological method, choose a therapeutic pad

"Calcimol"  
Calcesil  
-Filtek'250  
-Compolux

283. For successful treatment of pulpitis by biological method, choose a therapeutic method

Gasket:  
"Alcaliner"  
"Septocalcine"  
-Devitalizing paste  
-Dentin pasta

284. For successful pulpitis treatment, choose an endodontic tool:

"Gutta-condenser"  
"System "To 3 Endo" (Kerr)

-Dental mirror  
-stroke

285. For successful pulpitis treatment, choose an endodontic tool:

"Shaping File 1 (S1)  
"Finishing File 1 (F1)  
-chisel  
-kyureta

286. For successful pulpitis treatment, choose an endodontic tool:

"Apical Reamer"  
"H-File"  
-pinzet  
-mirror dental

287. For successful pulpitis treatment, choose an endodontic tool:

"Peeso Reamer"  
"GT Rotary Files"  
-contourmatrix  
-refractory thread

288. For successful pulpitis treatment, choose an endodontic tool:

"Root burave"  
"Root drill"  
-cofferdam  
-stroke with a top-up

289. In the treatment of pulpitis for tooth restoration, it is necessary to have:

"Polymerization lamp"

"Composite material"

-Root burav

-Riemer

290. In the treatment of pulpitis for tooth restoration, it is necessary to have:

"Contour matrix"

"Retraking thread"

-resorcine-formalin paste

-zinc-eugeno-paste

291. In the treatment of pulpitis for tooth restoration, it is necessary to have:

Vita Coloring

"Abrasive crystals"

-pulpoextractor

-channel

In the process of vital amputation, it is necessary to know:

The indication for the vital amputation is acute focal pulpitis

The vital amputation is not carried out in 12 teeth.

-Vital amputation is performed in single-root edits

-In the face of vital amputation, arsenic paste is superimposed on the mouth of the root canals

293. When treating pulpitis for permanent fillings, pick up a composite of light

Curing:

"Somposite"

"Herculite"

-Silicin

-Beladont

294. In the treatment of pulpitis on the teeth of the upper jaw anesthesia is performed:

"Infiltration"

"Tental"

-mental

-epidural

With a combination method of treatment of pulpitis, complications are possible:

"Breaking the tool in the channel"

"Perforation of the root canal wall"

-No correct answers

-hearing loss

For the resorcine-formalin method,:

"Rezorcin"

"Formalin"

-chloramine

-alcohol

The following complications may occur with local anesthesia:

"Breaking the injectable needle"

Hematomas

-No correct answers

All answers are correct

After the injection, soreness and swelling occur in cases of:

When using anesthetic with expired expiration date

"In the rough execution of manipulations"

All answers are correct

-No correct answers

299. Causes of bleeding from the root canal after extirpation are:

"stagnant phenomena in the vessels near the upper period"

"Incomplete removal of the pulp"

-narrow apical hole

-curvature of the root canal

300. Preconditions that break the tools in the root channel:

"Breaking the sequence of tools"

"Working in a blocked channel"

Measuring the working length of the root canal

-correct extraction of the jammed tool

The following errors may be made when filling the channel:

"Unsealed canal"

"Unfavoured sealed canal"

-distributed in the thinnest film

-around the entire part of the channel

The following errors may be made when filling the channel:

"Removal of material for apex"

"Low-quality sealing of the estuary part"

-homogeneous filling of the canal

-preserving the color of the tooth after filling

Materials for the constant obturation of the root canal system should be

Have the following properties:

"Biological compatibility"

"Insolubility in tissue fluids"

-dissolve

-difficult to remove from the root canal

Materials for the constant obturation of the root canal system should be

Have the following properties:

"Plasticity"

"Don't stain the tissues of the tooth"

-low ability to condense

-reduce adhesion when fixing a pin

Requirements for modern root cements:

It's easy to mix and have a convenient packaging.

"X-ray contrast"

-low ability to condense

-reduce adhesion when fixing a pin

Requirements for modern root cements:

"High plasticity"

"high-quality tightness"

-low ability to condense  
-reduce adhesion when fixing a pin

Requirements for modern root cements:

"Long working hours"

(short curing time in the mouth, minimal shrinkage)

-dissolve in tissue fluids  
-low ability to condense

308. Benefits of Guttaperchi:

Bioinertity and

Biocompatibility

"High plasticity and ability to condense"

-reduces adhesion when fixing a pin

Complexity of sterilization

309. Benefits of Guttaperchi:

"Light sealing if necessary"

"Biocompatibility"

Sharp shrinkage

-low plasticity

310. Methods of constant

channel obturation:

"Filling the canal with paste"

One pin

-silver

-depophoressis

Methods of constant channel obturation:

"Thermomechanical

obturation of guttaperchy"

"vertical condensation"

-resorcine-formalin method

Electrophoresis

Channel obturation criteria:

"Root canal-to-work length"

The homogeneity of filling satument satiation throughout the

Fragmentation of the tool in the channel

-vertical root fracture

Channel obturation criteria:

"Root canal-to-work length"

The homogeneity of filling satument satiation throughout the

-perforation

Fragmentation of the tool in the channel

314. The following

concentrations of hypochlorite solution are common

(NaOCl):

5.25%

3%

-30%

-25%

315. Emergency medicine for blood on the skin

The mucous membranes, injections and cuts include:

5% iodine solution

70% ethyl alcohol

-3% hydrogen peroxide

-bricant greens

Radiovisiography has a number of advantages:

Exposure time is minimal

The radiation dose has been reduced by 90%

Inaccurate readings in the presence of exudate  
-inaccurate readings for irrigation solutions  
Radiovisiography has a number of advantages:  
"Re-removal and detection on the monitor"

(doesn't require drying and unusing film)

High radiation dose in patient and staff

Requires additional room

318. Saliva components affecting plaque build-up

"amylase"

"lactoperoxidase"

-profession

-papain

At the systemic level, tooth decay resistance depends on the type:

Skeleton's Facial Structure

"Jaws"

Antimicrobial factors

-psycho-aspects

At the org-low level, tooth decay depends on:

"functioning of the salivary glands"

(degrees of washing and cleansing with the help of teeth saliva)

-tightness of teeth

-sizes of interdental

intermediates

At the molecular level, teeth resistance to acid

Impacts depend on the type:

"hydroxyapatite enamel"

"Micronutrient inclusions in the composition of hydroxyapatite"

-emulsis beams

-from mosaic electric charge enamel

At the tissue level, resistance depends on:

"Regularity of the enamel structure"

The presence and number of defects in it

Antimicrobial factors

-psycho-aspects

At the level of the tooth as an organ, tooth decay resistance is defined by:

"The structure of the enamel surface"

"Formation on it pellets"

-degree of enamel

mineralization

-interactions of protein and mineral structures

324. Preconditions that break the tools in the root channel:

"Breaking the sequence of tools"

"Working in a blocked channel"

Measuring the working length of the root canal

-correct extraction of the jammed tool

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(short curing time in the mouth, minimal shrinkage)

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Sharp shrinkage

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One pin

-silver  
-depophoressis  
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Mechanical tour guttaperchy  
"vertical condensation"  
-resorcine-formalin method  
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The charring of the root canal at work length  
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338. The following concentrations of hypochlorite solution are common (NaOCl):  
5.25%  
-6%  
-0%  
-25%  
339. Emergency medicine for blood on the skin and mucous membranes, injections and cuts include:  
5% iodine solution

70% ethyl alcohol  
-3% hydrogen peroxide  
-bricant greens

340. The nature of pain in acute pocket pulpitis of milk teeth?

"Short-term"  
"Appearing for no reason"  
-Pulsing  
-Permanent

341. Inflammation sites in acute focal diffuse pulpitis  
The part of the pulp

The crown part of the pulp  
-Periodont  
-Bifurcation site

342. Causes of systemic hypoplasia

Toxicosis in the second half of pregnancy

"Children's diseases during the first year of life"

-Injuries of milk teeth  
-Lack of fluoride in water

Which of the following diseases are not genetic?

"Fluorosis"  
"Tetracycline teeth"  
-Unfinished amelogenesis  
-Marble disease

344. Complaints of a patient in local hypoplasia?

"Cosmetic isan"  
"Change in the color of the tooth"

- Pain at temperature
- Pain when biting

345. Which tooth tissue does not change in amelogenesis?

Pulpa

"Dentin"

- Amal
- Enamel and dentin

Which of the following diseases are genetic?

"Unfinished amelogenesis"

Staton Syndrome - Capdepon

- Systemic hypoplasia
- Tooth caries

347. Differential diagnosis of the average tooth decay of milk teeth is carried out with

"Chronic gangrenous pulpitis"

"Chronic periodontitis"

- Initial tooth decay
- Fluorosis

348. Soft tooth tissue diseases

"Chronic pulpitis"

"Sharp pulpitis"

Periodontitis

- Parodontitis

349. With acute focal pulpitis of milk teeth:

"Night pains"

The causal tooth is precisely indicated.

- Body temperature drops
- Pale

350. Differentiation of acute focal pulpitis:

"With deep tooth decay"

With acute apical periodontitis

- With medium tooth decay
- With chronic gangrenous pulpitis

351. The nature of pain in acute diffuse pulpitis

"Appears for no reason"

"Self-involuntary pain"

- From acidic foods
- From the sweet

352. Clinical signs of acute diffuse pulpitis of milk teeth

"Pain in sensing all over the bottom of the cavity"

"Pain in percussion"

- Changes in tooth color
- Increased morning pain

353. Causes of changes in the child's condition in acute diffuse pulpitis

"Rising body temperature"

"General intoxication"

- Loss of appetite
- Sense of fear

354. When can I see a red, bleeding pulp in the cavity?

"Chronic proliferative pulpitis"

"Chronic hypertrophic pulpitis"

- With acute diffuse pulpitis
- With chronic gangrenous pulpitis

355. What causes chronic gangrenous pulpitis to cause severe pain?

"Deep sensing"

"High temperature"

- Sweet action
- Mechanical impact

356. How is the devital amputation carried out?  
With the help of Devit paste.  
"Using arsenic paste"  
-With infiltration anesthesia  
-With general anesthesia

357. Differential diagnosis of acute diffuse pulpitis from exacerbated chronic periodontitis:  
"Sharp soreness in sensing"  
"No change on X-ray"  
-Painfulness in chewing  
-Hyperemia, and swelling around the tooth

358. Cause of spontaneous pain in acute diffuse pulpitis  
Microbes and their toxins affect the nerve ending  
"The pressure of exudates in pulp"  
-Mechanical stimuli  
-Changes in temperature

359. Clinical signs of acute diffuse pulpitis  
"Irradiating pain"  
"Pain increasing at night"  
-Pain  
-Exactly indicate the causal tooth

360. Differential diagnosis of acute diffuse pulpitis from acute focal pulpitis

"Hyperemia, and swelling around the tooth"  
"Pain in percussion"  
-Caric cavity  
-Painlessness in sensing the base of the cavity

361. Pain in chronic fibrous pulpitis of milk teeth  
"Cause"  
It may not be.  
-When biting  
-Irradiating

362. Clinical signs of differential diagnostic value for diagnosing chronic fibrous pulpitis from medium tooth decay  
"Pain from temperature"  
"Painfulness in sensing the bases of the cavity"  
-hard dentin at the base of the cavity - Painless when biting

363. Methods used for differential diagnosis of chronic hypertrophic pulpitis from chronic granular periodontitis  
"X-rays"  
"EDI"  
-Percussion  
-Thermodiagnosis

364. Complaints of a patient with chronic hypertrophic pulpitis

"Pain from mechanical stimuli"  
"Bleeding at bite"  
-On spontaneous pain  
-Pain with sweet and bitter

365. What types of pulpitis are more common in baby teeth?

"Chronic gangrene"  
"Chronic fibrosis"  
-Chronic hypertrophic  
-Sharp focal

366. Effective way to treat single-rooted milk teeth with formed top:

"Deep amputation"  
"Ext-rationing"  
-Vital amputation  
-Biological method

367. What is put on the stump of pulp after its vital amputation in the milk teeth?

Calcidont paste  
Calcinic paste  
Rezorcin - formalin tampon  
Camphor - phenol tampon

368. What is left at the bottom of the cavity after the devital amputation of the crown pulp in the milk teeth?

"Formalin - thymol tampon"  
"Rezorcin - formalin tampon"  
-Eugenol tampon  
-Calcin - camecice paste

369. To devitalize the pulp of the tooth is used:

"Paraform pasta"  
Arsenic paste  
-Eugenol - thymol paste  
-Silver Guinness paste

370. The most effective method of treating single-rooted milk teeth pulpitis:

Devital extraction  
Ext-rationing  
Biological

- vital amputation

371. Frequently found forms of pulpitis of milk teeth:

"chronic fibrous pulpitis"

Sharp diffuse pulpitis

- chronic hypertrophic pulpitis  
Aggravation of chronic pulpitis

What do they leave on the mouths of the canals after the vital amputation?

"The pasta"

"calmecin paste"

-res.. Formalin tampon  
-formalin thymol paste

373. What is used for mummification in the treatment of milk teeth pulpitis:

"Res-formalin liquid"

"rezorcin-formalin epastion"

-calcin paste  
-calmecin paste

374. What is the filling of the cavity of the tooth after devital amputation ?

The "maret pad"

"Permanent filling"

-solution of rezorcin

-solution peroxide

375. What complication will lead to an overdose of arsenic paste in the treatment of pulpitis?

Medical periodontitis

"Pain"

-chronic fibrous pulpitis

Traumatic periodontitis

In the etiology of periodontitis are:

"Medical, "

"Infectious"

-acute, chronic

-gangrenous, granulomatous

Species of periodontitis, where the etiological factors are microorganisms:

"Infectious, "

Hematogenous

-chemical, infectious

-traumatic, hematogenous

378. What filling materials seal the channels of milk teeth after extirpation?

"The Cutter"

Rezorcin-formalin paste

-intradont

-unicem

379. Which of these nosologies directly lead to periodontal inflammation?

"chronic fibrous pulpitis"

"chronic gangrenous pulpitis"

-Sharp focal pulp

Deep tooth decay

380. The nature of pain in acute pocket pulpitis of milk teeth?

Appearing for no reason

Short-term

- Pulsing

- Permanent

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The crown part of the pulp

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- Marble disease

384. Complaints of a patient in local hypoplasia?

"Cosmetic isan"

Changing the color of the tooth

- Pain at temperature
- Pain when biting

385. Which tooth tissue does not change in amelogenesis?

Pulpa

Dentin

- Enamel
- Enamel and dentin

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Chronic gangrenous pulp

Chronic periodontitis

- Initial tooth decay
- Fluorosis

388. Soft tooth tissue diseases

Chronic pulpitis

Sharp pulpitis

- Periodontitis
- Periodontitis

389. With acute focal pulpitis of milk teeth:

The general state does not change

The salivation does not change.

- Body temperature rises

- Paleness

390. Differentiation of acute focal pulpitis:

With deep tooth decay

With acute apical periodontitis

- With chronic gangrenous pulpitis
- With medium tooth decay

391. The nature of pain in acute diffuse pulpitis

"Appears for no reason"

"Spontaneous pain"

- When biting
- From acidic foods

392. Clinical signs of acute diffuse pulpitis of milk teeth

The pain of sensing

The pain of percussion

- Changes in tooth color
- Increased morning pain

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Increased body temperature

General intoxication

- Feeling fear
- Loss of appetite

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High temperature

Mechanical impact

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Using the Pasta "Devital"

Using arsenic paste

- Using infiltration anesthesia

General anesthesia

397. Differential diagnosis of acute diffuse pulpitis from exacerbated chronic periodontitis:

Sharp soreness in sensing

No change on x-rays

- Hyperemia, and swelling

around the tooth

- Painfulness in chewing

398. Cause of spontaneous pain in acute diffuse pulpitis

Microbes and their toxins

affect the nerve ending

The pressure-curving of the exudate in the pulp

- Mechanical stimuli

Temperature changes

399. Clinical signs of acute diffuse pulpitis

The pain of increasing at night

Irradiating pain

- Uninterrupted unwarranted pain

- Pain

400. Differential diagnosis of acute diffuse pulpitis from acute focal pulpitis

The soreness in percussion

Hyperemia, and swelling

around the tooth

- Painlessness in sensing the base of the cavity

- Caric cavity

401. Pain in chronic fibrous pulpitis of milk teeth

"Causal"

It may not be

- Irradiating

- When biting

402. Clinical signs of differential diagnostic value for the diagnosis of chronic fibrous pulpitis from medium tooth decay

The pain of temperature

The soreness in sensing the bases of the cavity

- Soft dentin at the base of the cavity

- Painlessness when biting

403. Methods used for differential diagnosis of chronic hypertrophic pulpitis from chronic granular periodontitis

"EDI"

X-rays

- Percussion

Thermodiagnosis

404. Complaints of a patient with chronic hypertrophic pulpitis

Pain from mechanical stimuli

Bleeding when bitten

- Pain with sweet and bitter

- On spontaneous pain

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Chronic fibrosis

- Chronic hypertrophic

- Acute focal

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Deep amputation

- Vital amputation

Biological method

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- Eigenol tampon

- Calcin - camecice paste

To devitalize the pulp of the tooth is used:

Paraform paste

Arsenic paste

- Eugenol - thymol paste

- Guinness Silver Pasta

410. Caries in the spot stage are detected

It is detected by Fluorescence

The emergence of focal demineralization

The emergence of hypermineralization

Appearance of a barb

- All the answers are correct

What complaints are made in the face of superficial tooth decay

"Sweet pain"

"Pain from sour"

- Pain from hot

-spontaneous pain

-pain in sensing

Conditions for tooth decay are

The cariogenic flora

Low enamel resistance

- resident flora

- insoluble proteins

- easily digestible

carbohydrates

Additional site is dissected:

Grade 3

## Class 4

- 1 class
- 8th grade
- 5th grade

Complaints made in deep tooth decay

The presence of a deep cavity

The pain of cold and hot

- The presence of a non-deep cavity

- Percussion pain
- the presence of a chalky spot

415. With average tooth decay There is a medium-depth cavity.

The pain of sweets

- Spontaneous pain
- Night pains
- pain in percussion

416. Clinical antiseptics used in the treatment of tooth decay

3% hydrogen peroxide

Alcohol

- Chlorine-felipt
- Eludril
- chlorhexidine

417. The most common causes of pulpitis?

Microbes in the cavity

Toxins of microbes

Increased iodine content in food

- Pulp development anomaly
- Dental stones

418. Complaints of a patient in local hypoplasia?

"Change in the color of the tooth"

"Cosmetic isan"

-Pain at temperature

-Pain when biting

419. Which tooth tissue does not change in amelogenesis?

Pulpa

"Dentin"

-Amal

- Enamel and dentin

420. Causes of pulpitis?

Mechanical pulp injury

"Excessive thermal and medicinal effects in tooth decay"

- If the tooth enamel is over-affected

Complications from tooth and gum

- An anomaly in the development of pulp.

421. Children's pulpitis clinic?

Thin layer of dentin, dentin less mineralized

Dentin scans are wider

- The pulp camera is smaller in size

- A thick layer of dentin gives a load on the pulp

- Dentin canals are narrow

What is the reason for the rapid spread of inflammation in children?

More cell elements are in the pulp.

More amorphous matter is found in the pulp.

- There are fewer cell elements in the pulp

-More likely to be in the pulp of a smaller amount of amorphous substance

-More fibre

423. The development of apical periodontitis is associated with...?

The intake of microbes and their toxins from the inflamed pulp

Inflow of inflamed pulp exchange products

Lack of cavity

- Launched tooth-gum stone
- Complication of infectious diseases

424. Signs of acute pulpitis?

Acute intermittent pain,

"Pain, arises without irritant"

- Stupid pain
- Pain occurs when chewing
- Pain occurs when the jaw moves and is flushed

425. In acute pulpitis, children should not be used methods?

"Thermometry"

"EDI"

- Palpation
- Percussion

Sensing

426. Features of acute pulpitis?

It occurs with symptoms of periodontitis

Develops from deep tooth decay

- With long-term thermal exposure
- If you do not follow oral hygiene

"With natural loosening of the tooth

427. Signs of acute diffuse pulpitis?

Nester

Pain when eating

The whole side hurts, and it gives pain to different areas as the trigeminal nerve

progresses.

- No cavity
- Bad breath
- Nilichy fistulas

428. Clinical signs of fibrous pulpitis

Patients accurately point to a causal tooth

"Pain seating"

- Irradiating pain
- Percussion positive
- Growing wild meat into a tooth cavity

What is fluorosis?

endemic disease occurring in regions with high levels of fluoride in drinking water

Threshold of development of the resulting disruption of metabolic processes of developing teeth

Disruptions in the

development of the gum tissue

- Changes in the color of teeth under the influence of tetracycline drugs

430. Optimal fluoride content in drinking water which has an anti-cariogenic effect

0.7  
 1  
 -0,3  
 - 0,5  
 -2,1  
 431. Forms of fluorosis  
 Spotted  
 \*  
 "The bar"  
 - hypokeratosis  
 - balloon  
 - bubble  
 Where the strokes for  
 fluorosis are detected:  
 "On all teeth"  
 "Vestibular surface"  
 -akclusive  
 -chewing teeth  
 -aproximal surface  
 433. With which diseases  
 differentiate fluorosis  
 "Toothies"  
 "Hypoplasia"  
 Paradontosis  
 -pulpit  
 - alveolithic  
 Erosive form  
 "Expressed enamel  
 pigmentation"  
 Areas of lack of enamel  
 -melodious matte shade  
 -multiple shiny spots  
 -stripes in the form of strokes  
 435. What is typical for  
 fluorosis in the spot stage  
 The stains are multiple, are  
 located all over the crown.  
 The spots of methylene blue  
 are not stained.

This stage is detected by X-  
 ray  
 - methylene blue is stained  
 -spots have a dark brown color  
 What is typical of a  
 destructive form  
 The increased fragility of the  
 enamel is noted  
 "Dentin"  
 -painless sensing  
 -destruction of tooth cement  
 -On the X-ray is not visible  
 438.  
 Characteristics of a combined  
 shape  
 (develops in children between  
 the ages of 4.5 months and 3  
 years old)  
 Hypersthesia from  
 temperature slumbering  
 - Integrity of speakers  
 - teeth erasure is not observed  
 - No cosmetic defect  
 What is noted in the chalk-  
 shaped crab form?  
 Indentations in the form of  
 yellow or brown specks  
 There are small chipped  
 enamel  
 - Bleeding gums  
 - pain in the neck of the tooth  
 - Paradonan inflammation  
 What pathogenetic  
 phenomenon is characteristic  
 of acute periodontitis and  
 distinguishes it from chronic:  
 "Infiltration"  
 "Exudation"  
 -proliferation

- overgrowth of connective tissue

E) coagulation

Clinical trait characteristic of acute pulpitis:

"Rising temperature"

"Hyperemia of tissues around the tooth"

-bleeding gums

-pale mucosa

- dry mouth

List possible complications of acute periodontitis in children:

"Periostitis"

"chronic periodontitis"

-stomatitis

-halitosis

- pulpitis

443. List the X-ray manifestations of acute fibrous periodontitis:

"Thickening and sealing periodont"

"Extended periodontal slit"

-narrowing of periodontal crevice

-formation of fistula

- No changes on the X-ray

What is the prevention of acute periodontitis:

"Timely treatment of pulpitis" (timely treatment of tooth decay)

-timely treatment of stomatitis

-timely treatment of glossitis

Timely mumps treatment

In what forms of inseparation, fistula formation is possible:

"chronic granular periodontitis"

"chronic gangrenous pulpitis"

-chronic fibrous periodontitis

Aggravation of chronic fibrous periodontitis

- acute periodontitis

Causes of the upper periodontitis:

"Microorganisms and their toxins"

"Removal of filling material in the periodont"

-low fluoride in water

-violation of water-salt exchange

Increased iodine content in food

447. Clinical signs for acute periodontitis:

"The growing pain"

"Pain in percussion"

-stump pain

-inability to identify a sore tooth

-Only night pain

A milk tooth with periodontitis is to be removed if:

There are two years left before the physiological shift.

(II-III degree of dental mobility)

-There are 4 years left before the physiological shift  
-I degree of dental mobility  
Lack of root resorption

449. What medicines treat acute arsenic periodontitis:  
5% alcohol solution iodine  
"Unity"

Hydrogen peroxide  
-chloramine  
- carbolic acid

Clinical picture in acute pulp inflammation:  
"Self-involuntary pain"  
The night's pain  
Asymptomatic current  
- tooth intact - tooth is painted pink

451. With acute diffuse pulpitis:  
Deep cavity  
The cavity is not reported with the cavity of the tooth.  
Asymptomatic current  
- the presence of a svby stroke  
Pulp inexuability over 100 mcA

452. For chronic fibrous pulpitis:  
"Brown cavity of large sizes"  
"Increased sensitivity to cold and hot"  
Asymptomatic current  
-gangrene pulp  
Pulp hypertrophy

453. For chronic fibrous pulpitis:  
"Deep cavity cavity filled with altered dentin"

"Deep sensing is painful"  
-presence of a svby stroke  
-presence of granulama  
-presence of an intact tooth  
In the treatment of chronic hypertrophic pulpitis,:  
"Anesthesia, amputation"  
"Extirpation, filling of the canal"

-applications 2% p-r-ramodecent  
-staining 2% of methylene blue  
-coverage with fluoride varnish

Complaints of patients with chronic gangrenous pulpitis:  
"Bad breath, hot pain"  
The presence of a deep cavity, the color of the tooth has changed.

There are no complaints  
The color of the tooth has not been changed  
-caric cavity is not reported with the cavity of the tooth

456. On an objective examination of a patient with chronic gangrenous pulpitis:  
Deep cavity, deep sensing soreness

The color of the tooth is grayish-dark, caric cavity is reported with the cavity of the tooth

-tooth intact

The color of the tooth has not been changed

-You can see the bleeding pulp

457. Septodont tooth devitalization drugs:

"Caustynerva arsenic, caustinerva fast-acting (Rapide)

"Caustinner for temporary teeth without arsenic, caustinner sprotecting without arsenic (Fort)

- cutter

- quesofen

- Septonist

In the biological treatment of pulpitis, you should know: (strong drugs do not use)

The method is used in case of accidental exposure of the tooth cavity.

-No correct answers

All answers are correct

Method is used in the treatment of chronic gangrenous pulpitis

459. For successful treatment of pulpitis by biological method, choose a therapeutic pad

"CalcimoCalcesil"

"Kaltsevit, Life"

-Composite

-FinishingStrips

-Filtek'250

460. For successful treatment of pulpitis by biological

method, choose a therapeutic method

Gasket:

"Alcaliner, Septocalcine"

Dycal

-Dentin powder

-Prismafill

-Devitalizing paste

461. For successful pulpitis treatment, choose an endodontic tool:

"Gutta-condenser, System "To 3 Endo" (Kerr)

"Finishing File 3 (F3)

-Sundental

-Scaler

-Dental mirror

462. For successful pulpitis treatment, choose an endodontic tool:

"Shaping File 1 (S1) "

Finishing File 1 (F1)

-scalpel

-scissors

-chisel

463. For successful pulpitis treatment, choose an endodontic tool:

"H-File"

"K-File"

-stroke

-spatula

-pinzet

464. For successful pulpitis treatment, choose an endodontic tool:

"GT Rotary Files"

"File"

-excavator

-elevator

-contour matrix

465. For successful pulp treatment, choose an endodontic tool:

"Root burav, root drill"

"Pulp extractor, Miller's needle"

-finish strips

-dividing records

-cofferdam

In the treatment of pulpitis for tooth restoration, it is necessary to have:

"Polymerization lamp, composite material"

"A set of tools for restoration"

-Files

-K-File

-Root burav

467. In the treatment of pulpitis for the imposition of devitalizing the pastel, the milk tooth must have:

The Devitalizing Pasta

"Dentin pasta"

-resorcine-formalin paste

- zinc eugenoal paste

-cimion

In the treatment of pulpitis for tooth mummification, it is necessary to have:

The resrcine-formalin liquid

Rezorcin-formalin paste

-Root burav

-pulpoextractor

-channel

In the process of vital amputation, it is necessary to know:

The indication for the vital amputation is acute focal pulpitis

The amputation is carried out under anesthesia.

- In the face of vital amputation, arsenic paste is superimposed on the mouth of the root canals

- In the form of a vital amputation, resorcine-formalin liquid is applied to the mouth of the root canals

-Vital amputation is carried out by pulpextract

470. When treating pulpitis for permanent fillings, pick up a composite of light

Curing:

"Somposite"

"Herculite"

-Unicem

-Silicin

-Beladont

471. Clinical signs characteristic of chronic hypertrophic pulpitis:

There are bleeding soft tissues in the cavity.

"Blood and pain when chewing coarse food"

- Hyperemia of the gums

- percussion is sharply painful

Mobility of teeth

472. Stages of treatment of pulp devital amputation in the second visit:

A temporary filling is removed, a dental cavity opens

The amputation of the crown pulp

Removal of root pulp

- The answers are wrong
- after amputation, a medical pad is applied

Stages of treatment for vital amputation:

"Anaesthetic, a tooth cavity opens"

The amputation of the crown pulp

Closure of the cavity

- overlaying pasta devit
- imposition of painkiller supon

Methods for determining the initial stage of tooth decay:

Luminescence

phosphorescencia

Closure of the cavity

- percussion
- palpation

475. In the treatment of superficial tooth decay (5th grade), for permanent fillings use:

Uni-Fill

"Composite"

-Kresopat

-Forededent

476. In the treatment of superficial tooth decay (3-4 class), for permanent fillings use:

"Fuji II"

"Charisma"

Unifas

-Dentin pasta

477. In the treatment of average tooth decay (1st grade), for permanent fillings use:

Amalgam

Uni-Fill

-Vinoxol

-Adhezor

478. In the treatment of average tooth decay (class 2), for permanent fillings use:

Silidont

"Composite"

-Endometazone

-Iodent

479. In the treatment of secondary tooth decay (3rd grade), for permanent fillings use:

"Valux plus"

"Fuji II"

-Dentin pasta

-Abscess remedy

480. In the treatment of average tooth decay (4th grade), for permanent fillings use:

"Fuji I"

zadmira

-Iodent

-Kresopat

481. In the treatment of average tooth decay (5th grade), for permanent fillings use:

"Crystalline"

"Lux"

-Vinoxol

-Dentin pasta

482. In the treatment of average tooth decay (5th grade), for permanent fillings use:

zadmira

zProdiggi

-Kresodent

-Iodent

483. In the treatment of average tooth decay (5th grade), for permanent fillings use:

"Composite"

"Crystalline"

-Calcin

-Abscessremedy

484. In the treatment of secondary tooth decay (3rd grade), for permanent fillings use:

revolution

Tetric-Ceram

-Iodent

-Rezorcin-formalin paste

485. In the treatment of secondary tooth decay (4th grade), for permanent fillings use:

zProdiggi

"Composite"

-Eodent

-Artificial dentin

In the treatment of medium tooth decay for insulating pads, they use:

Adhezor

Unicem

-Composite

-Revolution

In the treatment of medium tooth decay for insulating pads, they use:

Unifas

"Baseline"

-Lux

-Spectrum TPH

In the treatment of medium tooth decay for insulating pads are used:

qCalcimol LC

"KetacCem"

-Kresopat

-Dentin pasta

In the treatment of medium tooth decay for insulating pads, they use:

Argil

Adhezor

-Filtek Supreme

-Filtek P 60  
489. In the treatment of deep tooth decay (1st class), for permanent fillings use:  
"Crystalline"  
Uni-Fill  
-Vinoxol  
-Tenet

490. In the treatment of deep tooth decay (class 2), for permanent fillings use:  
Silidont  
"Composite"  
-Endometazone  
-Eodent

491. In the treatment of deep tooth decay (3rd grade), for permanent fillings use:  
"Valux plus"  
"Composite"  
-cinque - eugenopaste  
-Abscessremedy

492. In the treatment of deep tooth decay (4th grade), for permanent fillings use:  
"Fuji I"  
zadmira  
-Iodent  
-Kresopat

493. In the treatment of deep tooth decay (5th grade), for permanent fillings use:  
zProdigi  
"Lux"  
-Vinoxol  
-Dentin pasta

494. In the treatment of deep tooth decay (5th grade), for permanent fillings use:

zadmira  
zProdigi  
-Kresodent  
-Iodent

495. In the treatment of deep tooth decay (5th grade), for permanent fillings use:

"Composite"  
\_Crystalline  
-Calcin  
-Abscessremedy

496. In the treatment of deep tooth decay (4th grade), for permanent fillings use:

"Lux"  
Tetric-Ceram  
-Iodent  
-Unicem

497. In the treatment of deep tooth decay (4th grade), for permanent fillings use:

zProdigi  
AdmiraCaps  
-Eodent  
-Tenet

In the treatment of deep tooth decay for insulating pads, they use:

Adhezor  
Unicem  
-Revolution  
-Tetric-Ceram

In the treatment of deep tooth decay for insulating pads, they use:

Unifas

"Baseline"

-Lux

-Spectrum TPH

In the treatment of deep tooth decay for insulating pads, they use:

qCalcimol LC

"KetacCem"

-Artificial dentin

-Dentin pasta

In the treatment of deep tooth decay for insulating pads, they use:

Argil

Adhezor

-Filtek Supreme

-Filtek P 60

502. The following forms of fluorosis are different

The stroke

Spotted

-Sharp

-There are no correct answers

The following forms of hypoplasia are different:

Spotted

Wavy

-Sharp

-There are no correct answers

504. Marble disease:

Hereditary disease

It occurs in both men and women

-enamel not changed

There are no changes on the X-ray

505. Capdepon dysplasia is characteristic:

Undetected etiology

Undetected pathogenesis

There are no teeth roots

-detected pathogenesis

Hereditary dental disorders include:

Marble disease

Imperfect amelogenesis

-Fluorosis

-Erosion

In acute forms of pulpitis, there are:

Self-involuntary pain

Night pains

-formation of wedge-shaped defect

-presence of a svby stroke

508. In acute forms of pulpitis:

The cavity is not reported with the cavity of the tooth

20-40 mcA pulp

Facial asymmetry

-tooth ache only during the day

509. For chronic fibrous pulpitis:

Self-involuntary pain

Pain from all stimuli

Asymptomatic current

Pulp hypertrophy

In the treatment of chronic hypertrophic pulpitis:

Pulp amputation

-anesthesia

-Prescribing antibiotics

Microbiological study

In the treatment of chronic gangrenous pulpitis 27 teeth are carried out:

Infiltration anesthesia

Chamber anesthesia

-removal of filling material  
behind the top of the root

-understatement of the bite

In the treatment of

nocremental pulp, 26 teeth are  
treated:

Infiltration anesthesia

"Filling the canal"

-removal of filling material  
behind the top of the root

-sealing fissur

513. Mandibular anesthesia is  
performed in the treatment of  
teeth:

37

45

-17

-27

514. Mandibular anesthesia is  
performed in the treatment of  
teeth:

35

46

-16

-24

515. Mandibular anesthesia is  
performed in the treatment of  
teeth:

33

44

-25

-17

When performing anesthesia,  
you need to know:

Mandibular anesthesia is  
performed in the treatment of  
36 teeth

Adrenaline has the ability to  
raise blood pressure

-Cutting anesthesia is  
performed in the treatment of  
36 teeth

-Tuber althes is performed in  
the treatment of 46 teeth

In the treatment of pulpitis for  
tooth restoration, it is  
necessary to have:

"Padding glass-numbered  
cement

Set for finishing fillings

-Riemer

-pulpoextractor

In the treatment of pulpitis,  
root canal seating is used:

zink-eugeno-paste

Rezorcin-formalin paste

-Dentin pasta

-Crystalline C2

In the treatment of pulpitis,  
root canal seating is used:

"Iodent"

"Kresodent"

-Latelux

-Somposite

In the treatment of pulpitis,  
root canal seating is used:

Guttapercha

The Silver Pin

-Crystalline C2

-Latelux

In the treatment of pulpitis for  
tooth restoration, it is  
necessary to have:

"Padding glass-numbered  
cement

Set for finishing fillings

-Riemer

-pulpoextractor

522. In the treatment of acute pulpitis 16 teeth by the method of vital amputation are carried out:

Infiltration anesthesia

Anaesthetising the needle injection site

-coverage with fluoride varnish

-sealing fissur

523. In the treatment of acute pulpitis 36 teeth by the method of vital amputation are carried out:

Anaesthetising the needle injection site

Amputation of the crown part of the pulp

-Tuber anesthesia

-palatinal anesthesia

524. In the treatment of acute pulpitis 46 teeth by the method of vital amputation are carried out:

Amputation of the crown part of the pulp

The imposition of a medical pad

-expansion of root canals

-palatinal anesthesia

525. When treating pulpitis for permanent fillings, select a composite chemical

Curing:

"Somposite"

"Sompolux"

-Beladont

-Cemion PC

526. When treating pulpitis for permanent fillings, select a composite chemical

Curing:

Crystalline C2

Uni-Fill

Unifas

-Forededent

527. When treating pulpitis for permanent fillings, pick up a composite of light

Curing:

profill

"Micronew"

Unifas

-Adhezor

528. In the treatment of acute focal pulpitis 13 teeth by the method of vital

Extraction is carried out:

Anaesthetising the needle injection site

Infiltration anesthesia

-imposing permanent amalgam fillings

-covering the tooth with fluoride varnish

In the treatment of acute focal pulpitis 21 teeth by biological method, the biological method is carried out:

Cutting or infiltration anesthesia

The formation of a cavity

-medical treatment of the root canal

-Imposition of permanent fillings of dentin paste  
In the treatment of acute focal pulpitis 46 teeth by biological method, the biological method is carried out:

Mandibular anesthesia  
The formation of a cavity  
Expansion and processing of channels

-filling channels  
In the treatment of pulpitis for cavity insulation,:

Cofferdam  
Klamp for Cofferdam

-Plager  
-File scissors

532. In the treatment of chronic fibrous pulpitis 37 teeth by the method of vital extirpation

Is:  
Mandibular anesthesia  
The formation of a cavity  
-amputation of pulp  
-root canal impregnation

533. In the treatment of chronic fibrous pulpitis 11 teeth by the method of vital extirpation

Is:  
Anaesthetising the needle injection site  
Infiltration anesthesia  
-imposing permanent amalgam fillings  
-Sealing fissure

534. In the treatment of chronic fibrous pulpitis 37 teeth by the method of vital extirpation

Is:  
Mandibular anesthesia  
The formation of a cavity  
-coverage with fluoride varnish

-Tuber alamy  
535. In the treatment of acute diffuse pulpitis 26 teeth by devitalization in

The first visit is:  
Autopsy of the tooth cavity under anesthesia

Partial or complete disparetetal cavity  
-sealing fissure  
-coating with fluoride varnish staining 2% r-rum methylene blue

536. In the treatment of acute diffuse pulpitis 16 teeth by devitalization

The second (last) visit is:  
Removal of temporary fillings, formation of cavity  
Amputation and extirpation of tooth pulp  
-staining 2% of methylene blue

-applications 3% r-rom remodent

In the treatment of pulpitis for filling cavities,:

The Matrix  
Cofferdam  
-Plager

-Spreader

The process of treating root canals involves several stages:

"Isolation of the working field"

Creating access

Functional method of examination -

functional samples

Paraclinical screening methods include:

Instrumental

Laboratory

-palpation

-percussion

In endodontic treatment, special attention should be paid to

The following points:

The position of the tooth

Tooth shape

-on pulp condition

All answers are correct

In endodontic treatment, special attention should be paid to

The following points:

Ratio of the non-alveolar and alveolar part of the tooth

Position to the occlusive surface of the tooth row

-on the condition of cement

-on pulp condition

The radio-viziography method has a number of advantages:

Reduces the radiation dose of the patient and staff

Does not require additional space

-sterilization at 140 degrees Celsius

Requires additional staff

The radio-viziography method has a number of advantages:

Allows you to archive your data

Makes it possible to transmit images over long distances

-necessary source of radiation use selenic

-plate is difficult to spot hidden hearths

X-rays are divided into:.

Diagnostic

Working pictures

-buccank

-standard

545. According to the diagnostic X-ray, it is determined:

The condition of the crown part of the tooth - anatomical features of the tooth

-condition of the lower jaw joint

-tooth color

Requirements for modern root cements:

Easy to mix and have a convenient packaging

X-ray contrast

-low ability to condense

-reduce adhesion when fixing a pin

Requirements for modern root cements:

High plasticity

High-quality tightness

-low ability to condense  
-reduce adhesion when fixing a pin

Requirements for modern root cements:

Long working hours  
Short curing time in the mouth, minimal shrinkage  
-dissolve in tissue fluids  
-low ability to condense

Benefits of guttaperchi:

Bioinertity and  
Biocompatibility  
High plasticity and ability to condense

Complexity of sterilization

-low plasticity

Benefits of guttaperchi:

Easy sealing if necessary

Biocompatibility

Sharp shrinkage

-low plasticity

Methods of constant channel obturation:

Filling the canal with paste

One pin

-silver

-depophoressis

Methods of constant channel obturation:

Thermomechanical nature of the guttaperchy

Vertical condensation

-vibration

-resorcine-formalin method

Channel obturation criteria:

The charring of the root canal at work length

Vertical root fracture

- excretion of material for apex

Channel obturation criteria:

The charring of the root canal at work length

The homogeneity of filling sints all over

-perforation

Fragmentation of the tool in the channel

555. The following concentrations of hypochlorite solution (NaOCl) are common:

5.25%

3%

-30%

-25%

556. Emergency medicine for emergency blood on the skin and mucous

shells, injections and cuts include:

5% iodine solution

70% ethyl alcohol

-3% hydrogen peroxide

-bricant greens

557. Mandibular anesthesia is performed in the treatment of teeth:

It's a

It's a

-17

-27

558. Mandibular anesthesia is performed in the treatment of teeth:

It's a

It's a

-16 -24

559. Mandibular anesthesia is performed in the treatment of teeth:

It's a

It's a

-25

-17

When performing anesthesia, you need to know:

Mandibular anesthesia is performed in the treatment of 36 teeth

Adrenaline has the ability to raise blood pressure

-Cutting anesthesia is performed in the treatment of 36 teeth

-Tuber althes is performed in the treatment of 46 teeth

## Ratings criterion

	Performance	Score	Student's level of knowledge
1	96-100%	It's cool «5»	Full correct answer to questions on this topic. He sums up and makes decisions, thinks creatively, analyzes himself.  Situational tasks are solved correctly, with a creative approach, with a full justification for the answer.  Actively participates in interactive games, correctly makes informed decisions and sums up, analyzes.
2	91-95%	It's cool «5»	Full correct answer to questions on this topic. He sums up and makes decisions, thinks creatively, analyzes himself.  Situational tasks are solved correctly with the full justification of the answer.  Actively participates in interactive games, correctly makes informed decisions and sums up.
3	86-90%	It's cool «5»	The correct answer to questions on this topic, but there are 1-2 inaccuracies. It analyzes itself.  Inaccuracies in solving situational problems, but with the right approach, justification for the answer.  Actively participates in interactive games, correctly makes informed decisions and sums up.
4	81-85%	Ok «4»	The questions raised on this topic are fully covered, but there are 2-3 inaccuracies and errors. Applies in practice, understands the essence of the issue, tells confidently, has accurate ideas.  Situational tasks have been solved correctly, but the

			justification for the answer is not complete enough.
5	76-80%	Ok «4»	<p>Correct, but not full coverage of the issue. The student knows the subject. He understands the essence of the question, tells confidently, has accurate ideas.</p> <p>Actively participates in interactive games. On situational tasks gives incomplete solutions.</p>
6	71-75%	Ok «4»	<p>Correct, but not full coverage of the issue. The student knows the subject. He understands the essence of the question, has ideas.</p> <p>Participates in interactive games. On situational tasks gives incomplete solutions.</p>
7	66-70%	Satisfy flax «3»	<p>The correct answer to half of the questions asked. The student knows, but does not fully understand the subject. He understands the essence of the question, tells confidently, has accurate ideas only on certain issues of the topic.</p> <p>Situational tasks have been solved correctly, but there is no justification for the answer.</p>
8	61-65%	Satisfy flax «3»	<p>The correct answer to half of the questions asked. The student knows, but does not fully understand the subject. He understands the essence of the issue, tells insecurely, has accurate ideas only on certain issues of the topic.</p> <p>Situational tasks have been solved with errors.</p>
9	55-60%	Satisfy flax «3»	<p>Answer with errors to half of the questions posed. The student makes mistakes on the topic, poorly understood, confused. Tells insecurely, has partial ideas on the topic.</p> <p>Situational tasks have been mishandled.</p>
10	50-54%	Dissatisfaction It's not a «2»	<p>Dissatisfaction</p> <p>It's not a «2»</p>
11	46-49%	Dissatisfaction It's not a «2»	<p>The correct answer to 1/4 of the questions asked. The student does not know the subject, poorly understands, gets confused.</p> <p>Situational tasks are not solved correctly, with the wrong approach.</p>

12	41-45%	Dissatisfaction It's not a «2»	The correct answer to 1/5 of the questions asked. The student does not know the subject, poorly understands, gets confused.  Situational tasks are not solved correctly, with the wrong approach.
13	36-40%	Dissatisfaction It's not a «2»	Coverage of 1/10 of the questions when the wrong approach. Practically does not understand the subject.
14	31-35%	Dissatisfaction It's not a «2»	The questions are not answered. He doesn't know the subject.

## Rating

### Criterion and assessments on the subject "Mistakes and complications in pediatric dentistry"

№	Назораттурлари	Сони	Мах.балл	Коэф.	Жами балл
1	Ж.Б.				
	1.1. Амалий машғулот	9	100	0,45	45
	1.2. Клиник машғулот	9	100		
	1.3.Т.М.И.	9		0,05	5
2	О.Н.	1	100	0,20	20
3	Я.Б.	1			
	3.1.Я.Б.				
	3.1.2.ОТКС		100	0,15	15
	3.1.3.Тест (30-та савол)		100	0,15	15
ЖАМИ:			100	1,0	100

## Literature

1. Khalilov I.H., Daminova S.B., Mukhamedov A M.S., Razzoiov S.M. Bolalar of toothalogy. It's a swathe of the company. Toshkent. ADAD PLUS. 2018 y.
2. Khalilov I.H., Daminova S.B., et al. Faculty Of Pediatric Therapeutic Dentistry. A special allowance. Tashkent. TAFAKKUR BO'STONI. 2015 y.
3. Khalilov I.H., Ramonov J.S., Muratazaev S.S., Mukhamedov A. Bolalar Therapeutics. Darslik. Tashkent. Top Image Media. 2015 y.
4. Muratazaev S.M., Muratazaev S.S. Bolalar Faculty of Dentistry Therapeutics. It's a swathe of the company. Toshkent. TTA Bosmahonasi. 2014 y.
5. Khalilov I.H., Abdullayev J.R., Daminova S.B. va Boshialar. Bolalar Faculty of Therapeuticdentists. Darslik. Toshkent. Geo fan poligraf. 2013 y.
6. Khalilov I.H., Ramonov J.S. va Boshialar. Bolalar Faculty of Therapeuticdentists. Darslik. Toshkent. SHAR. 2011 y.
7. Khalilov I.H. va boshjalar. Bolalar therapeutics dentistry. Dentist Casalliclar prevention. Darslik. Toshkent. Yangiyu'l poligraf servis. 2006 y.

#### Additional

1. Borovsky E.V. Therapeutic Dentistry. Tutorial. Moscow. Medical inpharmacy agento. 2008
2. Persin L.S. Stoamatology of childhood. Tutorial. Moscow. Medicine. 2003
3. Borovsky E.V. Therapeutic Dentistry. Tutorial. Moscow. Medical inpharmacy agento. 2002
4. Kuryakina N.V. Therapeutic dentistry of childhood. Tutorial. Moscow. NGMA. 2001
5. Mirziyoyev S.M. Buyuk Kelajazhimizning mard wa olijanob khaliimiz bilan birga Juramiz. Yuzbekiston matbuot wa achbort agentligining "O'zbekiston" shribaa ijodi uyi. 2017.
6. Mirziyoyev S.M. Tanyidiyi thalil, jaatyti tartib intiz va shahsija javobgarlik - jaar bir rabar faoliating kundalik yuidasi bilisi kerak. Yuzbekiston matbuot wa achbort agentligining "O'zbekiston" shribaa ijodi uyi. 2017.
7. Mirziyoyev S.M. Erkin wa farovon, democrat Yuzbekiston davlatini Birgalikda barpo etamiz. Yuzbekiston matbuot wa achbort agentligining "O'zbekiston" shribaa ijodi uyi. 2016.

#### **Internet sites:**

- 1.[www.ziyonet.uz](http://www.ziyonet.uz)
- 2.[www.e-kutubxona.uz](http://www.e-kutubxona.uz)
- 3.[www.googl.uz](http://www.googl.uz)
- 4.[www.e-stomatoly](http://www.e-stomatoly)
- 5.[www.edentwold](http://www.edentwold)
- 6.[www.medlibrary](http://www.medlibrary)
- 7.[www.pubmed.com](http://www.pubmed.com)
- 8.[www.cochrane.org](http://www.cochrane.org)
- 9.[www.ceholar.googl.com](http://www.ceholar.googl.com)
- 10.[www.med-info.ru](http://www.med-info.ru)
- 11.<http://home.higwire.org>
- 12.[www.bsmi.uz](http://www.bsmi.uz)
- 13.[www.detstom.uz](http://www.detstom.uz)