



Educational institution
"Royal Metropolitan University"

Quality Management System
Educational and Methodological Complex of the discipline "Therapeutic Dentistry"
Department of Dental Disciplines, Royal Metropolitan University
560004 "Dentistry"

**Ministry of Science, Higher Education, and Innovation of the Kyrgyz
Republic**

**Educational Institution
Royal Metropolitan University
Department of Dental Disciplines**



"APPROVED"

Vice Rector for Academic and
and Administrative Affairs

N.A. Urazaliyeva

"06" 29 2025



**TEACHING AND METHODOLOGICAL COMPLEX OF THE
DISCIPLINE**

"THERAPEUTIC DENTISTRY"

of the main educational program
in the specialty **560004 "Dentistry" (for foreign citizens)**
Graduate qualification: Specialist (Doctor)

Bishkek 2025



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Republic**

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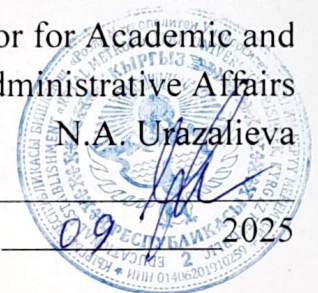


"APPROVED"

Vice Rector for Academic and
and Administrative Affairs

N.A. Urazalieva

"06" 09 2025



**WORKING PROGRAM OF THE DISCIPLINE
"THERAPEUTIC DENTISTRY"**

of the main educational program
in the specialty 560004 "**Dentistry**" (for international students)

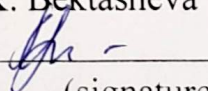
Graduate qualification: Specialist (Doctor)

Full-time program

Course	3, 4, 5
Semester	5, 6, 7, 8, 9, 10
Credit	5, 6, 8, 9, 10
Exam	7
Total credits in the curriculum	24
Total hours in the curriculum	720

Program developer:
A.K. Bektasheva

Reviewed and approved at a meeting of the
Department of Dental disciplines
Protocol No. 1 dated "6" September 2025
Head of the Dental disciplines Department,
PhD A.K. Bektasheva


(signature)

Bishkek 2025



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The work program for the course "Therapeutic Dentistry" has been developed in accordance with the requirements of the State Educational Standard for Higher Professional Education (GOS VPO) for specialty 560004 "Dentistry."

The work program has been approved by the Educational and Methodological Department of the RMU

Head of the Educational and Methodological Department

Reutskaya N. A.

(Full Name)

[Signature]

(Signature)

"06" 09 2025

The work program has been approved by the head of the core educational program for specialty 560004 "Dentistry"

Head of the Main Educational Program

[Signature]

(Full Name)

Sapronova A. Z.

(Signature)

"06" 09 2025

External review provided by

M. D., professor Cholokova G. I.

"4" 09 2025 (review attached)

The work program has been approved by a specialist from the RMU Quality and Monitoring Department

Q&M Department

[Signature]

(Full Name)

[Signature]

(Signature)

"06" 09 2025

РЕЦЕНЗИЯ

Рецензируемая рабочая программа дисциплины (РПД) «Стоматология» (для ЛД) имеет классический вид, типовую структуру, соответствует ГОС Кыргызстана, рассчитана до 2030 года. РПД включает в себя цели освоения дисциплины, место дисциплины в структуре ООП «Стоматология», структуру и содержание дисциплины. Фонд оценочных средств включает контрольные вопросы, ситуационные задачи и тесты. Так же в РПД «Стоматология» (для ЛД) приведены основная и дополнительная рекомендуемые литературные источники, приведен перечень информационных справочных ресурсов и программного обеспечения. В РПД «Стоматология» (для ЛД) описывается материально – техническое обеспечение дисциплины в РМУ и даются методические указания для обучающихся по освоению дисциплины.

Таким образом, рецензируемая РПД «Стоматология» (для ЛД) позволяет подготовить врача-стоматолога высшего профессионального уровня с широким и культурным кругозором, информационной грамотностью и психолого - педагогическими навыками, способного диагностировать стоматологическую патологию и оказывать профессиональную помощь пациентам.

Рецензент:

д.м.н., и.о. профессора кафедры

хирургической стоматологии

и ЧЛХ КГМА,

д.м.н.

« 4 » 09 2024 г.



Шаяхметов Д.Б.

Подпись Шаяхметова Д.Б. заверяю
д.м.н. Шаяхметов Д.Б.
Кыргызская государственная медицинская академия им. И.К. Ахунбаева



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1. The working program of the academic discipline

1.1. Explanatory note

The mission of the OU RMU is The mission of Royal Metropolitan University is to improve the health and quality of life of the population through the high-quality training of medical personnel capable of intercultural interaction, based on the integration of advanced scientific knowledge, innovation, and high standards of practice in an environment of unity of education, science, and clinical activity.

Abstract of the academic discipline. The course "Therapeutic Dentistry" is a fundamental clinical discipline focused on the etiology, pathogenesis, clinical presentation, diagnosis, treatment, and prevention of diseases of the dental hard tissues, pulp, and periodontium. Students master modern methods of dental diagnosis, the principles and stages of treating caries and its complications, non-carious lesions, and the fundamentals of endodontic treatment. Particular attention is paid to developing practical skills: examining patients, making a diagnosis, choosing a treatment strategy, performing therapeutic dental procedures, and adhering to the principles of medical ethics and deontology. This course promotes the development of professional competencies in dentistry and serves as the foundation for further study in clinical dental disciplines.


The purpose and objectives of the discipline

The purpose of discipline

developing professional competencies in students that ensure readiness to carry out preventive, diagnostic, and therapeutic activities for diseases of the hard tissues of the teeth, pulp, and periodontium, based on modern methods of clinical examination, principles of evidence-based medicine, and current clinical guidelines, while adhering to the requirements of medical ethics and the safety of dental care.

Objectives of the discipline

- Formation of systemic knowledge about the etiology, pathogenesis, clinical picture, diagnosis and prevention of diseases of hard dental tissues, pulp and periodontium.
- Mastering modern methods of clinical examination of dental patients, interpretation of laboratory and instrumental research results.
- Developing skills in making a diagnosis and developing a sound treatment plan in accordance with clinical guidelines and the principles of evidence-based medicine.

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- Mastering methods of treating caries, its complications and non-carious lesions of hard dental tissues using modern materials and technologies.
- Development of practical skills in conducting endodontic treatment and monitoring its effectiveness.
- Development of measures for the prevention of dental diseases and the formation of patient motivation to maintain dental health.
- Development of clinical thinking, skills for making professional decisions and assessing the quality of medical care provided.
- Developing skills in compliance with sanitary and epidemiological requirements, aseptic and antiseptic rules, as well as ensuring the safety of patients and medical personnel.
- Mastering the principles of medical deontology, ethics, and effective interaction with patients and colleagues.
- Formation of readiness for maintaining medical records in accordance with the established procedure.

The “Therapeutic Dentistry” block is part of the basic part of the professional cycle for the specialty “Dentistry” (code 560004).

The place of the discipline in the structure of the OOP (prerequisites, postrequisites)

This discipline is studied by students majoring in Dentistry (including foreign citizens) and is included in the compulsory scope of disciplines studied in the State Educational Standard of Higher Professional Education.

The course "Therapeutic Dentistry" builds on the previous disciplines, including normal and pathological anatomy, normal and pathological physiology, biochemistry, microbiology, pharmacology, and propaedeutics of dental diseases. The knowledge gained in "Therapeutic Dentistry" will subsequently be essential for studying the following disciplines: surgical dentistry, prosthetic dentistry, pediatric dentistry, orthodontics, and maxillofacial surgery.

The main purpose of the program in therapeutic dentistry is to develop students' clinical thinking, the ability to interpret anamnesis data, objective examination and additional research methods to establish a diagnosis and select rational treatment tactics for dental diseases.

Based on the main objectives of the training in the discipline "Therapeutic Dentistry", the program material is divided into the following sections:



- I. Non-carious lesions of teeth. The program material includes: classification, etiology and pathogenesis of non-carious lesions of hard dental tissues.
- II. Endodontics. The program material includes: the anatomical structure of the dental cavity, the morphology of the root canals of various groups of teeth, variants and anomalies of the structure of the root canals.
- III. Periodontology. The program material is divided into sections: anatomical and physiological characteristics of the periodontium, as well as the etiology of periodontal diseases.
- IV. Mucology. The program material includes: the structure and functions of the oral mucosa, methods of patient examination, clinical and laboratory diagnostic methods, differential diagnosis of diseases of the oral mucosa.

The total workload of the course is 720 hours.

The course includes lectures and practical classes. Ongoing assessment includes quizzes, tests, and practical skills assessments (including phantom tests) aimed at assessing the development of professional competencies. The final form of assessment is an exam.

Course prerequisites:

normal anatomy, pathological anatomy, normal and pathological physiology, biochemistry, microbiology, pharmacology, histology, propaedeutics of dental diseases.

Postrequisites:

surgical dentistry, orthopedic dentistry, pediatric dentistry, orthodontics, maxillofacial surgery, clinical dentistry.

Competencies of students formed as a result of mastering the discipline, planned results of mastering the academic discipline.

- Graduate in the specialty Dentistry with the assignment of a specialist qualification "Doctor" in accordance with the goals of the OOP and the objectives of professional activity, must have the following professional competencies:

Code	Contents of competence
GC-1	able and ready to analyze socially significant problems and processes, to use methods of natural sciences, mathematics and humanities in various types of professional and social activities;
IC-1	able and ready to work with computer equipment and software for system and application purposes to solve professional problems;
SPC-1	able and willing to implement ethical, deontological and bioethical principles in professional activities;



Code	Contents of competence
PC-2	is able and ready to conduct and interpret interviews, physical examinations, clinical examinations, results of modern laboratory and instrumental studies, morphological analysis of biopsy, surgical and autopsy material of patients, and to prepare medical records of outpatient and inpatient patients, children and adults.
PC-3	able and willing to conduct pathophysiological analysis of clinical syndromes, use sound methods of diagnosis, treatment, rehabilitation and prevention among children, taking into account their age, and the adult population.
PC-4	able and willing to apply aseptic and antiseptic methods, use medical instruments, carry out sanitization of treatment and diagnostic rooms, children's healthcare organizations, and possess the skills to care for sick children and adults.
PC-6	able and ready to work with medical and technical equipment used in work with patients, computer equipment, receive information from various sources, apply the capabilities of modern information technologies to solve professional problems;
PC-15	able and willing to collect and record a complete patient medical history, including oral health data.
PC-16	capable and ready to make a diagnosis based on the results of clinical and laboratory studies of biological materials and taking into account the laws of the course of pathology in organs, systems and the body as a whole.
PC-19	able and ready to diagnose typical dental diseases of the hard and soft tissues of the oral cavity, dentofacial anomalies in patients of all ages.
PC-20	able and ready to analyze and interpret the results of modern diagnostic technologies in children, adolescents and adults for successful treatment and preventive activities.
PC-21	able and ready to analyze the action of drugs based on the totality of their pharmacological properties in the treatment of dental diseases;
PC-22	able and ready to perform basic treatment measures for the most common dental diseases and conditions in adults and children.



Code	Contents of competence
PC-23	able and willing to prescribe adequate treatment to patients with dental diseases in accordance with the diagnosis, and implement an algorithm for selecting drug and non-drug therapy
PC-37	capable and ready to solve individual research and applied science problems in the field of healthcare in the diagnosis, treatment, rehabilitation and prevention of dental diseases;
PC-38	able and willing to conduct statistical analysis and prepare a report on the completed research

LO1:Analyze clinical cases and identify therapeutic problems in dentistry using scientific methods.

LO2:Use computer technologies and specialized software to solve diagnostic and treatment problems.

LO3:Apply the principles of bioethics, deontology and medical ethics in relationships with patients and colleagues.

LO4:Communicate professionally, work in a team, and effectively resolve conflicts in clinical practice.

LO5:Conduct a clinical examination of the oral cavity, collect anamnesis and prepare medical documentation in accordance with regulatory requirements.

LO6:Perform a pathophysiological analysis of diseases of the teeth and soft tissues of the mouth, interpreting the data of diagnostic studies.

LO7:Conduct diagnostics of acute and chronic dental and periodontal diseases in patients of different age groups.

LO8:Develop and implement individualized therapeutic treatment plans taking into account modern clinical guidelines and technologies.

LO9:Apply aseptic and antiseptic methods to ensure sanitary safety when performing dental procedures.

LO10:Use modern digital technologies for diagnosis, planning and implementation of therapeutic treatment, including the use of 3D technologies and digital scanners.

After mastering this discipline, the student:

will know:

- anatomical and physiological, age-related and individual features of the structure of teeth, periodontium and oral mucosa;



- etiology, pathogenesis, clinical picture and classification of the main dental diseases (caries, pulpitis, periodontitis, periodontal diseases, non-cariou lesions, diseases of the oral mucosa);
- modern principles of diagnosis, prevention and treatment of therapeutic dental diseases;
- fundamentals of endodontic treatment and features of the morphology of root canals of various groups of teeth;
- the main pathological symptoms and syndromes of dental diseases in accordance with the International Classification of Diseases (ICD).

will understand:

- the need for prevention of dental diseases and the importance of dispensary observation of patients;
- the importance of early diagnosis of diseases of the hard tissues of the teeth, pulp, periodontium and oral mucosa;
- the importance of observing the principles of asepsis, antiseptics and infection control in dental practice;
- the need to maintain medical records in dental treatment and preventive institutions;
- mechanisms of development of pathological processes in hard tissues of teeth, pulp, periodontium and oral mucosa;
- principles of physical, laboratory and instrumental diagnostics of dental diseases;
- the importance of preventive measures and oral hygiene in the prevention of dental diseases.

will be able to use:

- methods of clinical examination of dental patients;
- basic methods for diagnosing diseases of hard and soft tissues of the oral cavity;
- modern materials and technologies for the treatment of caries and its complications;
- methods of endodontic treatment of teeth;
- methods of professional and individual prevention of dental diseases;
- methods of differential diagnosis of diseases of the oral mucosa.

will be able to carry out:

- collection of dental anamnesis and clinical examination of the oral cavity;
- identification of the main symptoms and syndromes of dental diseases based on clinical examination;



- drawing up a plan for laboratory and instrumental examination of the patient;
- interpretation of the results of laboratory and instrumental diagnostic methods;
- establishing a preliminary diagnosis of dental diseases;
- implementation of preventive measures to prevent caries and periodontal diseases;
- teaching patients oral hygiene rules;
- preparation of medical and dental documentation.

will be able to analyze:

- data from a clinical examination of a dental patient (examination, probing, percussion, assessment of the hygienic condition of the oral cavity, etc.);
- results of X-ray and laboratory diagnostic methods;
- clinical symptoms and syndromes of diseases of hard and soft tissues of the oral cavity.

will be able to synthesize:

- results of clinical, laboratory and instrumental research methods for establishing a dental diagnosis;
- anamnesis and clinical examination data to identify pathological processes in the tissues of the oral cavity;
- information about the patient's condition to formulate a treatment and prevention plan.

will be able to evaluate:

- results of laboratory and instrumental methods for diagnosing dental diseases;
- the condition of the hard and soft tissues of the oral cavity;
- the effectiveness of the treatment and preventive measures;
- the degree of severity of the pathological process in the oral cavity.

1.2. Recommended educational technologies

The following educational technologies are used to help students master the academic discipline "Therapeutic Dentistry," gain knowledge, and develop professional competencies:

- lecture with elements of discussion and problem solving;
- lectures - electronic presentations;
- analysis of specific situations;
- role-playing game "doctor - patient";




- lecture-visualization;
- problem lecture;
- conference session;
- training;
- debate;
- brainstorming;
- master class;
- small group method;
- classes using training equipment and simulators;
- analysis of clinical cases;
- situational tasks;
- preparation and defense of medical history;
- use of computer training programs;
- attending medical conferences and consultations;
- participation in scientific and practical conferences, congresses, symposiums;
- student's research work;
- holding subject Olympiads;
- preparation of written analytical papers;
- preparation and defense of abstracts;

1.3. Scope of the discipline and types of academic work

The section data is presented in tabular form in accordance with the curriculum. It also specifies the volume of classroom instruction (lectures, seminars, practical classes, and labs) and independent student work (overall and by semester in which the course is studied), as well as the types of final assessments.

Form of study – full-time


	5 sem.	6 sem.	7 sem.	8 sem.	9 sem.	10 sem.	Total hours	in loans
Total labor intensity	120	120	90	120	150	120	720	24
Classroom work	72	72	54	72	90	72	432	
Lectures	18	18	18	18	18	18	108	
Practical classes	54	54	36	54	72	54	324	
Independent work (ISW)	24	24	18	24	30	24	144	
SRSP	24	24	18	24	30	24	144	

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	5 sem.	6 sem.	7 sem.	8 sem.	9 sem.	10 sem.	Total hours	in loans
Type of final control	Credit	Credit	Exam	Credit	Credit	Credit		

1.4. Structure of the discipline

1.4.1. Thematic plan for studying the discipline (by semester) –Reflects the course structure, reveals the sequence of study of sections and topics of the program; is presented in the form of a table and provides information on the distribution of the number of hours by topics, types of classes (lectures, seminars, practical classes, laboratory work, independent work of students), the competencies developed, the educational technologies used, the methods and methods of teaching, and forms of assessment.

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Subject plan for studying the discipline and competency matrix (workload is indicated in academic hours)

No.	Name sections and topics disciplines (lectures and practical classes)	Classroom classes				Total hours on	SRSP	Independent work of a student	Formed competencies	Used educational technologies, methods	Dummies	Forms of current and border control academic performance
		lectures	seminars	practical classes	laboratory work							
5th semester												
1	Organization and equipment of a therapeutic dental office.	2		2		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Dental unit	Assessment of the acquisition of practical skills (abilities)
2	Medical Ethics. Medical Records of a Dental Patient. Methods of Patient Examination.			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture-visualization	Dental unit	Testing, control work. Assessing the acquisition of practical skills



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												(abilities). Solving situational problems
3	Non-cariou dental lesions. Classification. Etiology. Pathogenesis.	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered	classes using phantom jaws



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											teeth for preparation	
4	Hypoplasia. Hyperplasia. Clinical presentation. Diagnostics. Differential diagnostics. Treatment.		4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture- visualizati on	A disassembla ble tooth model with layers of enamel and dentin, a jaw model with stages of caries developmen t, phantom teeth simulating softened dentin, multi- layered teeth for preparation	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems	



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5	Endemic dental fluorosis. Clinical presentation. Diagnostics. Differential diagnostics. Treatment.			2		2	2	2	PC-22, PC-23 PC-38	lecture using video materials	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	classes using phantom jaws
6	Hereditary disorders of dental development. Clinical presentation.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	problematic lecture	A disassemblable tooth	Testing, control work.



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	Diagnostics. Differential diagnostics. Treatment.									model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	Assessing the acquisition of practical skills (abilities). Solving situational problems
7	Abrasion of hard dental tissues. Wedge-shaped defect. Dental hyperesthesia. Clinical presentation.	2	4		6			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	A disassemblable tooth model with layers of enamel and	classes using phantom jaws



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	Diagnostics. Differential diagnostics. Treatment.										dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	
8	Dental erosion. Necrosis of hard dental tissues. Clinical presentation. Diagnostics. Differential diagnostics. Treatment.			2		2			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture-visualization	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of	Testing, control work. Assessing the acquisition of practical skills (abilities).



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											caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	Solving situational problems
9	Traumatic dental lesions. Classification. Clinical presentation. Etiology. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	problematic lecture	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom	classes using phantom jaws



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											teeth simulating softened dentin, multi- layered teeth for preparation	
10	Dental caries. Classification. Etiology. Pathogenesis.	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	problematic lecture	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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											dentin, multi-layered teeth for preparation	
11	Caries in the spot stage. Clinic. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture-visualization	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered	classes using phantom jaws



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											teeth for preparation	
12	Superficial caries. Clinic. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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13	Medium caries. Clinic. Treatment.			4		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	problematic lecture	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	classes using phantom jaws
14	Deep caries. Clinic. Treatment.			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	problematic lecture	A disassemblable tooth	Testing, control work.



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											model with layers of enamel and dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	Assessing the acquisition of practical skills (abilities). Solving situational problems
15	Filling materials.	2		4		6	2	2	PC-22, PC-23 PC-38	lecture using video materials	A disassemblable tooth model with layers of enamel and	classes using phantom jaws



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											dentin, a jaw model with stages of caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	
16	Errors and complications in caries treatment.	2		4		6			PC-22, PC-23 PC-38,	lecture using video materials	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of	Testing, control work. Assessing the acquisition of practical skills (abilities).



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											caries development, phantom teeth simulating softened dentin, multi-layered teeth for preparation	Solving situational problems
17	Prevention of dental caries	2		2		4			PC-22, PC-23 PC-38	lecture using video materials	A disassemblable tooth model with layers of enamel and dentin, a jaw model with stages of caries development, phantom	classes using phantom jaws



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											teeth simulating softened dentin, multi- layered teeth for preparation	
18	Oral cavity sanitation.			2		2	2	2	PC-22, PC-23 PC-38,	lecture- visualizati on	A disassembla ble tooth model with layers of enamel and dentin, a jaw model with stages of caries developmen t, phantom teeth simulating softened	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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											dentin, multi-layered teeth for preparation	
	Total 5 semester	18		54		7 2	24	24				Credit
	6th semester											
1	Introduction to endodontics. Root canal anatomy. Endodontic access.	2		2		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
2	Endodontic instruments. Classification. Operating rules.			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	problematic lecture	phantom teeth with cavities for	classes using phantom jaws



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											opening the crown, apex locator, endomotor	
3	Methods for determining the working length of the root canal.	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
4	Mechanical treatment of root canals. Preparation techniques.			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws



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5	Medicinal treatment of root canals. Irrigation.		2		2	2	2	PC-22, PC-23 PC-38	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
6	Temporary root canal filling. Medications.	2	4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws
7	Root canal obturation methods. Filling materials.	2	4		6			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	problematic lecture	phantom teeth with cavities for opening the	Testing, control work.



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											crown, apex locator, endomotor	Assessing the acquisition of practical skills (abilities). Solving situational problems
8	Lateral condensation of gutta-percha. Technique.			2		2			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws
9	Vertical condensation of gutta-percha. Modern obturation methods.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	problematic lecture	phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical



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											skills (abilities). Solving situational problems	
10	Errors and complications in endodontics. Prevention and elimination.	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20		phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws
11	Acute pulpitis. Clinical presentation. Diagnostics. Differential diagnostics. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20		phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving



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												situational problems
12	Chronic forms of pulpitis. Clinical presentation. Diagnostics. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20		phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws
13	Periodontitis. Acute forms. Clinical presentation. Diagnosis. Treatment.			4		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20		phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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14	Chronic periodontitis. Clinic. Diagnostics. Treatment.		4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20		phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws
15	Root canal retreatment. Indications. Methods.	2	4		6	2	2	PC-22, PC-23 PC-38		phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
16	Endodontic treatment of complicated cases (curved canals,	2	4		6			PC-22, PC-23 PC-38,		phantom teeth with cavities for opening the	classes using phantom jaws

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	<p align="center">Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"</p>

	obliteration, perforations).										crown, apex locator, endomotor	
17	Modern technologies in endodontics (apex locators, microscope, NiTi systems).	2		2		4			PC-22, PC-23 PC-38		phantom teeth with cavities for opening the crown, apex locator, endomotor	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
18	Modern research methods in endodontics			2		2	2	2	PC-22, PC-23 PC-38,		phantom teeth with cavities for opening the crown, apex locator, endomotor	classes using phantom jaws



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	Total 6 semester.	18		54		7 2	24	24				credit
	7th semester											
1	Structure and functions of periodontal tissues.	2		2		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
2	Blood supply, innervation, age-related changes in periodontal tissues.			2		2	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	problematic lecture	Jaw models, scaler, dental unit	classes using phantom jaws
3	Methods of examination of patients with periodontal diseases.	2		2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work.



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												Assessing the development of 3 practical skills (abilities). Solving situational problems
4	Dental indices.			2		2			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
5	Classification of periodontal diseases.	2		2		4	2	2	PC-22, PC-23 PC-38	lecture-visualization	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities).



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												Solving situational problems
6	Etiology of periodontal diseases.			2		2			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
7	Pathogenesis of periodontal diseases.			2		2	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
8	Catarrhal gingivitis. Clinical presentation.	2		2		4			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video	Jaw models, scaler, dental unit	classes using phantom jaws



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	Differential diagnosis. Treatment.									materials		
9	Hypertrophic gingivitis. Clinical presentation. Differential diagnosis. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
10	Ulcerative gingivitis. Clinical presentation. Differential diagnosis. Treatment.	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
11	Acute periodontitis. Clinical presentation. Differential diagnosis. Treatment.	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the



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											acquisition of practical skills (abilities). Solving situational problems	
12	Chronic periodontitis. Clinical presentation. Differential diagnosis. Treatment.		2		2			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws	
13	Periodontosis. Clinic. Differential diagnostics. Treatment.	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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14	Periodontolysis. Eosinophilic granuloma. Lether-Ziwe disease. Clinical presentation. Differential diagnosis. Treatment.	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
15	Papillon-Lefevre syndrome. Hand- Schüller-Christian disease. Clinical presentation. Differential diagnosis. Treatment.			2		2			PC-22, PC-23 PC-38	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
16	Periodontomas. Gingival fibromatosis. Clinical presentation. Differential diagnosis. Treatment.	2		2		4			PC-22, PC-23 PC-38,	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws



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17	Epulis. Clinic. Differential diagnostics. Treatment.			2		2	2	2	PC-22, PC-23 PC-38	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
18	Periodontal cyst. Clinical presentation. Differential diagnosis. Treatment.			2		2			PC-22, PC-23 PC-38,	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
	Total 7 semester	18		36		5 4	18	18				Exam
	8th semester											
1	Structure of the oral mucosa. Anatomical and histological features of the oral mucosa. 3	2		2		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work.



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												Assessing the acquisition of practical skills (abilities). Solving situational problems
2	Oral cavity examination methods. 3			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
3	Classification of diseases of the oral mucosa. 3	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving



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												situational problems
4	Morphological elements of lesions of the oral mucosa. 3			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
5	Traumatic injuries of the oral cavity: mechanical damage.			2		2	2	2	PC-22, PC-23 PC-38	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
6	Traumatic injuries of the oral mucosa: chemical and thermal injuries.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws



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7	Herpes simplex: etiology, pathogenesis, clinical symptoms, diagnosis, treatment.	2		4		6			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
8	Herpes zoster: etiology, pathogenesis, clinical symptoms, diagnosis, treatment. 3			2		2			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
9	HIV infection: etiology, pathogenesis and general manifestations in the oral cavity.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical



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												skills (abilities). Solving situational problems
10	Clinical manifestations of HIV infection in the oral cavity. Diagnosis and treatment. 3	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
11	Impetigo: etiology, pathogenesis, diagnosis, treatment. 3			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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12	Pyoderma chancroid: etiology, pathogenesis, diagnosis, treatment. 3			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
13	Oral tuberculosis: etiology, clinical forms (tuberculous lupus, miliary-ulcerative tuberculosis). 3			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
14	Oral tuberculosis: primary oral tuberculosis, scrofuloderma 3			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
15	Syphilis in the oral cavity: primary, secondary periods. 3	2		4		6	2	2	PC-22, PC-23 PC-38	lecture using	Jaw models, scaler, dental unit	Testing, control work.



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										video materials		Assessing the acquisition of practical skills (abilities). Solving situational problems
16	Syphilis: tertiary period, diagnosis and treatment. 3	2		4		6			PC-22, PC-23 PC-38,	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws
17	Gonococcal stomatitis: etiology, clinical symptoms,	2		2		4			PC-22, PC-23 PC-38	lecture using video materials	Jaw models, scaler, dental unit	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving



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													situational problems
18	Diagnosis and treatment of gonococcal stomatitis.			2		2	2	2	PC-22, PC-23 PC-38,	lecture using video materials	Jaw models, scaler, dental unit	classes using phantom jaws	
	Total 8 semester	18		54		7 2	24	24					
	9th semester												
1	Anatomical and physiological features of the oral cavity.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems	



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2	Classification of diseases of the oral mucosa.			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws
3	Traumatic lesions of the oral mucosa. Etiology. Clinical features. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
4	Mechanical trauma of the oral mucosa. Etiology. Clinical features. Treatment.			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
5	Chemical damage to the oral mucosa. Etiology.			4		4	2	2	PC-22, PC-23 PC-38	lecture using	Phantom Jaws	Testing, control work.



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	Clinical features. Treatment.									video materials		Assessing the acquisition of practical skills (abilities). Solving situational problems
6	Physical damage to the oral mucosa. Etiology. Clinical features. Treatment.			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws
7	Leukoplakia. Etiology. Clinical features. Treatment.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving



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												situational problems
8	Viral diseases of the oral mucosa. Acute herpetic stomatitis. Chronic herpetic stomatitis. Etiology. Clinical presentation. Treatment.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws
9	Viral diseases of the oral mucosa. Herpangina. Foot-and-mouth disease. Etiology. Clinical presentation. Treatment.			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
10	Syphilis. Etiology. Clinical features. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using	Phantom Jaws	classes using phantom jaws



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										video materials		
11	Tuberculosis. Etiology. Clinical features. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
12	Candidiasis. Etiology. Clinical features. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
13	Allergic diseases of the oral mucosa			4		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the



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											acquisition of practical skills (abilities). Solving situational problems	
14	Erythema multiforme exudative. Etiology. Clinical features. Treatment.	2		4		6			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
15	Recurrent aphthous stomatitis. Etiology. Clinical features. Treatment.			4		4	2	2	PC-22, PC-23 PC-38	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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16	Oesophageal reflux disease in exogenous intoxications. Etiology. Clinical features. Treatment.	2	4	6	2	2	PC-22, PC-23 PC-38,	lecture using video materials	Phantom Jaws	classes using phantom jaws
17	Oral mucosa in hypovitaminosis. Etiology. Clinical features. Treatment.		4	4			PC-22, PC-23 PC-38	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
18	Occipital mucosa in systemic diseases. Etiology. Clinical features. Treatment.		4	4	2	2	PC-22, PC-23 PC-38,	lecture using video materials	Phantom Jaws	classes using phantom jaws
	Total 9 semester	18	72	90	30	30		lecture using		



										video materials		
	10th semester											
1	Leukoplakia. Differential diagnosis. Treatment.	2		2		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
2	Lichen planus. Clinical presentation. Differential diagnosis. Treatment.			4		4	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws
3	Lupus erythematosus. Clinical presentation. Differential diagnosis. Treatment.	2		2		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work.



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												Assessing the acquisition of practical skills (abilities). Solving situational problems
4	Pemphigus. Clinical presentation. Differential diagnosis. Treatment.		4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws	
5	Dermatitis herpetiformis Duhring. Clinical presentation. Differential diagnosis. Treatment.		2		2	2	2	PC-22, PC-23 PC-38	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving	



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												situational problems
6	Pemphigoid. Clinical presentation. Differential diagnosis. Treatment.	2		4		6	2	2	GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws
7	Folded tongue. Clinical presentation. Differential diagnosis. Treatment.	2		4		6			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
8	Black (hairy tongue) tongue. Clinical presentation. Differential diagnosis. Treatment.			2		2			GC-1, IC-1, SPC-1, PC-2, PC-3, PC-4	lecture using video materials	Phantom Jaws	classes using phantom jaws



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9	Desquamative glossitis. Clinical presentation. Differential diagnosis. Treatment.	2		4		6	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
10	Rhomboid glossitis. Clinical presentation. Differential diagnosis. Treatment.	2		2		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
11	Exfoliative cheilitis. Clinical presentation. Differential diagnosis. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical



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											skills (abilities). Solving situational problems	
12	Glandular cheilitis. Clinical presentation. Differential diagnosis. Treatment.			2		2	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
13	Actinic and meteorological cheilitis. Clinical presentation. Differential diagnosis. Treatment.			4		4			PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems



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14	Contact allergic cheilitis. Clinical presentation. Differential diagnosis. Treatment.			4		4	2	2	PC-6, PC-15, PC-16, PC-19, PC-21, PC-20	lecture using video materials	Phantom Jaws	classes using phantom jaws
15	Atopic cheilitis. Clinical presentation. Differential diagnosis. Treatment.	2		4		6	2	2	PC-22, PC-23 PC-38	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
16	Eczematous cheilitis. Macrocheilitis. Clinical presentation. Differential diagnosis. Treatment.	2		4		6			PC-22, PC-23 PC-38,	lecture using video materials	Phantom Jaws	classes using phantom jaws



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17	Occupational diseases of the respiratory tract.	2		2		4			PC-22, PC-23 PC-38	lecture using video materials	Phantom Jaws	Testing, control work. Assessing the acquisition of practical skills (abilities). Solving situational problems
18	Prevention of oral mucosal diseases			2		2	2	2	PC-22, PC-23 PC-38,	lecture using video materials	Phantom Jaws	classes using phantom jaws
	Total 10 sem	18		54		7 2	24	24				
	Total hours by discipline:	10 8		32 4		4 3 2	144	144				

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Examples of educational technologies, methods and teaching techniques (abbreviated): traditional lecture (L), lecture-visualization (LV), problem lecture (PL), lecture-press conference (LPC), lesson-conference (LC), training (T), debates (D), brainstorming (MSh), master class (MC), round table (RT), activation of creative activity (ATD), regulated discussion (RD), forum-type discussion (F), business and role-playing educational game (DI, RI), small group method (MG), classes using simulators, imitators (Tr), computer simulation (KS), analysis of clinical cases (KS), preparation and defense of medical history (IB), use of computer training programs (CTP), interactive atlases (IA), attendance of medical conferences, consultations (VK), participation in scientific and practical conferences (SPC), congresses, symposia (Sim), student educational and research work (UIRS), conducting subject Olympiads (O), preparation of written analytical works (AP), preparation and defense of abstracts (R), project technology (PT), excursions (E), distance educational technologies (DOT).

Sample forms of current and midterm monitoring of academic performance (abbreviated): T – testing, Pr – assessment of mastery of practical skills (abilities), ZS – solving situational problems, CR – test, KZ – test assignment, IB – writing and defending a medical history, CL – writing and defending a supervisory sheet, R – writing and defending an abstract, S – interview on test questions, D – preparing a report, etc.

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1.4.2. Organization of independent work of students

No.	Topic of independent work for students of 5th semester:	Assignment for independent work	Recommended reading
1.	Modern ergonomics in dentistry. Four-handed work. Types of dental handpieces.	Abstract, presentation, report preparation.	1. Borovsky E.V. Therapeutic dentistry. 2. Trezubov V.V. Dental office: equipment and facilities. 3. Therapeutic dentistry. National guidelines.
2.	Professional oral hygiene as a stage of examination and preparation for caries treatment. Hygiene indices.	Abstract, presentation, skills development.	1. Ulitovsky S.B. Oral hygiene. 2. Kuzmina I.A. Prevention of dental diseases. 3. Nikolaev A.I. Practical therapeutic dentistry.
3.	Hereditary disorders of dental tissue development: amelo- and dentinogenesis imperfecta. Differential diagnosis.	Abstract, presentation, compilation of tables.	1. Groshikov M.I. Non-carious lesions of dental tissues. 2. Therapeutic dentistry / edited by G.M. Barer. 3. Borovsky E.V. Therapeutic dentistry.
4.	Acid necrosis of enamel. Occupational hazards and their impact on hard dental tissues. Preventive measures.	Abstract, presentation, report preparation.	1. Nikolaev A.I. Practical therapeutic dentistry. 2. Therapeutic dentistry. National guidelines. 3. Groshikov M.I. Non-carious lesions of dental tissues.
5.	Modern methods of dental splinting for traumatic injuries. Types of splints and composite materials.	Abstract, presentation, preparation using dummies.	1. Lutskaya I.K. Dental trauma. 2. Maksimovsky Yu.M. Phantom course of therapeutic dentistry. 3.



No.	Topic of independent work for students of 5th semester:	Assignment for independent work	Recommended reading
			Borovsky E.V. Therapeutic dentistry.
6.	The role of diet and carbohydrates in the development of dental caries. Stefan curve. Cariogenic microflora.	Abstract, presentation, report preparation.	1. Leontiev V.K., Pakhomov G.N. Prevention of dental diseases. 2. Okushko V.R. Fundamentals of tooth physiology. 3. DentalCaries / Fejerskov O.
7.	Deep fluoridation and remineralization therapy in the treatment of early caries. Modern preparations.	Abstract, presentation, analysis of clinical cases.	1. Borovsky E.V. Dental caries. 2. Nikolaev A.I., Tsepov L.M. Practical therapeutic dentistry. 3. Kuzmina I.A. Prevention of dental diseases.
8.	Isolation of the working field in therapeutic dentistry: Cofferdam (Rubberdam) system, Optradam. Application technique.	Presentation, video demonstration, work on phantoms.	1. Nikolaev A.I. Practical therapeutic dentistry. 2. Maksimovsky Yu.M. Phantom course. 3. Handbook of dentistry edited by Borovsky.
9.	Psychological preparation of the patient for dental intervention. Specific aspects of first-time patient consultations.	Abstract, presentation, report preparation.	1. Dentistry: textbook / edited by T.G. Robustova. 2. Borovsky E.V. Therapeutic dentistry. 3. Ethics and deontology in dentistry.



No.	Topic of independent work for students of 7th semester:	Assignment for independent work	Recommended reading
1.	The role of gingival fluid in normal and diseased periodontal tissue. Biofilm (dental plaque) as an ecosystem.	Abstract, presentation, report preparation.	1. Borovsky E.V. Therapeutic dentistry. 2. Grudyanov A.I. Periodontal diseases. 3. Carranza's Clinical Periodontology.
2.	Modern indices for assessing periodontal tissue condition (PMA, CPITN, SBI, PMA). Methods for their calculation.	Presentation, filling out diagnostic cards.	1. Tsepov L.M. Diagnostics and treatment of periodontal diseases. 2. Nikolaev A.I. Practical therapeutic dentistry. 3. Dentistry: textbook / edited by T.G. Robustova.
3.	Radiographic diagnostics of periodontal diseases. Panoramic radiography and CBCT.	Abstract, presentation, interpretation of photographs.	1. Rogatskin D.V. Cone-beam computed tomography. 2. Therapeutic dentistry. National guidelines. 3. Grudyanov A.I. Oral hygiene products and methods.
4.	Differential diagnostics of gingivitis and mild periodontitis.	Compiling a comparative table.	1. Borovsky E.V. Therapeutic dentistry. 2. Danilevsky N.F. Periodontal diseases. 3. Nikolaev A.I. Practical therapeutic dentistry.
5.	The role of occlusal trauma in the pathogenesis of periodontitis. Methods of selective tooth grinding.	Abstract, presentation, report preparation.	1. Grudyanov A.I. Periodontal diseases. 2. Tsepov L.M. Clinical periodontology. 3. Borovsky E.V. Therapeutic dentistry.
6.	The relationship between periodontal diseases and systemic diseases of the body (diabetes mellitus,	Abstract, presentation, report preparation.	1. Nikolaev A.I. Practical therapeutic dentistry. 2. Grudyanov A.I. Periodontal diseases. 3. Periodontology / edited by L.A. Dmitrieva.



No.	Topic of independent work for students of 7th semester:	Assignment for independent work	Recommended reading
	gastrointestinal pathology).		
7.	Modern methods of professional periodontal hygiene. Air-flow technology and ultrasonic scaling.	Presentation, preparation on dummies.	1. Ulitovsky S.B. Oral hygiene in periodontology. 2. Tsepov L.M. Clinical periodontology. 3. Therapeutic dentistry. National guidelines.
8.	The use of lasers and photodynamic therapy in the complex treatment of periodontal diseases.	Abstract, presentation, report preparation.	1. Dmitrieva L.A. Modern technologies in periodontology. 2. Risovany S.Yu. Laser dentistry. 3. Nikolaev A.I. Practical therapeutic dentistry.
9.	Local use of antibiotics and antiseptics (prolonged forms: gels, threads, chips) in periodontology.	Abstract, presentation, preparation of treatment plans.	1. Therapeutic dentistry. National guidelines. 2. Borovsky E.V. Therapeutic dentistry. 3. Grudyanov A.I. Medicines in periodontology.
10.	Dental splinting for moderate to severe periodontitis. Types of permanent and temporary splints.	Presentation, working with composite materials on dummies.	1. Nikolaev A.I. Practical therapeutic dentistry. 2. Dmitrieva L.A. Therapeutic dentistry. 3. Borovsky E.V. Therapeutic dentistry.

No.	Topic of independent work for students of semester 8:	Assignment for independent work	Recommended reading
1.	Features of regional blood circulation and innervation of the oral mucosa.	Abstract, presentation, report preparation.	1. Banchenko G.V. Diseases of the oral mucosa. 2. Borovsky E.V. Therapeutic



No.	Topic of independent work for students of semester 8:	Assignment for independent work	Recommended reading
	Functions of the mucous membrane.		dentistry. 3. Lutskaya I.K. Diseases of the oral mucosa.
2.	Additional methods of examining the oral mucosa: cytological, histological, stomatoscopy, fluorescent diagnostics.	Presentation, description of micropreparations.	1. Therapeutic dentistry. National guidelines. 2. Danilevsky N.F. Diseases of the oral mucosa. 3. Dentistry: textbook / edited by T.G. Robustova.
3.	Pathohistological changes of the oral mucosa: acanthosis, parakeratosis, dyskeratosis, vacuolar dystrophy.	Abstract, drawing up diagrams/tables of damaged elements.	1. Borovsky E.V., Mashkilleyson A.L. Diseases of the mucous membrane of the oral cavity and lips. 2. Pathological anatomy of diseases of the dental system.
4.	Lesions of the oral mucosa due to radiation sickness and exposure to ionizing radiation. Radiation stomatitis.	Abstract, presentation, report preparation.	1. Banchenko G.V. Combined lesions of the oral mucosa and internal organs. 2. Therapeutic dentistry / edited by G.M. Barer.
5.	Clinical manifestations of herpes infection in children and adults. Antiviral therapy in dentistry.	Abstract, presentation, selection of treatment regimens.	1. Lutskaya I.K. Viral diseases in dentistry. 2. Borovsky E.V. Therapeutic dentistry. 3. Rabinovich I.M. Herpes infection.
6.	Protocol for managing a patient with suspected HIV	Abstract, presentation, solution	1. HIV infection and dentistry / edited by prof.



No.	Topic of independent work for students of semester 8:	Assignment for independent work	Recommended reading
	infection during a dental appointment. Personal safety measures for the physician.	of situational problems.	A.I. Martynov. 2. Prevention of occupational infection in dentistry (SanPiN).
7.	Differential diagnostics of specific lesions of the oral mucosa (syphilis, tuberculosis) with Vincent's ulcerative necrotic stomatitis.	Compilation of a comparative diagnostic table.	1. Banchenko G.V. Handbook of Dentistry. 2. Borovsky E.V., Mashkilleyson A.L. Diseases of the oral mucosa and lips.
8.	Modern antiseptics and keratoplasty in the treatment of infectious and traumatic lesions of the oral mucosa.	Abstract, presentation, review of drugs.	1. Therapeutic dentistry. National guidelines. 2. Nikolaev A.I. Practical therapeutic dentistry.
9.	The role of immunomodulators in the complex treatment of chronic recurrent viral diseases of the oral mucosa.	Abstract, presentation, report preparation.	1. Khaitov R.M. Immunology: textbook. 2. Danilevsky N.F. Diseases of the oral mucosa.

	Topic of independent work for students of 9th semester:	Assignment for independent work	Recommended reading
1.	Differential diagnostics of true and false polymorphism of lesion elements on the oral mucosa.	Abstract, compilation of comparative tables.	1. Borovsky E.V. Therapeutic dentistry. 2. Banchenko G.V. Diseases of the oral mucosa. 3. Lutskaya I.K. Diseases of the oral mucosa.




	Topic of independent work for students of 9th semester:	Assignment for independent work	Recommended reading
2.	Radiation lesions of the oral mucosa. Post-radiation stomatitis: clinical presentation and prevention.	Abstract, presentation, report preparation.	1. Therapeutic dentistry. National guidelines. 2. Danilevsky N.F. Diseases of the oral mucosa. 3. Dentistry / edited by T.G. Robustova.
3.	Precancerous lesions of the oral mucosa. WHO classification. Risk groups and dental cancer alertness.	Presentation, analysis of clinical cases.	1. Mashkilleyson A.L. Precancer of the oral mucosa. 2. Borovsky E.V. Therapeutic dentistry. 3. OralPathology / Regezi JA, Sciubba JJ
4.	Modern approaches to immunotherapy for recurrent herpetic stomatitis.	Abstract, presentation, review of drugs.	1. Rabinovich I.M. Herpes infection. 2. Therapeutic dentistry / edited by G.M. Barer. 3. Viral diseases in dentistry / Lutsкая I.K.
5.	Mucosal lesions in secondary and tertiary syphilis. Diagnostic considerations in a dental clinic.	Abstract, presentation, report preparation.	1. Banchenko G.V. Handbook of Dentistry. 2. Borovsky E.V. Therapeutic Dentistry. 3. Syphilis / edited by Yu.K. Skripkin.
6.	Specific manifestations of tuberculosis (lupus) on the face and mouth. Dentist's approach.	Abstract, presentation, report preparation.	1. Danilevsky N.F. Diseases of the oral mucosa. 2. Phthiology: textbook / edited by M.I. Perelman.
7.	Antifungal therapy in dentistry. Treatment considerations for candidiasis in patients taking antibiotics.	Presentation, preparation of treatment plans.	1. Nikolaev A.I. Practical therapeutic dentistry. 2. Kuzmina I.A. Prevention of dental diseases. 3. Candidiasis / Cawson RA



	Topic of independent work for students of 9th semester:	Assignment for independent work	Recommended reading
8.	Stevens-Johnson syndrome and Lyell's syndrome as severe forms of allergic reactions to oral mucosa.	Presentation, algorithm of emergency care.	1. Khaitov R.M. Clinical allergology. 2. Therapeutic dentistry. National guidelines. 3. Borovsky E.V. Therapeutic dentistry.
9.	Differential diagnosis of chronic recurrent aphthous stomatitis and Behcet's disease.	Abstract, presentation, report preparation.	1. Banchenko G.V. Combined lesions of the oral mucosa and internal organs. 2. Lutskaya I.K. Diseases of the oral mucosa. 3. Dentistry / edited by G.M. Barer.
No.	Topic of independent work for students of semester 10:	Assignment for independent work	Recommended reading
1.	Koebner phenomenon in lichen planus. The role of psychosomatic factors in the development of lichenoid reactions.	Abstract, presentation, report preparation.	1. Borovsky E.V. Therapeutic dentistry. 2. Banchenko G.V. Diseases of the oral mucosa. 3. Lutskaya I.K. Diseases of the oral mucosa.
2.	Systemic lupus erythematosus: features of facial skin lesions ("butterfly") and the red border of the lips.	Presentation, analysis of clinical cases.	1. Mashkilleyson A.L. Diseases of the oral mucosa and lips. 2. Danilevsky N.F. Diseases of the oral mucosa. 3. Therapeutic dentistry. National guidelines.
3.	Cytological diagnosis of blistering lesions. Tzanck cells. Nikolsky's	Abstract, description of micropreparations, work with the atlas.	1. Borovsky E.V. Therapeutic dentistry. 2. Banchenko G.V. Combined lesions of the oral mucosa



	Topic of independent work for students of 9th semester:	Assignment for independent work	Recommended reading
	sign in various forms of pemphigus.		and internal organs. 3. Fitzpatrick's Dermatology in General Medicine.
4.	Differential diagnosis of Duhring's dermatitis herpetiformis and true pemphigus. Jadassohn test.	Compilation of a comparative diagnostic table.	1. Nikolaev A.I., Tsepov L.M. Practical therapeutic dentistry. 2. Therapeutic dentistry / edited by G.M. Barer. 3. Pathology of the oral mucosa / edited by prof. A.I. Rybakov.
5.	Modern corticosteroid drugs and cytostatics in the complex treatment of bullous lesions of the oral mucosa.	Abstract, presentation, preparation of treatment plans.	1. Therapeutic dentistry. National guidelines. 2. Dmitrieva L.A. Therapeutic dentistry. 3. Rabinovich I.M. Medicines in dentistry.
6.	Glossalgia and oral paresthesia. Differential diagnosis with glossitis in systemic diseases.	Abstract, presentation, report preparation.	1. Borovsky E.V. Therapeutic dentistry. 2. Kazarina L.N. Glossalgia: etiology, clinical picture, treatment. 3. Dentistry / edited by T.G. Robustova.
7.	Malignant transformation of rhomboid glossitis and leukoplakia of the tongue. Oncologic alertness in desquamative processes.	Presentation, algorithm for examining an oncology patient.	1. Mashkilleyson A.L. Precancer of the oral mucosa. 2. Luts kaya I.K. Diseases of the oral mucosa. 3. OralOncology / JS Curran.
8.	The use of laser therapy and ultraviolet irradiation in the treatment of chronic	Abstract, presentation, review of physiotherapeutic methods.	1. Risovaniy S. Yu. Laser dentistry. 2. Nikolaev A. I. Practical therapeutic dentistry. 3. Therapeutic

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	Topic of independent work for students of 9th semester:	Assignment for independent work	Recommended reading
	forms of cheilitis (exfoliative and glandular).		dentistry / edited by G. M. Barer.
9.	Miescher's cheilitis and Melkersson-Rosenthal syndrome. Differential diagnosis of lip swelling.	Abstract, presentation, report preparation.	1. Banchenko G.V. Diseases of the oral mucosa. 2. Danilevsky N.F. Diseases of the oral mucosa. 3. Borovsky E.V. Therapeutic dentistry.

1.4.3. Assessment tools for monitoring academic performance

- **Current and midterm (modular) control**

Current monitoring of students' knowledge may represent:

- oral survey;
- solving situational problems;
- assessment of the acquisition of practical skills on phantoms;
- test task; test work;
- checking the completion of written homework;
- checking abstracts, reports, presentations.

Topics of abstracts (reports, presentations):

5th semester

- **Ergonomics in the work of a dentist:** Modern standards of workplace organization and four-handed work.
- **Differential diagnosis of caries at the spot stage** with enamel hypoplasia and fluorosis: key clinical tests.
- **Modern methods of vital enamel staining** and their role in the early diagnosis of caries.
- **Wedge defect and abfraction:** modern views on the etiology and tactics of restoration.




- **The influence of environmental factors and excess fluoride** in drinking water on the development of hard dental tissues (endemic fluorosis).
 - **Dental trauma in childhood and adolescence:** classification and algorithm for providing emergency care.
 - **Glass ionomer cements:** classification, properties and role in the "sandwich technique" methodology.
 - **Errors in the preparation of carious cavities** According to Black: methods of prevention and correction.
 - **Hyperesthesia of hard dental tissues:** mechanisms of occurrence and modern desensitizers.
 - **Prevention of occupational diseases** a dentist at a therapeutic appointment.
- 7th semester**
- **Biofilm (dental plaque) as a biological system:** mechanisms of formation and resistance to antiseptics.
 - **The role of somatic pathology** (diabetes mellitus, gastrointestinal diseases) in the development of aggressive forms of periodontitis.
 - **Modern ultrasonic technologies in periodontology:** Comparative characteristics of scalers and the Vector device.
 - **The use of lasers in the complex treatment of periodontal diseases:** Indications and clinical efficacy.
 - **Differential diagnosis of periodontitis and periodontosis:** pathomorphological and radiological differences.
 - **Local use of antibiotics and immunomodulators** in pocket therapy: pros and cons.
 - **Surgical methods in the complex treatment of periodontitis:** From curettage to flap operations (review).
 - **Temporary splinting in periodontology:** use of fiberglass materials (Ribbond, GlasSpan).
 - **Vincent's ulcerative necrotic gingivitis:** Features of the clinical presentation, diagnosis and emergency treatment.
 - **Professional oral hygiene** as the foundation for successful treatment of periodontal diseases.
- 8th semester**
- **Anatomical and histological features of the structure of various sections of the oral mucosa** in terms of age.
 - **Modern methods of early diagnosis of mucosal pathology:** fluorescence stomatoscopy and cytological examination.



- **Traumatic lesions of the oral mucosa:**classification and differential diagnosis of mechanical, chemical and radiation trauma.
- **"Professional" lesions of the mucous membrane:**the effect of heavy metal salts and acids on oral tissues.
- **Herpesvirus infection:**Features of the clinical course of acute and chronic recurrent herpes in adults.
- **Dental status of HIV-infected patient:**marker diseases in the oral cavity and physician tactics.
- **Features of the manifestation of syphilis in different periods:**hard chancre, papular and gummatous rashes on the mucous membrane.
- **Tuberculous lupus and tuberculous ulcer:**Etiology, clinical features and differential diagnostics.
- **Pyoderma and gonococcal stomatitis:**Rare bacterial infections in dental practice.
- **Organization of infection control:**Prevention of hepatitis and HIV infection during a visit to a general dentist.

9th semester

- **Leukoplakia as a precancerous condition:**clinical forms (flat, warty, erosive) and the risk of malignancy.
- **Oral candidiasis:**Classification and modern regimens of antifungal therapy (local and general treatment).
- **Erythema multiforme exudative (EME):**etiological factors (infectious-allergic and toxic-allergic forms).
- **Recurrent aphthous stomatitis (RAS):**the role of gastrointestinal pathology and the immune system in the pathogenesis of the disease.
- **Differential diagnosis of chronic ulcers on the oral mucosa:**decubital, tuberculous, trophic, cancerous.
- **Drug allergy in dentistry:**clinical manifestations range from Quincke's edema to anaphylactic shock.
- **Chronic recurrent herpetic stomatitis:**modern methods of anti-relapse therapy.
- **Immunomodulators and keratoplasty**in the complex treatment of ulcerative-necrotic processes of the mucous membrane.
- **Oral dysbacteriosis:**Causes of occurrence after antibiotic therapy and methods of correction of microbiocenosis.
- **Oncological alertness of the dentist:**Algorithm for examining a patient with long-term non-healing lesions.

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10th semester

- **Lichen planus:**The role of stress and somatic diseases (diabetes mellitus, hypertension) in the development of lichenoid reactions (Grinshpan syndrome).
- **Differential diagnosis of cystic lesions:**Methodology for identifying Nikolsky's symptom and the importance of cytological examination (Tzanck cells).
- **Red lupus:**Clinical forms and characteristics of lesions of the vermilion border of the lips. Differential diagnosis with lichen planus.
- **Dermatitis herpetiformis Duhring:**Etiopathogenesis, role of gluten enteropathy and diagnostic value of the Jadassohn test.
- **Pemphigoid (non-acantholytic pemphigus):**Features of the course, forms of damage (mucous-synechial atrophic dermatitis).
- **Anomalies and diseases of the tongue:**Differential diagnosis of desquamative glossitis ("geographic tongue") and rhomboid glossitis.
- **Glossalgia and paresthesia of the oral mucosa:**Modern theories of the development of "burning mouth syndrome" and approaches to neurotropic therapy.
- **Exfoliative and glandular cheilitis:**Clinical picture, modern diagnostic methods and treatment tactics.
- **Allergic cheilitis:**Contact, atopic and eczematous cheilitis - diagnostic features and exclusion of allergens.
- **Melkersson-Rosenthal syndrome:**Triad of signs, diagnosis and interdisciplinary approach to treatment (neurologist, dentist).
- **Modern physiotherapeutic methods**in the treatment of chronic diseases of the lips and mucous membranes (laser therapy, photodynamic therapy).
- **Use of systemic and topical corticosteroids**in dental practice: indications, side effects and treatment monitoring.

Sample situational problems for the discipline:

Situational problems (5th semester)

Problem #1 Patient A., 20, complains of short-term pain in tooth No. 4.6 triggered by cold and sweets. The pain subsides immediately after the stimulus is removed. Examination reveals a deep carious cavity within the peripulpal dentin on the chewing surface of tooth No. 4.6. The dentin floor is pigmented, probing the floor is painful, and the response to cold is short-lived. EOD is 8 μ A.



Question: Make a preliminary diagnosis and create a treatment plan.

Problem #2 Patient K., 35, complains of a dark spot on her anterior tooth, No. 11, which appeared about a year ago. There is no pain. Upon examination, a brown, matte spot is visible on the vestibular surface near the neck of tooth No. 11. The surface is smooth and firm upon probing. Thermometry and percussion are painless. Electron percussion voltage is 4 μ A.

Question: What diseases require differential diagnosis and what staining method will confirm the diagnosis?

Problem #3 During a routine dental examination, symmetrical chalky, shiny spots were discovered on the vestibular surfaces of patient M., 19, of his incisors. His medical history includes: Until age 10, he lived in a region with a fluoride content of 2.5 mg/L in the water. The spots do not stain with methylene blue.

Question: Make a diagnosis and justify the etiology of this condition.

Problem #4 Patient L., 45, complains of pain in the necks of teeth 1.3 and 1.4, which occurs when brushing. Examination revealed wedge-shaped hard tissue defects with smooth, dense walls in the cervical area of these teeth. Probing of the defects is painful.

Question: Make a diagnosis and name the main factors contributing to the development of this pathology.

Problem #5 During preparation of a deep cavity in tooth No. 3.6 due to acute deep caries, a pulp point was accidentally exposed. This caused sharp pain and a drop of scarlet blood.


Question: What is the doctor's approach in this situation and what treatment method will preserve the viability of the entire pulp?

Semester 7: Periodontology

Problem #1 A 35-year-old patient complained of bleeding gums and itching. Physical examination revealed hyperemic, swollen gums with prominent supragingival plaque. Periodontal pocket depth was 3.5 mm. There was no tooth mobility. X-ray revealed resorption of the compact plate at the apices of the interdental septa.

Question: Make a diagnosis according to the classification (severity of periodontitis).

Problem #2 A pregnant woman (second trimester) complains of gum growth in the area of her anterior teeth. Physical examination: the gingival papillae cover half the crowns of the teeth, are bright red, and bleed when touched.

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Question: Make a diagnosis and determine the treatment tactics (surgical or conservative?).

Problem #3 The patient reports "exposure" of the necks of the teeth without pain or inflammation. Objectively: the gums are pale, tightly enveloping the teeth, with a 2 mm recession. The teeth are stable. There are wedge-shaped defects on the premolars.

Question: Conduct a differential diagnosis between periodontosis and periodontitis.

Problem #4 During the comprehensive treatment of periodontitis, the doctor plans a closed procedure to remove subgingival calculus and granulations.

Question: What is the name of this manipulation and what instruments (curettes) are needed for it?

Problem #5 A patient with Vincent's ulcerative necrotic gingivitis exhibits necrosis of the gingival papillae, which are covered with a gray plaque. A foul odor emanates from the mouth.

Question: Make a plan for medical treatment (selection of antiseptics and enzymes).

8th semester: sopr (infections and injuries)

Problem #1 The patient complained of a blister on her lip that had burst and developed a painful crust. Similar rashes often occur after a cold.

Question: Make a diagnosis and prescribe etiotropic local therapy.

Problem #2 A man presented with a complaint of a non-healing ulcer on his cheek. Upon examination, the ulcer was located opposite the sharp edge of a decayed tooth, No. 3.8. The edges of the ulcer were soft and painful.

Question: Make a diagnosis (decubital ulcer) and name the doctor's first action.

Problem #3 The patient's tongue was found to have a deep ulcer with jagged, undermined edges. The base was yellowish and marked with small red dots (Trel grains). The lymph nodes were fused and tender. The patient had a history of lung disease.

Question: What specific disease does this picture indicate?

Problem #4 The child has a whitish coating on the mucous membranes of his cheeks and tongue, resembling curdled milk. Removing the coating reveals a hyperemic surface.

Question: Make a diagnosis and name a drug to create an alkaline environment in the oral cavity.



Problem #5 During examination of a patient with confirmed HIV status, white thread-like growths were found on the lateral surface of the tongue that did not come off when scraped.

Question: What is the name of this condition (hairy leukoplakia?) and what is its diagnostic significance?

9th semester: allergies and precancerous diseases

Problem #1 The patient complains of a very painful "ulcer" in his mouth. Physical examination reveals a single, rounded lesion on the lip mucosa, covered with a white coating and a bright red border. It heals within 10 days.

Question: Diagnosis (RAS) and recommendations for general examination (GIT).

Problem #2 A man who smokes has a white, "cigarette paper"-like spot on his cheek that won't come off. A crack has developed in the center of the spot and a lump has formed at the base.

Question: What complications of leukoplakia should be considered? What is the treatment strategy (biopsy)?

Problem #3 Fifteen minutes after taking the antibiotic, the patient's mucous membranes became red, the tongue swelled, and he began having difficulty breathing.

Question: Make a diagnosis (anaphylactic reaction) and name the first aid drug.

Problem #4 A grayish area with sharp edges was discovered on the vermilion border of the lower lip. The surface was covered with tightly adherent scales. Attempts to remove them caused bleeding.

Question: Conduct differential diagnosis between flat leukoplakia and lichen planus.

Problem #5 In the spring, the patient developed blisters on his oral mucosa, which quickly burst, forming extensive erosions. He also developed "target"-shaped spots on his hands.

Question: Make a diagnosis (MEE) and indicate the reason for seasonality.

10th semester: dermatoses and diseases of the tongue/lips

Problem #1 The patient complains of a burning sensation in her tongue. On examination, there are red, desquamated patches of epithelium on the dorsum of the tongue, surrounded by a white halo. The patches change shape and position (called "geographic tongue").

Question: Make a diagnosis and explain if specific treatment is needed.



Problem #2 An elderly patient has a chronic crack in his lower lip that hasn't healed for two months. He smokes a pipe. The edges of the crack have become ridged and dense.

Question: Justify the need for cytological examination for malignancy.

Problem #3 A patient with lichen planus reports increased pain after gold crowns were placed in the presence of old steel bridges in the mouth.

Question: What phenomenon (galvanism) aggravates the course of the disease?

Problem #4 The patient has mica-like scales on the vermilion border of the lips, with raised edges and a center tightly fused to the tissue. Following removal, cicatricial atrophy has occurred.

Question: Make a diagnosis (lupus erythematosus) and indicate the characteristic sign on the facial skin.

Problem #5 The patient complains of severe dryness and crusting on the lips. Objectively: the lower lip is enlarged and everted, with dilated orifices of the minor salivary glands visible, resembling "dew drops."

Question: Make a diagnosis (glandular cheilitis) and suggest a treatment method.

Boundary (modular) control may represent:

- testing by section (computer);

Sample test assignments for midterm assessment (5th semester)

Topic: Caries and non-caries lesions of teeth

- The etiological factors of dental caries include:** a) oral microflora; b) diet and nutritional regimen (carbohydrates); c) tooth tissue resistance; d) time factor; e) all of the above.
- In case of moderate caries, probing of the carious cavity is painful:** a) at all points of the bottom; b) only at one point; c) along the enamel-dentin border; d) in the area of the pulp horns; e) probing is painless.
- Systemic enamel hypoplasia is characterized by:** a) symmetry of lesions of the same teeth; b) localization of defects at different levels of the tooth crowns; c) pain upon probing; d) positive reaction to methylene blue; e) connection with excess fluoride in water.
- The clinical sign of a wedge-shaped defect is:** a) location in the fissure area; b) the bottom and walls of the cavity are softened; c) the defect has a wedge shape with dense shiny walls; d) intense staining with dyes; e) spontaneous night pain.
- The vital staining method is used for diagnostics:** a) deep caries; b) caries in the spot stage; c) fluorosis; d) hereditary disorders of tooth development; e) moderate caries.



6. **The EOD index for dental caries is:**a) 2–6 μA ; b) 10–12 μA ; c) 20–25 μA ; d) 60 μA ; e) 100 μA .
7. **When preparing a cavity according to Black's class II, the following is mandatory:**a) preservation of the enamel edge; b) formation of an additional platform on the chewing surface; c) use of only diamond burs; d) opening the cavity from the side of the tooth neck; d) all of the above.
8. **Dental fluorosis develops when:**a) poor oral hygiene; b) excessive fluoride intake during tooth development; c) calcium deficiency in the diet; d) frequent consumption of acidic foods; d) taking tetracycline.
9. **Auxiliary methods for diagnosing caries include:**a) survey; b) examination; c) probing; d) thermometry; d) percussion.
10. **The main material for a therapeutic lining for deep caries is:**a) phosphate cement; b) light-curing composite; c) calcium hydroxide-based material; d) glass ionomer cement; d) amalgam.

(7th semester)

Topic: Periodontal diseases

1. **The main signs of periodontitis include:**a) the presence of a periodontal pocket; b) resorption of bone tissue of the interdental septa; c) bleeding gums; d) tooth mobility; e) all of the above.
2. **The depth of the periodontal pocket in mild periodontitis is:**a) up to 2 mm; b) up to 3.5 mm; c) more than 5 mm; d) 6–8 mm; d) no pocket.
3. **The main difference between periodontosis and periodontitis is:**a) the presence of tartar; b) the absence of inflammation in the gums and periodontal pockets; c) the presence of purulent discharge; d) pronounced tooth mobility in the early stages; d) hyperemia and swelling of the gums.
4. **The Schiller-Pisarev test is used for:**a) determining the degree of tooth mobility; b) identifying hidden inflammation in the gums; c) assessing the quality of filling; d) determining the pocket depth; d) measuring the level of hygiene.
5. **With hypertrophic gingivitis (edematous form) the gums:**a) pale, dense, painless; b) bluish, edematous, bleeds when touched; c) has ulcers along the edge; d) tightly covers the neck of the tooth; d) covered with a gray coating.
6. **Radiographic signs of moderate periodontitis are:**a) no bone changes; b) bone resorption up to 1/3 of the root length; c) bone resorption from 1/3 to 1/2 of the root length; d) complete destruction of the interdental septa; d) osteoporosis of the apexes of the septa without a decrease in their height.



7. **Local factors in the development of periodontal diseases include:**a) tartar; b) bite anomalies; c) overhanging edges of fillings; d) high labial frenulum; d) all of the above.
8. **Scaling is:**a) removal of dental plaque; b) splinting of teeth; c) curettage of periodontal pocket; d) selective grinding; d) professional whitening.
9. **Vincent's ulcerative necrotic gingivitis is characterized by all of the following EXCEPT:**a) putrid odor from the mouth; b) necrosis of the gingival margin; c) increased body temperature; d) absence of pain; d) enlargement of regional lymph nodes.
10. **To stabilize loose teeth, the following is used in complex treatment:**a) professional hygiene; b) temporary and permanent splinting; c) antibiotic therapy; d) enzyme applications; d) electrophoresis.

(8th semester)

Topic: Infectious and traumatic lesions of the oral mucosa

1. **The primary morphological elements of oral mucosal lesions include:**a) erosion; b) spot; c) ulcer; d) crack; d) aphtha.
2. **The causative agent of acute herpetic stomatitis is:**a) Epstein-Barr virus; b) herpes simplex virus (HSV-1); c) pale treponema; d) Koch's bacillus; d) cytomegalovirus.
3. **Nikolsky's symptom is tested for diagnosis:**a) lichen planus; b) candidiasis; c) pemphigus; d) leukoplakia; d) erythema multiforme exudative.
4. **Hard chancre is a clinical sign of:**a) secondary syphilis; b) tertiary syphilis; c) primary syphilis; d) tuberculous lupus; d) HIV infection.
5. **In acute candidiasis, plaque on the mucous membrane:**a) fused with underlying tissues; b) easily removed by scraping; c) has the appearance of a gray film; d) presents as keratinized papules; d) absent.
6. **All of the following are characteristic of HIV infection in the oral cavity, except:**a) Kaposi's sarcoma; b) hairy leukoplakia; c) ulcerative necrotic stomatitis; d) caries in the spot stage; d) recurrent candidiasis.
7. **Decubital ulcer occurs due to:**a) exposure to viruses; b) specific infection; c) chronic mechanical trauma (sharp edge of a tooth, prosthesis); d) taking medications; d) allergic reaction.
8. **Tzanck cells are found in:**a) cytological examination of prints in pemphigus; b) bacterioscopy in syphilis; c) histological examination in leukoplakia; d) luminescent diagnostics; d) serological examination.



9. **Local treatment for herpes simplex includes the use of:**a) antiviral ointments (acyclovir); b) antibiotics; c) keratoplasty; d) hormonal ointments; e) a) and c) are correct.
10. **A characteristic sign of a tuberculous ulcer is:**a) dense cartilaginous infiltrate at the base; b) soft, undermined edges and bottom with "Trel grains"; c) smooth edges and bottom the color of "spoiled fat"; d) presence of Wickham mesh at the periphery; d) rapid healing without a scar.

(9th semester)

Topic: Precancerous conditions, allergies, and systemic diseases of the oral mucosa

1. **Precancerous diseases with a high risk of malignancy include:**a) flat leukoplakia; b) erosive-ulcerative form of leukoplakia; b) soft leukoplakia; d) meteorological cheilitis; d) desquamative glossitis.
2. **A clinical form of leukoplakia characterized by the appearance of plaques rising above the level of the mucosa:**a) flat; b) warty; c) erosive; d) soft; d) leukoedema.
3. **Erythema multiforme exudative (EME) is characterized by the appearance on the skin of:**a) nodes; b) vegetations; c) "cockades" (target spots); d) cicatricial atrophy; d) telangiectasias.
4. **Afta is:**a) deep tissue defect with muscle damage; b) superficial round defect covered with fibrinous plaque and surrounded by a bright rim; c) limited accumulation of pus in tissue; d) cystic element with serous contents; d) area of keratinization of the epithelium.
5. **The leading factor in the pathogenesis of chronic recurrent aphthous stomatitis (RAS) is:**a) trauma; b) gastrointestinal pathology and immune disorders; c) poor oral hygiene; d) excess fluoride in water; d) herpes simplex virus.
6. **If a delayed allergic reaction is suspected (to the plastic of the prosthesis), the following is performed:**a) general blood test; b) skin allergy tests (application); c) blood sugar determination; d) x-ray of the jaws; d) flora culture.
7. **Emergency care for anaphylactic shock begins with the administration of:**a) antibiotics; b) adrenaline (epinephrine); c) vitamins; d) analgesics; d) antiseptics.
8. **Keratoplasty (oil solutions of vitamins A, E) is used for:**a) pain relief; b) plaque removal; c) acceleration of epithelialization of erosions and ulcers; d) fight against viruses; d) stopping bleeding.



9. **Differential diagnosis of leukoplakia is carried out with:**a) lichen planus; b) candidiasis; c) lupus erythematosus; d) syphilitic papules; d) all of the above.
10. **The main principle of treatment of toxic-allergic stomatitis is:**a) increasing the diet with spices; b) immediate discontinuation of the allergen; c) prescription of irritants; d) continued contact with the allergen during therapy; d) physiotherapy in the acute period.

(10th semester)

Topic: Diseases of the oral mucosa (dermatostomatosis), diseases of the tongue and cheilitis

1. **The pathognomonic sign of lichen planus is:**a) Nikolsky's sign; b) Wickham's mesh; c) Tzanck cells; d) "geographical" pattern on the tongue; d) presence of crusts on the lips.
2. **In the typical form of lichen planus, the following are visible on the mucous membrane:**a) small whitish papules merging into a pattern; b) extensive painful ulcers; c) blisters with serous contents; d) areas of hyperemia with plaque; d) vegetations.
3. **The clinical signs of true (acantholytic) pemphigus are:**a) long-term course and rapid healing of erosions; b) positive Nikolsky's symptom; c) absence of erosions; d) presence of scars after healing; d) painlessness of elements.
4. **The Jadassohn test (with potassium iodide) is used to diagnose:**a) lupus erythematosus; b) pemphigus; c) Duhring's dermatitis herpetiformis; d) desquamative glossitis; d) Miescher's cheilitis.
5. **The characteristic triad of signs in lupus erythematosus:**a) spot, papule, nodule; b) erythema, hyperkeratosis, cicatricial atrophy; c) blister, erosion, crust; d) edema, plaque, crack; d) itching, burning, pain.
6. **Desquamative glossitis is characterized by:**a) constancy of the pattern on the back of the tongue; b) migration of desquamation foci (migrating glossitis); c) presence of deep cracks and pain; d) severe keratinization of the filiform papillae; d) loss of taste sensitivity.
7. **In rhomboid glossitis, the lesion is localized:**a) on the lateral surface of the tongue; b) on the tip of the tongue; c) in the middle third of the back of the tongue in front of the circumvallate papillae; d) under the tongue; d) on the soft palate.
8. **Glandular cheilitis is caused by:**a) allergy to lipstick; b) hyperplasia and hyperfunction of minor salivary glands; c) exposure to sunlight; d) viral infection; d) mechanical trauma.



9. **Exfoliative cheilitis (dry form) is characterized by the appearance of scales:**a) tightly fused to the underlying tissue; b) resembling “mica”, attached in the center; c) black; d) in the form of a “collar” around the lips; e) bleeding when removed.

10. **To which group of diseases does Melkersson-Rosenthal syndrome belong?**a) specific infections; b) hereditary anomalies; c) neurodental syndromes (a combination of cheilitis, fissured tongue and facial nerve paresis); d) oncological diseases; e) fungal infections.

• **Final control**

Final control At the end of the study of the academic discipline, it is carried out in the form of an exam, which is given on the basis of the results of testing and midterm (modular) control in the discipline.

1.4.4. Course policy and assessment criteria

Students' knowledge is assessed using a point-rating system in accordance with the standard “Regulations on the modular point-rating system for assessing students’ knowledge.

Discipline "Dentistry" assessed on a 100-point scale:

The maximum score is 100, of which:

- SRS - 20 points;
- current control - 40 points
- midterm control (module completion) - 40 points.

The results of the two modules are added together to produce an average score.


Scoring Policy	Module 1	Module 2, etc.
SRS	20 points	20 points
Classroom work (activity in discussions, oral questioning, group work, etc.)	40 points	40 points
Total for the module (testing)	40 points	40 points
Total for the discipline:	100 points	
Exam		

Final assessment in the form of a test is carried out based on the results of attendance, current and midterm (modular) assessment.

The final assessment form is a credit.

The following scale of grades and scores is used to evaluate student performance:


Rating and Scoring Scale	
Maximum	Intervals

	<p align="center">Educational institution Royal Metropolitan University</p>
	<p align="center">Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"</p>

score	unsatisfactory	"satisfactorily"	"Fine"	"Great"
20	0-11	12-15	16-17	18-20
40	0-23	24-30	31-35	36-40
60	0-35	36-45	46-53	54-60
100	0-59	60-75	76-89	90-100

Academic achievement grading scale

Rating (points)	Letter grading system	Value for calculating GPA	Digital equivalent of the assessment	Assessment according to the traditional system
96-100%	A+	4.00	5	Great
93-95.99%	A	3.75		
90-92.99%	A-	3.67		
87-89.99%	B+	3.33	4	Fine
83-86.99%	B	3.00		
80-82.99%	B-	2.67		
77-79.99%	C+	2.33	3	Satisfactorily
73-76.99%	C	2.00		
70-72.99%	C-	1.67		
67-69.99%	D+	1.33	2	
63-66.99%	D	1.00		
60-62.99%	D-	0.67		
00-59.99%	F	0.00	1	Unsatisfactory
	P			Credit
	NP			Fail
	I		Not taken into account when calculating the average grade	Failed to comply with all disciplinary requirements for a valid reason
	W			Refusal to attend a course that is not mandatory

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	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

	AU			Attended the course as a listener, without receiving grades (awarded to a student if he/she has attended at least 80% of the classes in the additional discipline as a listener).
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I - awarded to a student who has failed to complete all course requirements for a valid reason. The student has the right to complete all course requirements within the time limit established by the educational institution, after which the grade will be adjusted.

W - assigned to a student who decides to withdraw from a course no later than the sixth week of the semester. Applies only to elective courses.

AU - awarded to a student if he/she has attended at least 80% (eighty percent) of the classes in the additional discipline as a listener.

For each discipline, GPA is calculated automatically in the information system.

GPA (Grade Point Average (GPA) is a weighted average of a student's academic achievement. GPA is a key indicator of academic performance.

Based on academic performance, a GPA is calculated, with a maximum of 4.0. A student's GPA is calculated based on their academic performance in each semester and at graduation.

1.4.5. Educational, methodological and informational support of the discipline

List of sources and literature:

a) main literature:

1. Therapeutic dentistry: textbook / O. O. Yanushevich, Yu. M. Maksimovsky, L. N. Maksimovskaya, L. Yu. Orekhova. - 3rd ed. , processed and additional - Moscow: GEOTAR-Media, 2023
2. Therapeutic dentistry. Dental diseases. In 3 parts. Part 1.: textbook / edited by E. A. Volkov, O. O. Yanushevich - Moscow: GEOTAR-Media, 2015.



3. Therapeutic dentistry: in 3 parts. Part 2: Periodontal diseases: textbook / edited by G. M. Barer. - Moscow: GEOTAR-Media, 2021
4. Therapeutic dentistry. In 3 parts. Part 3. Diseases of the oral mucosa: textbook / Ed. G. M. Barer - 2nd ed., supplemented and revised. - Moscow: GEOTAR-Media, 2015
5. Therapeutic dentistry. Caries and diseases of dental hard tissues. Endodontics: a guide to practical training: a tutorial / Yu. M. Maksimovsky, A. V. Mitronin; edited by Yu. M. Maksimovsky. - Moscow: GEOTAR-Media, 2021

b) additional literature:


1. Dentistry. International classification of diseases. Clinical characteristics of nosological forms / M. Ya. Alimova, L. N. Maksimovskaya, L. S. Persin, O. O. Yanushevich - Moscow: GEOTAR-Media, 2016
2. Therapeutic dentistry. Dental diseases. In 3 parts. Part 1: textbook / edited by E. A. Volkov, O. O. Yanushevich - Moscow: GEOTAR-Media, 2016
3. Dentistry. Recording and Maintaining a Case History: A Guide / Edited by V. V. Afanasyev, O. O. Yanushevich. - 2nd ed., corrected and enlarged. - Moscow: GEOTAR-Media, 2016
4. Features of disinfection and sterilization in dentistry: a textbook / E. A. Bazikyan - Moscow: GEOTAR-Media, 2016
5. Anesthesia and intensive care in dentistry / Gritsuk S. F. - Moscow: GEOTAR-Media, 2012
6. Histology and embryology of the oral cavity organs and teeth / V. V. Gemonov, E. N. Lavrova, L. I. Falin - Moscow: GEOTAR-Media, 2016

List of resources of the information and telecommunications network "Internet" necessary for mastering the discipline

Provide links to websites that are publicly accessible.

List of resources of the information and telecommunications network "Internet" required for mastering the discipline (modules)

- www.kyrlibnet.kg.
- www.iprbookshop.ru.
- www.consilium-medicum.com.
- www.medportal.ru.
- www.studmedlib.ru
- Cochrane.org, sciencedirect.com.
- www.mediliter.ru, www.meduniver.com,
- kingmed.info, vk.com, itweek.ru, medlit.biz,

	Educational institution Royal Metropolitan University
	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

- allmedbook.ru, booksmed.com, medicalenglish.ru,
- library.bsu.edu.ru, rutracker.org.

1.4.6. Material and technical support of discipline

When teaching students, modern methods and forms of teaching are used, using the latest information technologies, electronic educational resources and other information systems necessary for the successful implementation of educational, scientific and therapeutic activities.

The department has the necessary equipment for teaching, including demonstration devices, multimedia, phantoms, posters, and visual aids. Classroom requirements include computer labs, academic and specially equipped treatment rooms, phantom classrooms, and dental laboratories. A blackboard is also available.

Lecture room equipped with a power supply kit IIIЭ (220 V, 2 kW, complete with RCD), specialized furniture and office equipment (a blackboard for writing with chalk and felt-tip pen, a stand-lecture, a lecturer's desk, a chair-armchair, classroom tables, classroom chair), as well as technical teaching aids (wall-mounted screen with electric drive and remote control, multimedia projector with laptop).

To review knowledge of the anatomical structure of the maxillofacial region (muscular skeletal structure, blood supply, innervation, topography of teeth).

Monitoring student knowledge The assessment is completed after the student logs in from a computer or mobile device. The student registers, the system assigns a task on the selected nosology, and the student selects the correct answers from a variety of options and solves interactive situational problems. The final score is displayed as a percentage and is calculated based on the number of correct answers.

The practical lesson consists of two parts: 1. The first half is a review of the student's theoretical knowledge (etiology, pathogenesis, clinical presentation, diagnostic and differential diagnostic methods). 2. The second half is work in the clinical room or phantom classroom. Students practice manual skills in the phantom classroom, where the entire treatment process can be simulated on modern patient head phantoms: from isolating the working field with a cofferdam system to using ultrasonic scalers, endomotors, and modern composite materials.

Table 1

Item No.	Type	Name	Note



1.	Videos (educational multimedia aids)	<ol style="list-style-type: none"> 1. Methods of examination of a dental patient. 2. Algorithm for preparing class IV carious cavities according to Black. 3. Stages of adhesive preparation and aesthetic restoration. 4. Endodontic access and instrumentation of root canals. 5. Professional hygiene: ultrasonic scaling and Air-Flow. 6. Clinical diagnostics of oral mucosal diseases. 7. Splinting of teeth for periodontal diseases. 	From 10 to 20 minutes for each film
2.	Presentations	Throughout the entire lecture course (Cariesology, Periodontology, Endodontics, Diseases of the mucous membrane)	From 20 to 35 slides per presentation
3.	Written and test assignments	Throughout the entire lecture course for current, midterm and final assessments	In significant quantities (variable tasks)
4.	Practical classes in a phantom classroom	<p>Working on phantom installations:</p> <ol style="list-style-type: none"> 1. Practicing preparation skills on artificial teeth. 2. Working with endomotors and apex locators on jaw phantoms. 3. Application of the cofferdam system and matrix systems. 4. Practicing professional hygiene techniques on mannequins. 5. Filling of carious cavities with modern composites. 	In significant quantities according to the curriculum

List of premises used


	Educational institution Royal Metropolitan University
	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

Table 2.

No.	Audience type	List of equipment
1	An auditorium for lecture-type classes.	A stationary multimedia projector, laptop, 3x4 m screen, whiteboard, and audio equipment (microphone, speakers)
2	Auditorium for seminars, ongoing monitoring and midterm assessment, group and individual consultations	Stationary multimedia projector, laptop, 3x4 m screen, interactive whiteboard, dummies, phantoms.

1.4.7. Student research work

The research work in the discipline "Therapeutic Dentistry" has the following goals: increasing the level of professional and creative training of students, improving the forms of involving young people in scientific research and using the creative potential of students to solve current problems of modern dental science.

The research work is aimed at solving the following problems:

- to form an idea of the main stages of scientific research in the field of dentistry;
- to teach how to use the conceptual apparatus of scientific research in work;
- teach how to work with various information sources (medical databases, scientific libraries);
- development of skills for perception and analysis of professional information (clinical protocols, evidence-based medicine data);
- development and improvement of the ability to make informed clinical decisions and implement them;
- training students by means of their acquisition of methods, techniques and skills for carrying out scientific research work during the learning process;
- development of their creative abilities, independence, initiative in studies and future professional activities within the framework of the specialty "Dentistry".
- **The program of scientific research work of students (SRW), as a section for mastering practical skills, includes:**
- study of specialized literature and other scientific and medical information, achievements of domestic and foreign science and technology in the



- regions aspects of dentistry (new materials, digital technologies, methods of endodontic treatment), preparation of scientific papers (literature reviews);
- participation in conducting clinical and laboratory scientific research or in carrying out certain developments in departments;
 - collection, processing, analysis and systematization of scientific information on a topic (study of medical records, analysis of radiographs, CBCT) or on assignment;
 - preparation of reports and presentation of a paper at a conference, preparation of scientific work (articles, abstracts) for publication;
 - participation in mass events of the research and development system (student scientific conferences, dental forums, subject Olympiads in manual skills, competitions, "Science Week", exhibitions of achievements in the dental industry).

To solve the problem, students are invited to read and meaningfully analyze scientific monographs and articles on various issues of therapeutic dentistry (cariesology, endodontics, periodontology, diseases of the oral mucosa), contained in the list of resources of the information and telecommunications network "Internet":

- <http://e-stomatology.ru>(Dental Association of Russia)
- <https://www.nature.com/bdj/>(British Dental Journal)
- <https://www.sciencedirect.com/journal/journal-of-dentistry>
- <https://www.ada.org/>(American Dental Association)
- <http://www.dentaltoday.com>
- <https://www.joponline.org>(Journal of Periodontology)
- <http://www.elibrary.ru/>(Scientific Electronic Library)
- <http://www.medLine.ru>
- <http://whodc.mednet.ru/>
- <http://elibrary.rsl.ru/>(Russian State Library)
- <https://cyberleninka.ru/>
- <https://www.pubmed.ncbi.nlm.nih.gov/>

The results of work with scientific monographs and articles are discussed during practical classes.

To develop and improve communication skills, decision-making skills, and dentist tactics in emergency situations and complex clinical cases, special training sessions are organized in the form of work in small groups, role-playing games (simulating a patient appointment), brainstorming (analysis of differential diagnostics),



discussions on treatment methods, or presentations. In preparation for these presentations, students are divided into groups in advance, advocating for a particular treatment tactic for the dental problem under discussion.

2. Educational and methodological materials

Educational and methodological materials (EMM), as methodological support for the discipline, are presented in the form of lecture texts, developments of practical classes, both in printed and electronic form.

2.1. Lecture notes

3rd year, 5th term

Lecture #1. Organizing a Therapeutic Appointment. Methodology for Clinical Examination of a Dental Patient

Target: Systematization of knowledge about regulatory requirements for the organization of dental care and mastering the algorithm for a comprehensive examination of the patient to establish a sound diagnosis.

1. Organizational and hygienic principles of the office functioning

The effectiveness of therapeutic treatment directly depends on environmental conditions and aseptic precautions. The dentist's work is regulated by current sanitary and epidemiological regulations (SanPiN).

Requirements for the premises:

- **Spatial parameters:** Ceiling height is at least 2.6 m. The area for one dental unit is 14 m², and for each subsequent unit, 7 m². The area increases with the use of universal units with expanded functionality.
- **Surface finish:** Walls and floors should be smooth, without gaps, and made of materials resistant to chemical disinfectants (such as porcelain stoneware or linoleum with sealed seams). The color scheme should be neutral, light tones with a reflectivity of at least 40%, which eliminates color distortion when selecting shades for the restoration.



- **Microclimate and light:** Supply and exhaust ventilation is required. Lighting is combined. Local lighting (the unit's luminaire) should provide illumination of the work area in the range of 8,000–28,000 lux, while the light should be shadowless and not blind the patient.

Ergonomics of reception: The modern "four-handed dentistry" paradigm involves the use of an assistant, who performs auxiliary procedures (aspiration, instrument delivery). This allows the dentist to concentrate on the surgical field. The dentist is positioned between 8 and 12 o'clock relative to the patient's head, preventing the development of occupational musculoskeletal disorders.

2. Logistics

The central link is the dental unit, which combines the patient chair, the doctor's unit, the assistant's unit and the lighting system.

Instrumental complex:

- **Tips:** Turbine (speed up to 400,000 rpm) for enamel preparation under water cooling; mechanical micromotors (up to 40,000 rpm) for working with dentin, root canal treatment and polishing.
- **Insulation means:** The gold standard is the cofferdam system (rubber dam), which ensures absolute dryness of the working field, protection of the pulp from saliva and protection of the patient's airway from accidental aspiration of small instruments and solutions.
- **Diagnostic kit:** Includes a dental mirror (for viewing, retraction of soft tissues and protection of the tongue), a pointed angled probe (for tactile assessment of tissue density and fixation in fissures), dental tweezers and a set for periodontal probing.

3. Methodology of clinical examination

The examination is carried out according to a strict algorithm: from a subjective survey to objective tests and additional research.

3.1. Subjective examination (Anamnesis)

- **Complaints (Molestia):** The nature of the pain (sharp, aching, spontaneous, or irritant-induced), location, and duration of attacks are determined. Temperature-induced pain that quickly subsides after the irritant is removed is typical of dental caries. Spontaneous nighttime pain indicates pulpitis.
- **Medical history (Anamnesismorbi):** When did the symptoms first appear, how did the process develop, was this tooth previously treated and what was the result.



- **Anamnesis of life (Anamnesis vitae):** Identification of concomitant medical conditions (diabetes, hypertension, allergy history). The presence of an allergy to local anesthetics is a critical factor.

3.2. Objective examination (Status praesens)

External inspection: Assess facial symmetry, skin condition, mouth opening, and examine the vermilion border of the lips. Palpate regional lymph nodes (submandibular, cervical)—normally, they are not enlarged, soft, and painless.

Oral examination:

1. **Examination of the mucous membrane:** Assessment of color, moisture content and integrity of the oral cavity.
2. **Tooth probing:** This is performed carefully on all surfaces. It allows us to determine the presence of a cavity, the consistency of the dentin (softened or densely pigmented), and the tenderness of the enamel-dentin junction.
3. **Percussion:** Tapping the crown of the tooth with the instrument handle. Vertical percussion determines the condition of the periodontium, while horizontal percussion determines the condition of the periodontium. Pain indicates that the inflammation has spread beyond the tooth.
4. **Palpation of the gums:** Assessment of density and pain in the area of the projection of the apex of the tooth root to identify signs of periodontitis.

3.3. Additional diagnostic methods

To verify the diagnosis, instrumental and hardware methods are used:

- **Thermometry:** A cold test (cold reaction) can determine pulp vitality. A lack of reaction indicates necrosis or previous endodontic treatment.
- **Electroodontometry (ED):** Assessment of the electrical excitability of pulp nerve endings. Values of 2–6 μA are normal, 20–60 μA indicate pulpitis, and $>100 \mu\text{A}$ indicate pulp death.
- **X-ray diagnostics:*** Targeted intraoral radiography: assessment of the condition of hard tissues and the periodontal gap of a specific tooth.
 - **CBCT (Cone Beam Computed Tomography):** 3D visualization allows for a detailed study of the anatomy of the canals and hidden pathological foci.
- **Vital staining:** The use of a 2% methylene blue solution for the differential diagnosis of caries at the spot stage from non-carious lesions (hypoplasia, fluorosis). The carious spot is colored due to increased enamel permeability.



4. Documenting the results

All data is recorded in the Dental Patient Medical Record (Form No. 043/u). Diagnosis is made in accordance with ICD-10. The final step is the development of a comprehensive treatment plan and its signature by the patient.

Literature (GEOTAR-Media):

1. *Restorative Dentistry: National Guidelines/* ed. L. A. Dmitrieva, I. M. Maksimovsky. - M.: GEOTAR-Media, 2021.
2. *Dental diseases: a textbook/* O. O. Yanushevich, Yu. M. Maksimovsky. - M.: GEOTAR-Media, 2023.
3. *Examination methods during a dental appointment/* E. M. Kuzmina. - M.: GEOTAR-Media, 2020.

Lecture 2. Non-carious dental lesions. Classification, etiology, pathogenesis, and clinical presentation.

The purpose of the lecture: To study the etiological factors and mechanisms of development of pathologies of hard dental tissues that arise without the participation of microflora, in order to conduct high-quality differential diagnostics with the carious process.

1. Definition and general characteristics

Non-carious lesions of teeth— This is a heterogeneous group of diseases of hard tissues (enamel, dentin, cementum), the development of which is not associated with microbial factors or carbohydrate fermentation processes. Unlike caries, these lesions are often systemic and are associated either with impaired amelogenesis or with chemical and mechanical effects on already erupted teeth.

2. Classification of non-carious lesions

In domestic dentistry (according to V.K. Patrikeev), it is customary to divide teeth into two main groups depending on the time of occurrence of the pathology relative to the period of eruption:

I. Lesions occurring during the period of follicular development (before eruption):

1. **Enamel hypoplasia**(systemic and local).
2. **Enamel hyperplasia**(enamel drops).
3. **Dental fluorosis**(endemic).
4. **Hereditary developmental disorders**(amelogenesis and dentinogenesis imperfecta).
5. **Medication-related disorders**(eg "tetracycline teeth").

II. Lesions occurring after teething:

1. **Wedge-shaped defect.**



2. **Erosion of hard dental tissues.**
 3. **Acid necrosis.**
 4. **Pathological abrasion.**
 5. **Hyperesthesia**(sensitivity) of tooth tissue.
 6. **Dental trauma**(acute and chronic).
3. Etiology and pathogenesis of pre-eruption lesions
- 3.1. Enamel hypoplasia
- **Etiology:**Associated with metabolic disorders in the body of the fetus or child (maternal infections, rickets, endocrine disorders).
 - **Pathogenesis:**Dysfunction of ameloblasts in the process of formation of the organic matrix of enamel or its primary mineralization.
 - **Clinical forms:**Spotted, grooved, and cup-shaped. Symmetrical lesions of the same teeth are characteristic.
- 3.2. Dental fluorosis
- **Etiology:**Long-term excessive intake of fluoride into the body (over 1.5 mg/l in drinking water) during the period of teeth mineralization.
 - **Pathogenesis:**Fluoride, an enzymatic poison, disrupts the function of ameloblasts and the enamel maturation process. This leads to the formation of chalky, brittle enamel with a disrupted hydroxyapatite structure.
 - **Classification (according to WHO):**Very mild, mild, moderate, moderate, severe.
4. Etiology and pathogenesis of lesions after eruption
- 4.1. Wedge-shaped defect
- **Etiology:**The leading role is played by mechanical factors (incorrect technique of brushing teeth with horizontal movements, hard brushes) and abfraction (micro-bending of the tooth due to occlusal overload).
 - **Pathogenesis:**In the cervical region, where the enamel layer is minimal, mechanical abrasion or chipping of microprisms occurs under the influence of mechanical stress.
 - **Clinical picture:**A wedge-shaped defect with smooth, dense walls on the vestibular surface.
- 4.2. Erosion of hard dental tissues
- **Etiology:**Exposure to aggressive chemical factors (citrus fruits, carbonated drinks) in combination with endocrine disorders (hyperthyroidism).
 - **Pathogenesis:**Chemical dissolution of the surface layers of enamel without the participation of microflora.



- **Clinical picture:** An oval or cup-shaped enamel defect, most often found on the central incisors and canines. The surface is smooth and hard.

4.3. Acid necrosis

- **Etiology:** Occupational hazards (acid fumes at work) or frequent vomiting (bulimia, reflux esophagitis).
- **Pathogenesis:** Uniform demineralization of all tooth surfaces under the influence of acid vapors, leading to loss of shine and thinning of the cutting edge.

5. Differential diagnosis with caries


Sign	Caries (spot stage)	Hypoplasia	Fluorosis
Time of appearance	After eruption	Immediately upon teething	Immediately upon teething
Localization	Typical places (fissures, contacts)	Any (depending on the duration of the disease)	Group damage to all teeth
Staining (methylene blue)	Painted (+)	Not stained (-)	Not stained (-)
Surface	Rough	Smooth	Smooth or chalky-speckled

7. Literature (sources of GEOTAR-Media)

1. **Therapeutic dentistry: textbook** in 3 parts. Part 1. Dental diseases / edited by O. O. Yanushevich, Yu. M. Maksimovsky. - M.: GEOTAR-Media, 2023.
2. **Non-carious lesions of dental tissues that develop before and after their eruption:** textbook / I. M. Makeeva et al. - M.: GEOTAR-Media, 2020.
3. **Therapeutic Dentistry. National Guidelines/** ed. L. A. Dmitrieva. - M.: GEOTAR-Media, 2021.

Lecture No. 3. Non-carious lesions of teeth developing during the follicular development period (before eruption)

Target: To study the etiopathogenesis, clinical picture and diagnostic methods of malformations of hard dental tissues caused by endogenous and exogenous factors during prenatal and early postnatal ontogenesis.

	Educational institution Royal Metropolitan University
	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

1. Enamel hypoplasia

Definition: A developmental defect consisting of underdevelopment of dental tissue (enamel), arising as a result of disruption of metabolic processes in the rudiments of teeth.

- **Systemic hypoplasia:** Caused by metabolic disorders in the child's body (rickets, infections, endocrine disorders) or the mother's. Groups of teeth that develop during the same period are affected.
 - *Clinical forms:* Change in color (spots), underdevelopment (cup-shaped, grooved), absence of enamel (aplasia).
 - *Specific forms:* Hutchinson, Pfluger, Fournier teeth.
- **Local hypoplasia:** It occurs as a result of trauma to the permanent tooth bud or an inflammatory process that has spread from the root of a primary tooth (periodontitis). Most often, a single tooth (Turner's tooth) is affected.

2. Dental fluorosis

Etiology: An endemic disease associated with excessive fluoride intake from drinking water (over 1.5 mg/l) during the period of dental tissue mineralization.

- **Pathogenesis:** Fluoride inhibits the activity of the phosphatase enzyme, disrupts the activity of ameloblasts and protein metabolism, which leads to defective enamel formation and loss of its transparency.
- **Classification according to V.K. Patrikeev:**
 1. *Dashed:* small white stripes.
 2. *Spotted:* clear white spots without shine.
 3. *Chalky-speckled:* matte enamel with pigmented dots (specks).
 4. *Erosive:* tissue loss in the form of pits (erosions).
 5. *Destructive:* destruction of crowns due to fragility.

3. Hereditary disorders (dysplasia)

- **Amelogenesis imperfecta:** A genetic disorder characterized by discoloration of teeth (from yellow to brown) and early chipping of thin, underdeveloped enamel.
- **Dentinogenesis imperfecta (Stanton-Capdepont syndrome):** The teeth have a watery gray or amber color, the dentin is soft, and the crowns wear down quickly to the gum level.

4. Tooth discoloration (Drug-induced lesions)

- **Tetracycline teeth:** The effect of taking tetracycline during calcification. The antibiotic binds to calcium and is deposited in tissue, causing permanent staining of teeth (ranging from lemon to brown) when exposed to UV rays.



Lecture No. 4. Non-carious lesions of teeth developing after their eruption

Target: To acquire knowledge about the mechanisms of wear and destruction of hard tissues of erupted teeth due to mechanical, chemical and traumatic factors.

1. Wedge-shaped defect

Etiology and pathogenesis: The modern concept identifies two reasons:

1. **Mechanical:** Incorrect brushing of teeth (horizontal brush movements).
2. **Abfraction:** micro-bending of the tooth in the cervical region under excessive occlusal load, leading to micro-chipping of the enamel prisms.
- **Clinical picture:** A wedge-shaped defect with smooth, polished walls in the cervical area. The pulp is usually not exposed due to the deposition of reparative dentin.

2. Dental erosion

Definition: Progressive cup-shaped loss of enamel and dentin on the vestibular surface, not associated with caries.

- **Etiology:** Chemical factor (consumption of acidic foods, carbonated drinks) and endocrine disorders (thyrotoxicosis).
- **Clinical stages:** Initial (damage to enamel only), severe (up to the enamel-dentin junction), deep (damage to dentin).

3. Pathological abrasion

Definition: Rapid tissue loss leading to disruption of the anatomical shape of the crowns and a decrease in the bite height.

- **Reasons:** Bruxism, lack of antagonists, exposure to industrial dust, malocclusion.
- **Classification according to Brachko:** I degree (wear of tubercles), II degree (up to the enamel-dentin junction), III degree (up to the neck of the tooth).

4. Necrosis of hard dental tissues

- **Acid (chemical) necrosis:** An occupational disease among chemical industry workers. Acid fumes are inhaled and dissolve enamel. Teeth become dull, rough, and wear down quickly.
- **Radiation necrosis:** Occurs after radiation therapy for CLC tumors. Enamel becomes brittle and darkens, and teeth are destroyed to the core.

5. Hyperesthesia of dental tissues

Definition: Increased sensitivity to temperature, chemical, and mechanical irritants. It often accompanies all types of non-carious lesions. It is caused by dilation of the dentinal tubules and hydrodynamic fluid shift, which irritates pulp receptors.



Literature (GEOTAR-Media)

1. **Therapeutic dentistry: textbook** at 3 p.m. Part 1 / O.O. Yanushevich. — GEOTAR-Media, 2023.
2. **Non-carious lesions of dental tissues**/ I.M. Makeeva. - GEOTAR-Media, 2020.
3. **Therapeutic Dentistry. National Guidelines**/ L.A. Dmitrieva. — GEOTAR-Media, 2021.

Lecture No. 5. Traumatic dental lesions

The purpose of the lecture: To study the classification, biomechanics and clinical manifestations of dental damage caused by mechanical impact in order to provide emergency and routine dental care.

1. Relevance and etiology

Dental trauma is one of the most challenging areas of therapeutic dentistry due to the unpredictable impact on the pulp and periodontium. The main causes include household and sports injuries, falls, and traffic accidents. In children, trauma is often associated with the period of active growth and bite formation.

2. Classification of dental trauma

According to the WHO classification and modification by I.G. Lukomsky, the following are distinguished:

- **Acute trauma:** a sudden impact of great force.
- **Chronic trauma:** long-term exposure to low-intensity factors (bad habits, professional factors, over-stressing fillings).

Clinical forms of acute trauma:

1. **Tooth contusion:** Mechanical impact without tooth displacement or tissue integrity. Accompanied by rupture of a portion of the vascular-nerve bundle and pulp swelling.
2. **Tooth dislocation:** displacement of a tooth in its socket (incomplete, complete, impacted).
3. **Tooth fracture:**
 - Within the enamel (chipping);
 - Within the dentin (without opening the tooth cavity);
 - With opening of the tooth cavity;
 - Root fracture (horizontal, oblique, vertical).

3. Pathogenesis and clinical features of individual forms

Tooth contusion: Characterized by pain upon percussion and palpation along the mucosal fold. Radiographically, there are no changes. The dynamics of EOD are



important: temporary decreased sensitivity due to edema may be followed by recovery or necrosis.

Tooth dislocation:

- **Incomplete:**The tooth is mobile, displaced laterally, or protruded from the socket. The radiograph shows a widened periodontal space.
- **Driven in:**The most dangerous type. The tooth is deeply embedded in the alveolus, with the cutting edge below the level of adjacent teeth. Significant bone loss and pulp destruction occur.
- **Full:**The tooth falls out of its socket completely. Replantation is possible provided the tooth is stored properly (in saline, milk, or in the cheek).

Crown and root fractures:When a fracture occurs within the dentin, the patient experiences pain from thermal stimuli. When the pulp is exposed, the patient experiences acute, spontaneous pain. Root fractures are diagnosed only by radiography. Longitudinal and oblique fractures carry the most unfavorable prognosis, requiring tooth extraction.

4. Differential diagnosis and treatment principles

Treatment includes immobilization (splinting) for dislocations, endodontic treatment for pulp loss, and restoration of the crown. In cases of root fractures in the apical third, tooth preservation is possible.

Lecture #6. Dental Caries: Classification. Etiology. Pathogenesis

The purpose of the lecture:In-depth study of the mechanisms of caries occurrence as a multifactorial process for the development of prevention strategies and etiotropic treatment.

1. Modern definition

Dental caries— is a pathological process that appears after teeth eruption, characterized by demineralization and proteolysis of hard tissues, followed by the formation of a defect under the influence of endogenous and exogenous factors.

2. Etiology: The Case Triad Concept

For caries to develop, three main components and the time factor must interact:

1. **Cariogenic microflora (Biofilm):**Streptococcus mutans plays a dominant role. These bacteria have the ability to adhere to the pellicle and synthesize sticky glucans. Their metabolism results in the formation of organic acids (lactic and propionic).
2. **Nutritional profile (Carbohydrates):**Frequent consumption of easily digestible carbohydrates (sucrose) provides bacteria with a substrate for fermentation. Not only the dosage but also the exposure time (the "stickiness" of the food) is important.



3. **Resistance of the macroorganism:**The condition of the enamel (degree of mineralization), the quantity and quality of saliva (salivation rate, pH, viscosity, content of secretory IgA).

3. Pathogenesis: Mechanism of demineralization

The key process is a local change in the hydrogen index (pH) on the enamel surface under dental plaque.

- **Critical pH level:**When the value reaches 5.5 and below, the oral fluid ceases to be supersaturated with calcium and phosphate ions in relation to the enamel.
- **Demineralization process:**Dissociation of hydroxyapatite $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ crystals occurs. Mineral ions leave the lattice.
- **Reversibility:**At the white spot stage, remineralization is possible—the influx of external ions (saliva, gels) into subsurface demineralization foci. If the balance shifts toward demineralization, the organic framework (collagen) is destroyed, and a cavity forms.

4. Classification of caries

The following systems are used for clinical practice and reporting:

- **By depth of damage (Clinical):**
 1. Spot stage (white, pigmented);
 2. Superficial (within the enamel);
 3. Medium (in mantle dentin);
 4. Deep (peripulpar dentin).
- **By localization (according to Black):**Grades I–VI.
- **According to ICD-10:**K02.0 — enamel caries; K02.1 — dentin caries; K02.2 — cementum caries.
- **Downstream:**Acute, chronic, flourishing (multiple), suspended.

Literature (GEOTAR-Media)

1. **Therapeutic Dentistry. National Guidelines/** edited by L. A. Dmitrieva. - M., 2021.
2. **Dental diseases: a textbook/** O. O. Yanushevich, Yu. M. Maksimovsky. - M., 2023.
3. **Dental trauma/** A. V. Alimsky. - M.: GEOTAR-Media, 2020.

Lecture #7. Caries in the Spot Stage. Superficial Caries: Etiopathogenetic Diagnosis and Modern Therapy Methods

The purpose of the lecture:A detailed study of the initial stages of enamel demineralization and the development of conservative and minimally invasive treatment algorithms.



1. Caries in statu maculae

Initial caries is a focal demineralization of enamel. The process is characterized by the loss of mineral components, but without the formation of a macroscopic defect.

1.1 Pathomorphological changes: Under the influence of organic acids (lactic and pyruvic), hydroxyapatite crystals dissolve. A characteristic feature is the preservation of a thin surface layer (approximately 20–30 μm), which remains more mineralized due to constant contact with saliva. The main changes occur in the subsurface layer, where the interprismatic spaces expand, leading to a change in the refractive index of light (the appearance of a white spot).

1.2. Clinical diagnostics:

- **Complaints:** Patients most often have no complaints. In rare cases, a feeling of "soreness" from chemical irritants is noted.
- **Objectively:** When the surface is air-dried, a white or yellowish spot, lacking its characteristic shine, is revealed. It's important to assess the contours; caries always has indistinct edges.
- **Differential diagnosis:**
 - **Hypoplasia:** The spots are symmetrical, smooth, shiny, and appear before eruption.
 - **Fluorosis:** Multiple spots on all groups of teeth, often in the form of streaks, are associated with the endemic area.
- **Special tests:**
 - **Vital staining:** A 2% methylene blue solution is applied to the cleaned surface for 2–3 minutes. The porous demineralization zone actively absorbs the dye.
 - **Transillumination:** When illuminated with a powerful beam of light, the spot appears as a shadow area.

1.3. Treatment protocol (Remineralizing therapy): The goal is to replenish mineral deficiencies.

1. Professional oral hygiene.
2. Isolation from saliva and drying.
3. Application of 10% calcium gluconate solution (or 2–3% calcium chloride) for 15 minutes.
4. Subsequent application of a 2% sodium fluoride solution (or fluoride varnish) to fix the calcium and form fluorapatite. The course of treatment is 10–15 procedures.



2. Superficial caries (Caries superficialis)

This stage is characterized by the destruction of the surface layer of enamel and the formation of a defect within it.

2.1. Clinical presentation and diagnostics:

- **Complaints:** Short-term pain from sweet, sour (chemical irritants), and sometimes cold. The pain subsides immediately after rinsing the mouth.
- **Objectively:** Probing reveals an enamel defect with a rough base. The probe becomes stuck in the cavity. The enamel-dentin junction is intact.

2.2 Treatment (Minimal Invasion):

1. **Grinding method:** If the defect is shallow and located on a smooth surface, it is ground down, polished and subjected to deep fluoridation.
2. **Filling:** * Preparation within the enamel.
 - Acid etching of enamel (37% phosphoric acid).
 - Application of the adhesive system.
 - Filling with a light-curing composite or sealant (for fissure caries).

Lecture #8. Dentin Caries: Moderate and Deep Caries. Clinical Features and Treatment Options

The purpose of the lecture: To study the pathomorphology and clinical features of deep lesions of hard dental tissues, and to master the technique of differential diagnosis with pulpitis.

1. Medium caries (Caries media)

Medium caries is the most common form. The process destroys the enamel-dentin junction and attacks the mantle dentin.

1.1 Pathogenesis: Dentinal tubules facilitate rapid penetration of microbes. In response to irritation, vascular reactions begin in the pulp, and sclerotic (transparent) dentin forms in the tubules, attempting to limit infection.

1.2. Clinical picture:

- **Complaints:** For short-term pain from thermal (cold, heat) and mechanical factors.
- **Objectively:** The carious cavity is filled with softened, pigmented dentin.
- **Probing:** Painful along the enamel-dentin junction. The cavity floor is painless.
- **EOD:** 2–6 μ A (pulp intact).

1.3. Treatment: The procedure is performed according to the following algorithm: anesthesia → preparation → antiseptic treatment (2% chlorhexidine) → filling. The



use of an insulating liner (GIC) is recommended for deep class II and III cavities to compensate for the polymerization stress of the composite.

2. Deep caries (Caries profunda)

This is a borderline condition between caries and pulpitis. The dentin layer above the pulp is extremely thin.

2.1. Clinical forms:

- **Acute deep caries:*** Complaints: Sharp pain from all types of irritants (especially cold).
 - *Objectively:* A deep cavity with a narrow entrance, the bottom is covered with light, moist, softened dentin, which is removed in layers.
 - *Probing:* Sharp pain all over the bottom.
- **Chronic deep caries:**
 - *Complaints:* May be absent (asymptomatic).
 - *Objectively:* The cavity has a wide entrance, the bottom is dense, pigmented (black or brown).

2.2. Differential diagnosis with pulpitis:

Sign	Deep caries	Acute focal pulpitis
The nature of pain	Only from irritants	Spontaneous, nocturnal
After eliminating the cause	The pain goes away immediately	The pain lasts 15–20 minutes
Probing	The whole bottom is painful	Sharp pain in one point (pulp horn)
EOD	up to 10–12 μA	20–25 μA

Export to Sheets

2.3. Treatment tactics:

The main task is to maintain the vitality of the pulp.

1. **Preparation:** As gentle as possible (especially the bottom).
2. **Medicinal treatment:** Warm antiseptic solutions.
3. **Therapeutic pad:** Calcium hydroxide-based preparations (Dycal, Life) are applied to the bottom of the cavity. They provide an antiseptic effect and stimulate the pulp to form replacement dentin.
4. **Temporary filling:** In acute cases, it is recommended to leave a medicinal lining under a temporary filling for 3–7 days to monitor the condition of the pulp.



Literature for preparation (GEOTAR-Media publishing house):

1. **Restorative Dentistry: National Guidelines/** ed. L. A. Dmitrieva, I. M. Maksimovsky. - M., 2021.
2. **Dental diseases: a textbook/** O. O. Yanushevich. - M., 2023.
3. **Minimally invasive dentistry/** ed. H. Murakami. - M., 2021.

Lecture #9: Errors and Complications in the Diagnosis and Treatment of Dental Caries

The purpose of the lecture: To analyze the causes of diagnostic and tactical errors at various stages of caries treatment, to study methods for their elimination and prevention of complications to ensure the durability of restorations and maintain pulp health.

1. Errors at the diagnostic stage

Diagnostic errors are often associated with incomplete examination of the patient or misinterpretation of clinical data.

- **Insufficient diagnosis of hidden cavities:** Carious lesions on the approximal (contact) surfaces are often not visible during routine examination.
 - *Investigation:* Missing a carious lesion, progression of the process to pulpitis.
 - *Prevention:* Mandatory use of radiography (visiography) or CBCT if hidden caries is suspected.
- **Misdiagnosis of differential diagnosis:** Mistaking deep caries for chronic pulpitis or vice versa.
 - *Investigation:* Choosing the wrong treatment method (unjustified depulcation or, on the contrary, leaving the inflamed pulp under the filling).
 - *Prevention:* Conducting EOD and careful thermometry.

2. Errors at the stage of preparation of the carious cavity

This stage is the most critical, as it is associated with the irreversible removal of hard tooth tissue.

- **Perforation of the cavity bottom or wall:** Occurs due to poor visibility, failure to adhere to the topography of the tooth cavity, or the use of aggressive burs at high speeds.
 - *Tactics:* In case of accidental pulp exposure, immediate application of calcium hydroxide-based preparations (direct coating) is recommended. In case of extensive perforation, endodontic treatment is recommended.



- **Insufficient necrectomy (recurrent caries):** Leaving infected, softened dentin on the floor or walls of the cavity.
 - *Investigation:* Development of caries under a filling (“secondary caries”).
 - *Prevention:* Control using a caries detector (staining of the demineralization zone).
 - **Overheating of the dental pulp:** Preparation without water cooling or with blunt burs.
 - *Investigation:* Thermal burn of the pulp and development of aseptic necrosis.
 - **Fracture of the cavity wall:** Leaving enamel without dentin support (“undermined” edges).
3. Errors at the filling stage
- **Violation of adhesion protocol:** Penetration of saliva or gingival fluid into the cavity after enamel etching.
 - *Investigation:* Violation of the marginal fit of the filling material, the appearance of a “white line” at the border with the enamel.
 - *Prevention:* Using a cofferdam (rubber dam).
 - **Incorrect formation of contact point:** Lack of or poor contact between teeth in Black Class II treatment.
 - *Investigation:* Constant penetration of food into the interdental space, development of chronic papillitis and periodontitis.
 - *Prevention:* Use of matrix systems and wedges.
 - **Overhanging edge of filling material:** Extrusion of material into the interdental space.
 - *Investigation:* Trauma to the gingival papilla, bleeding, resorption of alveolar bone tissue.
 - **Overbite (supercontact):** Insufficient grinding of the filling along the occlusion.
 - *Investigation:* Acute periodontal injury, pain when biting, possible chipping of the tooth wall or the filling material itself.
4. Complications in the near and long term
- 4.1. Post-filling pain
- **Reasons:** Excessive etching of dentin (hypersensitivity), polymerization stress (material shrinkage), overheating or accidental exposure of the pulp.
 - **Tactics:** If the pain does not go away within 2-3 days or is nocturnal, the cavity must be opened and endodontic treatment performed.



4.2. Change in the color of a tooth or filling

- **Reasons:** Using materials with expired shelf life, poor finishing (polishing), smoking or consuming coloring products in the first 24 hours.

4.3. Loss of a filling

- **Reasons:** Incorrect cavity formation (lack of retention zones), failure to comply with adhesive preparation stages, excessive chewing load.

5. Summary of prevention

Successful treatment of caries is ensured by three factors:

1. **Thorough diagnostics** using hardware methods (electronic imaging, x-ray).
2. **Compliance with ergonomic and cooling rules** during dissection.
3. **Isolation of the working field** and strict adherence to the instructions of the manufacturer of adhesive systems.

Literature (GEOTAR-Media):

1. **Therapeutic Dentistry. National Guidelines**/ ed. L. A. Dmitrieva, I. M. Maksimovsky. - M., 2021.
2. **Errors and complications in therapeutic dentistry**/ A. Zh. Petrikas. - M.: GEOTAR-Media, 2022.
3. **Dental diseases: a textbook**/ O. O. Yanushevich. - M., 2023.

3rd year 6 semesters

Lecture 1. Introduction to Endodontics. Root Canal Anatomy

The purpose of the lecture: To study the fundamentals of endodontic intervention, thoroughly examine the complex internal morphology of various tooth groups, and classify root canal types to ensure high-quality cleaning, shaping, and obturation of the root canal system.

1. The concept of endodontics and the tasks of the stage

Endodontics is a branch of dentistry that studies the morphology, physiology, and pathology of the dental pulp and periodontal tissues surrounding the tooth root.

- **Main objective:** Elimination of the source of infection within the root canal system and creation of conditions for the regeneration of periodontal tissues.
- **Complexity:** The internal anatomy of a tooth is significantly more complex than its external form. The canal system includes macrocanals, microcanals, deltas, and anastomoses.

2. Morphology of the pulp chamber and root canals

The internal space of the tooth is divided into the coronal part (pulp chamber) and the root part (canal system).



- **Anatomical apex:** The most distant point of the root.
- **Physiological apex (apical constriction):** The transition point between dentin and cementum.
 - **Importance:** This is where the canal filling should end. It is located 0.5–1.0 mm coronal to the anatomical apex.
- **Channel configuration types (according to Vertucci):**
 - **Type I:** One channel from the chamber to the top.
 - **Type IV:** One channel splits into two independent ones with separate openings.
 - **Type VIII:** Three independent channels in one root.

3. Features of the anatomy of different groups of teeth

Knowing the average number of channels helps to avoid skips (a “skipped channel” is the most common cause of failure).

- **Incisors and canines of the upper jaw:** Always 1 root and 1 channel.
- **First premolar upper jaw:** In 80% of cases it has 2 roots and 2 canals (buccal and palatine).
- **Molars of the upper jaw:** Usually 3 roots and 3-4 canals.
 - **NB!** In the mesial-buccal root (MB), the fourth canal (MB2) is found in 50-90% of cases.
- **Lower jaw molars:** Usually 2 roots and 3 canals (two in the mesial root, one in the distal).

Structure cross section of grinder tooth showing enamel, dentine, pulp, nerves, root canals. Infographic poster with captions. Dentist visual aid. Flat isolated vector

4. Errors in creating endodontic access

Incorrectly formed access makes it impossible to find all channels.

- **Insufficient opening of the cavity vault:**
 - **Investigation:** Overhanging dentin edges interfere with visibility and straight entry into the canals, increasing the risk of instrument breakage.
- **Excessive expansion (perforation of the bottom or wall):**
 - **Cause:** Lack of knowledge of the topography of the tooth cavity or work without taking into account the inclination of the tooth in the arch.
 - **Tactics:** Closing the perforation with MTA (Mineral Trioxide Aggregate) material.
- **Skipping of the fourth canal (MB2) in molars:**



- **Investigation:** Persistence of infection, development of chronic periodontitis after “successful” treatment.

5. Summary of clinical application

To successfully pass through the channels, you must:

1. **Visualization:** Use of binocular loupes or an operating microscope.
2. **X-ray control:** Images taken in different projections to identify hidden bends and additional roots.
3. **Straight-line access:** Creating conditions under which the instrument enters the canal without bending in the coronal part.

Literature (GEOTAR-Media):

1. *Endodontics. Clinical approaches and methods/* ed. J. Rhodes. - M., 2020.
2. *Therapeutic dentistry: textbook/* E. V. Borovsky. - M., 2022.
3. *Clinical anatomy of human teeth/* I. V. Gaivoronsky. - M.: GEOTAR-Media, 2023.

You're right, for a comprehensive lecture summary, it's crucial to highlight the Objective and Plan (the main points) at the very beginning. This helps structure the learning and immediately understand the skills to be acquired.

Below is an expanded sample for Lecture #2, designed to take these important elements into account.

Lecture 2. Instrumentation in endodontics

The purpose of the lecture:

To develop a clear understanding of the classification of endodontic instruments, study international standards (ISO), master the rules for selecting instruments depending on the clinical situation, and learn safe work algorithms to prevent instrument breakage in the canal.

Main questions of the lecture:

1. Classification of endodontic instruments by purpose and manufacturing method.
2. ISO standardization: color coding, geometric parameters and taper.
3. Characteristics of the main groups of instruments (for widening the mouth, passing and shaping the canal).
4. Features of nickel-titanium (NiTi) instruments and their advantages over steel ones.
5. Prevention of breakage and deformation of tools during operation.



1. Classification of tools according to ISO

All tools are divided into groups depending on the stage of work:

- **Diagnostic:**(Root needles, verifiers).
- **To widen the mouth:**(Gates-Glidden, Largo/Peeso Reamer).
- **For soft tissue removal:**(Pulp extractors are very fragile and are only suitable for one-time pulp extraction!).
- **To pass and expand:**(K-files, K-renderers, H-files).
- **For obturation:**(Drain fillers, spreaders, pluggers).

2. Geometric parameters and color coding

According to the ISO standard, the tool has three key characteristics:

1. **Pen color:**Indicates the tip diameter (\$d_0\$).
 - *For example:*No. 25 (red) means the tip diameter is 0.25 mm.
2. **Taper:**In standard hand tools, it is 2%. This means that for every 1 mm of length, the diameter increases by 0.02 mm.
3. **Length of working part:**The standard length is 16 mm, while the total length of the rod can be 21, 25, 28 or 31 mm.

3. Features of K-files and H-files

- **K-File (Kerr):**Made by twisting square wire. It's the safest and most versatile. It works with sweeping and rotating motions.
- **H-File (Hedstroem):**It's made using a milling method. It's very sharp and resembles a herringbone pattern.
 - **NB!**Works only at the root canal exit. Rotation of the H-file in the root canal is prohibited due to the risk of instant fracture.

4. Modern NiTi instruments

Nickel-titanium alloys have revolutionized the industry due to:

- **Flexibility:**Allows treatment of highly curved canals without the risk of perforation.
- **Memory effect:**The tool returns to its original shape after loading.
- **Increased taper:**Allows you to quickly create the correct conical shape of the canal for high-quality filling.

5. Errors and breakdown prevention

Instrument breakage (breakage of a fragment) is one of the most serious complications.

- **Reasons:**Metal fatigue, dry run, excessive pressure.
- **Prevention:**
 1. Use of lubricants (EDTA gels).



2. Visual inspection: if the tool threads become unraveled or tangled, it must be disposed of immediately.
3. Maintaining the sequence (do not jump from #15 straight to #25).

Summary for practice:

The success of endodontics depends 50% on the correct instrument selection. Always start with small steel files (#06-#10) to create a glide path, and only then proceed to active canal enlargement.

Literature:

1. *Endodontics/* Domenico Ricucci. — Practical Medicine, 2021.
2. *Instrumental support for endodontics/* I. A. Kazantsev. - GEOTAR-Media, 2023.

Lecture No. 3. Methods for determining the working length of the root canal (WL)

The purpose of the lecture:

Learn the algorithm for determining precise endodontic intervention boundaries. Learn to integrate electronic and radiographic methods to prevent periodontal trauma and ensure hermetic obturation of the root canal system.

Main questions of the lecture:

1. Anatomical landmarks of the apical part of the root.
2. Comparative characteristics of methods for determining RD.
3. Electronic apexlocation technology: physical principles and operating rules.
4. X-ray method: rules of implementation and possible distortions.
5. Clinical protocol of "double control" and prevention of complications.

1. Anatomical justification

The success of treatment depends on where we finish cleaning and filling. In endodontics, three key points in the root apex area are distinguished:

1. **Anatomical apex:**The most distant point of the root.
2. **Apical foramen (Foramen apicale):**The location where the canal emerges onto the root surface. In 50–80% of cases, it is displaced away from the anatomical apex.
3. **Apical constriction (Physiological apex):**The zone of maximum canal narrowing. This is where dentin transitions into cementum.
 - **Golden rule:**Instrumental processing and filling should end precisely in the constriction zone, which is usually 0.5–1.0 mm coronal to the anatomical apex.



2. Comparative characteristics of methods for determining RD

A. X-ray method

It is a classic and essential tool for visualizing morphology.

- **Technique:** A measuring file (at least No. 15) with a stopper installed on an external landmark (bump) is inserted into the canal and a picture is taken.
- **Advantages:** Allows you to see the canal curves, the presence of additional roots and the condition of the periodontium.
- **Flaws:**
 - * Provides a planar (2D) image (overlay of roots).
 - Projection distortions (lengthening/shortening of the tooth in the image).
 - Does not show the actual position of the apical foramen if it extends onto the buccal or lingual surface.

B. Electrometric method (Apex location)

Today, it is the most accurate and objective method.

- **Operating principle:** Periodontal tissue and the mucous membrane have the same electrical resistance. When a file touches the periodontal tissue, a circuit is closed, and the device records this.
- **Terms of use:**
 - * The tooth cavity must be dry (isolated with a cofferdam).
 - The canal must be moistened (with sodium hypochlorite solution).
 - Avoid contact with metal restorations.
- **Interpretation:** The greatest accuracy is achieved by slowly advancing the file to the "APEX" (or 0.0) mark, and then "rolling back" 0.5 mm.

B. Tactile method

Based on the manual sensitivity of the physician.

- **The gist:** The doctor feels a slight resistance when the instrument reaches the narrowing.
- **Restrictions:** Extremely subjective. Doesn't work with wide apices (in children), root apex destruction, or severe curvatures.

G. Paper pin method

- **Application:** Used as an auxiliary tool for wide or perforated canals.
- **The gist:** An adsorbent is introduced into the canal. If the tip of the pin is dry, we are in the canal; if there is blood or exudate on the tip, we have entered the periodontium.

3. Clinical algorithm "Double control" (Step-by-Step)

To minimize errors, the modern standard suggests the following procedure:

1. **Creating a straight line access:**Pre-flaring relieves file tension, making the measurement more accurate.
2. **Preliminary measurement:**The apex locator is used to determine the RD. The stopper is fixed to the incisal edge or cusp.
3. **X-ray confirmation:**A snapshot with the entered files allows you to correlate the device readings with real anatomy.
4. **Correction:**If the file is perfectly positioned on the image (0.5–1 mm to the apex), the data is recorded. If there are any deviations, the radiographic documentation is revised.
5. **Re-measurement:**It's important to remember that during canal widening, the canal's curvature straightens, shortening it by 0.5–1.0 mm. Therefore, the final RD measurement is performed immediately before filling.

4. Errors and complications

Error	Cause	Consequence
Non-income (short RD)	Denticles, steps, poor visibility.	Chronic inflammation in the remaining pulp.
Exit beyond the apex (long RD)	Incorrect measurement, no stopper.	Post-filling pain, risk of sinusitis, nerve damage.
Loss of orientation	Stopper displacement or bump chipping.	Violation of the entire channel processing protocol.

5. Summary

Determining the working length is not a formality, but a legally significant step. An error of 1 mm can lead to tooth extraction several years later. A perfect result is achieved only with a combination of electronic apex location and high-quality radiographs.

Literature:

1. *Endodontics*/ ed. I. V. Gaivoronsky. — SpetsLit, 2023.
2. *Clinical Dentistry: A Guide*/ edited by E. V. Borovsky. - M., 2022.
3. *Electronic apexlocation in practice*/ A. V. Zoryan. — GEOTAR-Media, 2021.



Lecture No. 4. Mechanical treatment of root canals

The purpose of the lecture: To study the biological and mechanical principles of root canal preparation and master the basic techniques of manual and machine processing to create the optimal canal shape for obturation.

Main questions:

1. Objectives and principles of mechanical processing (biological feasibility).
 2. Step-Back technique: stages, advantages and disadvantages.
 3. Crown-Down technique: a modern standard.
 4. The concept of "glide path" (Glide Path).
 5. Preparation errors: steps, perforations, canal blockage.
1. Tasks of mechanical processing
 - **Cleaning:** Removal of pulp remnants, bacteria and infected pre dentin.
 - **Formation:** Giving the canal a conical shape with a maximum diameter at the mouth and a minimum at the apical constriction.
 - **Creating conditions for irrigation:** Widening of the canal is necessary so that the irrigator needle can deliver the solution to the apical third.
 2. Step-Back Technique

Traditional technique of treatment from apex to mouth.

 - **Step 1:** Determination of the RD and expansion of the apical part to the "Master File" (minimum ISO No. 25).
 - **Step 2:** Sequential use of larger files of shorter length (each next one 1 mm shorter).
 - **Step 3:** Smoothing of walls (recapitulation) with a master file.
 - **Minus:** Risk of infected sawdust being pushed over the top (piston effect).
 3. Crown-Down Technique

A modern method used when working with NiTi instruments.

 - **The gist:** First, the orifice third expands, then the middle one, and lastly, the apical one.
 - **Advantages:** Better depth control, efficient sawdust removal, reduced risk of tool breakage.

Lecture #5. Medicinal treatment of root canals. Irrigation

The purpose of the lecture: To justify the need for chemical disinfection of the root canal system, to study the properties of irrigation solutions and algorithms for their use for the complete elimination of microflora.

Main questions:

1. The role of irrigation in endodontics (the concept of biofilm).



2. Properties of basic solutions (Sodium hypochlorite, EDTA, Chlorhexidine).
 3. Irrigation protocol: sequence and timing of exposure.
 4. Activation of irrigants (ultrasonic and sound).
 5. Prevention of complications (hypochlorite accident).
1. Why is mechanical processing not enough?

The canal system includes deltas, anastomoses, and lateral canals, which instruments cannot penetrate. Only fluid can dissolve organic matter in these areas.

2. Basic irrigants

- **Sodium hypochlorite (NaOCl) 0.5%–5.25%:**
 - *Action:* Dissolves living and necrotic tissue, has a powerful antibacterial effect.
 - *Peculiarity:* Does not remove the "smear layer" (dentin filings).
- **EDTA 15%–17%:**
 - *Action:* A chelating compound that dissolves the inorganic part (dentin filings), opening the dentinal tubules.
- **Chlorhexidine 2%:** Used in the treatment of retreatments (against *E. faecalis*), but is incompatible with hypochlorite (forms a toxic precipitate).

3. Irrigation algorithm (protocol)

1. Continuous NaOCl flushing during expansion.
2. Final rinse: EDTA (1 min) to remove smear layer.
3. Repeated flushing with NaOCl to disinfect open tubules.
4. Drying with paper pins.

4. Complications: Hypochlorite accident

Occurs when the needle gets stuck in the canal and the solution is injected under pressure from the top.

- **Symptoms:** Sharp pain, immediate swelling, hematoma.
- **Help:** Stop work, antihistamines, cold, analgesics.

Summary of lectures 4-5: Mechanical and medicinal treatments are inseparable. The instrument creates a "pathway" for the antiseptic, and the antiseptic makes the instrument's work safe and biologically effective. Without high-quality irrigation, even a perfectly dilated canal will remain infected.

Literature:

1. *Endodontics*/ S. Cohen, R. Burns. - 2020.
2. *Root canal irrigation*/ M. Solomonov. — 2021.
3. *Therapeutic dentistry*/ edited by E. V. Borovsky. - M., 2022.



Lecture No. 6. Methods of root canal obturation. Materials

The purpose of the lecture: Learn modern root canal sealing standards, classify filling materials, and master permanent filling techniques to prevent periodontal re-infection.

Main questions:

1. Requirements for obturation materials.
2. Classification of sealers and fillers (gutta-percha).
3. Method of lateral condensation of cold gutta-percha.
4. Vertical condensation methods (heated gutta-percha).
5. Quality criteria for filling.

1. Obturation materials

To ensure high-quality filling of the canal, a combination of two components is used:

- **Filler (main filler):** Gutta-percha. It is inert, biocompatible, does not shrink, and is easily removed when necessary.
- **Sealer (sealant):** A paste that fills the micro-spaces between the canal wall and gutta-percha.
 - *Types of sealers:* Epoxy resins (AH-Plus), bioceramics (the most modern type), zinc-eugenol pastes.

2. Basic obturation methods

1. **One Paste Method:** (Obsolete, not recommended) High risk of shrinkage and porosity.
2. **Single pin method:** Use a single gutta-percha point matching the size of the final instrument (Master-point). Effective only with bioceramic sealers.
3. **Lateral condensation:** The "gold standard" in price/quality ratio. A main pin and several additional pins are inserted into the canal and compacted with a spreader.
4. **Vertical condensation (System B, Termafil):** Gutta-percha is heated and introduced into the canal in a plastic state, which allows filling all lateral microtubules.

Lecture #7. Pulpitis. Etiology, pathogenesis, clinical features

The purpose of the lecture: To study the mechanisms of occurrence and development of inflammation in the dental pulp, and also to learn to differentiate various clinical forms of pulpitis based on complaints and objective data.

Main questions:

1. Etiological factors of pulp inflammation.



2. Pathogenesis: phases of inflammation and features of the vascular reaction of the pulp.
 3. Classification of pulpitis (ICD-10 and working classification).
 4. Clinical picture of acute and chronic forms.
 5. Differential diagnostics.
1. Etiology (causes)
 - **Infectious factor:** Penetration of bacteria from a carious cavity (the main route) or through the apical foramen (retrograde pulpitis).
 - **Traumatic factor:** Crown fracture, acute trauma or accidental opening of the pulp horn during caries treatment.
 - **Iatrogenic factor:** Overheating of the pulp with a bur without cooling, toxic effect of filling materials.
 2. Pathogenesis

The pulp is located in a confined space (the dentinal chamber). Inflammation causes swelling, but the rigid walls of the chamber cause a sharp increase in pressure. This leads to compression of the nerve endings (severe pain) and vascular ischemia, which ultimately causes tissue necrosis.
 3. Clinical picture
 - **Acute pulpitis:**
 - *Complaints:* Spontaneous, paroxysmal pain that intensifies at night.
 - *Irradiation:* The pain may radiate to the ear, temple, back of the head (along the branches of the trigeminal nerve).
 - *Reaction:* Long-term pain from temperature stimuli (especially cold).
 - **Chronic pulpitis:**
 - *Complaints:* Aching pain that occurs with temperature changes or food intake. It is often asymptomatic until it becomes acute.
 - *Objectively:* A deep carious cavity, often communicating with the cavity of the tooth.
 4. Differential diagnostics

Pulpitis must be distinguished from:

 1. **Deep caries:** (With caries, pain is only caused by an external stimulus and quickly goes away).
 2. **Periodontitis:** (With periodontitis there is pain when biting, and X-rays show changes in the bone).
 3. **Trigeminal neuralgia:** (Short-term shooting pains, presence of trigger zones).



Resume: Understanding the pathogenesis of pulpitis dictates the choice of treatment method: in reversible forms, it is possible to preserve the viability of the pulp; in irreversible forms, complete extirpation (removal) is indicated, followed by hermetic obturation, as discussed in Lecture No. 6.

Literature:

1. *Pulp diseases/* Riccucci D. - 2021.
2. *Therapeutic Dentistry. A Textbook in Three Parts/* ed. A.M. Barera. — 2022.
3. *Pulpitis: a tutorial/* I.V. Gaivoronsky. - 2023.
Lecture #8. Periodontitis. Etiology, pathogenesis, clinical presentation, and treatment

The purpose of the lecture: To study the mechanisms of inflammation development in periodontal tissues, master methods of differential diagnosis of various forms of periodontitis and protocols for their conservative treatment.

Main questions:

1. Classification of periodontitis (acute and chronic forms).
 2. Etiological factors (infection, trauma, chemical exposure).
 3. Pathogenesis: from exudation to destruction of bone tissue.
 4. Clinical picture and radiological diagnostics.
 5. Treatment principles: pain relief and bone restoration.
1. Etiology and Pathogenesis
 - **Infectious:** The main route is from the necrotic pulp through the apical foramen.
 - **Traumatic:** Chronic overload of the tooth (overfilled filling) or acute trauma.
 - **Medicinal:** Periodontal irritation by strong antiseptics or removal of filling material.

Pathogenesis: In an acute process, exudate accumulates in the ligament of the tooth, creating pressure (the tooth "grows"). In a chronic process, the bone tissue around the apex is replaced by granulation tissue (granuloma) or a cavity filled with epithelium (cyst) forms.

2. Clinical picture

- **Acute periodontitis:** A sharp, localized pain that intensifies with the slightest touch to the tooth. A feeling of a "growing tooth."
- **Chronic periodontitis:** It is often asymptomatic. A fistula may be detected on the gum.
- **X-ray diagnostics:**



- *Fibrous*:widening of the periodontal space.
- *Granulating*:a source of destruction with unclear contours ("tongues of flame").
- *Granulomatous*:a clearly defined, rounded bone defect.

3. Treatment of periodontitis

It is carried out in 2-3 visits:

1. **First visit**:Creation of outflow (evacuation of pus), thorough cleaning of canals, temporary filling with an antiseptic (calcium-based).
2. **Second visit**:(After 7-14 days) Evaluation of dynamics, repeated irrigation and permanent obturation of the canal.

Lecture No. 9. Endodontic treatment of complicated cases

The purpose of the lecture:To study the doctor's tactics when working in difficult anatomical conditions (bends, obliteration) and master methods for correcting iatrogenic errors (perforations, broken instruments).

Main questions:

1. Working in curved canals: step prevention.
2. Obliterated canals: tactics for searching for mouths.
3. Perforations: classification and selection of material for closure.
4. The concept of revision (retreatment) of root canals.

1. Curved channels

The main danger is the creation of a "step" (ledge) or straightening of the canal (transportation of the apex).

- **Tactics**:Use of flexible NiTi files, pre-bending of steel files, mandatory creation of a "glide path" (Glide Path).

2. Obliteration (sclerosis) of the canals

Narrowing of the canal lumen due to the deposition of secondary dentin.

- **Tactics**:Use of a microscope, special endodontic probes, ultrasonic tips for removing denticles and EDTA gels for chemical expansion.

3. Perforations

An artificial opening in the root wall or the bottom of the tooth cavity.

- **Forecast**:Depends on the location (above or below the gum line) and the time of closure.
- **Material of choice**:MTA (Mineral Trioxide Aggregate) or Bioceramics. These materials are bioactive and allow for the restoration of the tooth's bond at the site of the defect.



4. Broken tools

- **Risk factors:** Metal fatigue, lack of irrigation.
- **Solution:** An attempt at extraction using ultrasound under a microscope or the “bypass” method (bypassing the instrument from the side and filling the canal along with it).

Literature:

1. *Root canal retreatment/* Riccucci D. - 2022.
2. *Endodontics: Complications and their solutions/* Sh. Cohen. - 2021.
3. *Restorative Dentistry. Periodontitis/* edited by Borovsky E.V. - 2023.

4th year, 7th term

Lecture 1. Periodontal structure. Classification of periodontal diseases.

The purpose of the lecture:

To develop in students a systematic understanding of the structure of the periodontium, its functions, and to study the modern classification of periodontal diseases for subsequent application in clinical practice.

The issues under consideration:

1. Anatomical and functional characteristics of the periodontium.
2. The structure of the gums, periodontium, root cementum and alveolar bone.
3. Functions of the periodontium.
4. Etiology and risk factors of periodontal diseases.
5. Classification of periodontal diseases.

Introduction

The periodontium is a complex of tissues surrounding the tooth, providing its anchorage in the jaw, and also contributing to nutrition, protection, and cushioning of chewing forces. Understanding the structure of the periodontium and the classification of its diseases is key to the diagnosis, prevention, and treatment of dental diseases.

1. Structure of the periodontium

The periodontium includes the following anatomical and functional structures:

1. Gingiva

The gingiva is a mucous membrane covering the alveolar processes of the jaws and



surrounding the necks of the teeth. There are free (marginal) gingiva, attached gingiva, and interdental papillae. Functions of the gingiva:

- barrier (protection of underlying tissues from microbial invasion);
- mechanical (participation in the distribution of chewing load);
- immunological (local defense reactions).

2. Periodontium (periodontal ligament)

The periodontium is a connective tissue formation located between the cementum of the tooth root and the alveolar wall. Main functions:

- support and retention (tooth fixation);
- shock-absorbing;
- trophic (providing nutrition to tissues);
- receptor (sensitivity to load).

3. Root cementum

Cementum is the mineralized tissue covering the tooth root. It serves as the attachment site for periodontal fibers. A distinction is made between acellular and cellular cementum.

4. Alveolar bone

The alveolar portion of the jaw forms the bony socket of the tooth. It includes compact and spongy bone. Functions:

- tooth support;
- participation in remodeling under load.

5. Blood supply and innervation

The periodontium is rich in vessels and nerves, which ensures its high regenerative capacity and sensitivity.

2. Functions of the periodontium

The periodontium performs a number of important functions:

- supporting (keeping the tooth in the alveolus);
- shock-absorbing (distribution of chewing pressure);
- trophic (metabolism);
- protective (barrier against infection);
- plastic (tissue regeneration).

3. Classification of periodontal diseases

Periodontal diseases are a group of pathological conditions that differ in etiology, clinical course and degree of tissue damage.

1. Inflammatory diseases



- **Gingivitis**- inflammation of the gums without disruption of tooth attachment. Forms: catarrhal, hypertrophic, ulcerative-necrotic.
- **Periodontitis**— an inflammatory disease accompanied by the destruction of the periodontium and bone tissue. Classification by course:
 - acute and chronic;
 - mild, moderate and severe;
 - localized and generalized.

2. Dystrophic diseases

- **Periodontosis**— a chronic disease with predominantly dystrophic damage to periodontal tissues without pronounced inflammation.

3. Idiopathic diseases

Diseases of unknown etiology, accompanied by progressive destruction of the periodontium.

4. Periodontal lesions in systemic diseases

Periodontal lesions associated with general diseases of the body:

- blood diseases;
- endocrine disorders;
- immunodeficiency states.

4. Etiology and risk factors

The main etiological factor of periodontal diseases is microbial dental plaque.

Additional factors include:

- poor oral hygiene;
- smoking;
- hormonal changes;
- systemic diseases;
- traumatic occlusion.

Conclusion

The periodontium is a complex functional system that ensures the preservation of teeth and the normal function of the masticatory system. Disturbances in any of its structures can lead to the development of diseases of varying severity.

Understanding the anatomy and classification of periodontal diseases is the basis for timely diagnosis, prevention, and effective treatment.

List of references.



1. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Periodontology: national guide / ed. O.O. Yanushevich. - M.: GEOTAR-Media, 2018.
3. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.
4. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.

Lecture 2. Etiology and pathogenesis of periodontal diseases

The purpose of the lecture:

To develop students' understanding of the main etiological factors and mechanisms of periodontal disease development, as well as their role in the formation of clinical manifestations.

The issues under consideration:

1. The main etiological factors of periodontal diseases.
2. The role of microbial dental plaque in the development of inflammation.
3. Local and general risk factors.
4. Pathogenesis of inflammatory periodontal diseases.
5. Immunological and vascular mechanisms of periodontal damage.

Introduction

Periodontal diseases are one of the most common pathologies in dentistry. Their development is caused by a complex interaction of microbial, local, and systemic factors. Understanding the etiology and pathogenesis is essential for informing preventive and therapeutic measures.

1. Etiology of periodontal diseases


1.1 Microbial factor

Dental plaque, a complex microbial community (biofilm), plays a leading role in the development of periodontal disease. It contains various types of microorganisms, including anaerobic bacteria. These microorganisms release toxins, enzymes, and metabolic products that damage periodontal tissue and trigger an inflammatory response.

1.2. Local factors

Local factors that contribute to the development of periodontal diseases include:

- poor oral hygiene;
- tartar;

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- malocclusion;
- crowded teeth;
- poor quality fillings and orthopedic structures;
- traumatic occlusion.

1.3. General factors

General (systemic) factors influence the body's reactivity and the course of periodontal diseases:

- endocrine disorders (diabetes mellitus);
- cardiovascular diseases;
- blood diseases;
- hypovitaminosis;
- immunodeficiency states;
- stress and bad habits (smoking).

2. Pathogenesis of periodontal diseases

The pathogenesis of periodontal diseases is a multi-stage process that includes the interaction of microorganisms and the body's defense reactions.

2.1. Formation of dental plaque

The initial stage is the formation of plaque on the tooth surface. Over time, it mineralizes and turns into tartar, which intensifies the pathological process.

2.2 Inflammatory response

Under the influence of microbial factors, inflammation of the gums (gingivitis) develops. Main symptoms:

- hyperemia;
- edema;
- bleeding;
- soreness.

2.3. Process propagation


If left untreated, the inflammation spreads to deeper periodontal tissues, leading to periodontitis. This occurs:

- destruction of connective tissue attachment;
- formation of periodontal pockets;
- alveolar bone resorption.

2.4 Immunological mechanisms

The body's immune response plays a dual role:

- on the one hand, it is aimed at eliminating infection;
- on the other hand, it can contribute to damage to one's own tissues.

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The following are involved in the process:

- neutrophils;
- macrophages;
- lymphocytes;
- inflammatory mediators (cytokines, prostaglandins).

2.5. Vascular changes

Inflammation is accompanied by changes in microcirculation:

- vasodilation;
- increasing their permeability;
- tissue trophic disorder.

3. Factors influencing the course of the disease

The course of periodontal diseases depends on:

- patient's age;
- general condition of the body;
- level of oral hygiene;
- timeliness of treatment;
- individual reactivity of the organism.

Conclusion

The etiology and pathogenesis of periodontal disease are a complex, multifactorial process in which plaque plays a leading role, along with local and systemic factors. Understanding these mechanisms allows us to substantiate modern approaches to the prevention and treatment of periodontal disease.

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Lecture 3. Catarrhal gingivitis. Hypertrophic gingivitis

The purpose of the lecture:

To develop students' knowledge about the clinical forms of gingivitis (catarrhal



and hypertrophic), their etiology, pathogenesis, clinical picture, diagnosis and treatment principles.

The issues under consideration:

1. The concept of gingivitis and its classification.
2. Etiology and pathogenesis of catarrhal gingivitis.
3. Clinical picture and diagnosis of catarrhal gingivitis.
4. Etiology and pathogenesis of hypertrophic gingivitis.
5. Clinical forms of hypertrophic gingivitis.
6. Diagnosis, differential diagnosis and treatment of gingivitis.

Introduction

Gingivitis is an inflammatory disease of the gums that occurs without disrupting the integrity of the periodontal attachment. It is the earliest and most reversible form of periodontal disease. The most common forms are catarrhal and hypertrophic gingivitis.

1. Catarrhal gingivitis

Etiology

The main cause of catarrhal gingivitis is microbial dental plaque. Additional factors include:

- poor oral hygiene;
- tartar;
- carious cavities;
- orthodontic and orthopedic structures;
- general diseases of the body.

Pathogenesis

Under the influence of microorganism toxins, an inflammatory reaction of the gums develops, accompanied by a disruption of microcirculation and increased vascular permeability.

Clinical picture


Characteristic features:

- hyperemia of the gums;
- edema;
- bleeding when brushing teeth;
- unpleasant sensations (itching, burning);
- absence of destruction of the gingival attachment.

A distinction is made between acute and chronic courses.

Diagnostics

The diagnosis is established on the basis of:

	Educational institution Royal Metropolitan University
	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

- patient complaints;
- clinical examination;
- hygiene and inflammation indices.

Treatment

Main treatment areas:

- professional oral hygiene;
- elimination of local irritants;
- antiseptic treatment;
- anti-inflammatory therapy;
- teaching the patient oral hygiene.

2. Hypertrophic gingivitis

Etiology

The causes of hypertrophic gingivitis are similar to catarrhal gingivitis, but an important role is played by:

- hormonal changes (puberty, pregnancy);
- prolonged exposure to local irritants;
- taking certain medications.

Pathogenesis

Characterized by the proliferation of gum tissue due to chronic inflammation and disruption of regeneration processes.

Clinical forms

There are two main forms:

1. Edematous form

- pronounced swelling of the gums;
- bright hyperemia;
- bleeding;
- soft consistency of tissues.

2. Fibrous form

- dense gums;
- pale pink color;
- proliferation of interdental papillae;
- minor bleeding.

Clinical picture

An increase in gum volume, partial coverage of the tooth crowns, difficulty in hygiene, and possible complaints about a cosmetic defect are observed.

Diagnostics

Includes:



- clinical examination;
- determination of the degree of gum growth;
- differential diagnosis with other forms of gingival hyperplasia.

Treatment

Depends on the form of the disease:

- in the edematous form:
 - anti-inflammatory therapy;
 - elimination of local factors;
- in fibrous form:
 - surgical treatment (gingivectomy);
 - subsequent anti-inflammatory therapy.

Oral hygiene training is mandatory.

3. Prevention of gingivitis

Preventive measures include:

- regular and proper oral hygiene;
- professional teeth cleaning;
- timely treatment of dental diseases;
- monitoring of general health.

Conclusion

Catarrhal and hypertrophic gingivitis are common forms of inflammatory gum disease. With timely diagnosis and proper treatment, these conditions are reversible. Maintaining good oral hygiene and eliminating risk factors are key to prevention.

List of references.

1. Periodontology: national guide / ed. O.O. Yanushevich. - M.: GEOTAR-Media, 2018.
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Lecture 4. Vincent's ulcerative gingivitis (necrotizing ulcerative gingivitis)

The purpose of the lecture:

To develop students' knowledge of the clinical manifestations, etiology, pathogenesis, diagnosis and principles of treatment of Vincent's ulcerative gingivitis (necrotizing ulcerative gingivitis).

The issues under consideration:



1. The concept and place of necrotizing ulcerative gingivitis in the classification of periodontal diseases.
2. Etiology and risk factors of the disease.
3. Pathogenesis of Vincent's ulcerative gingivitis.
4. Clinical picture and stages of the disease.
5. Diagnostics and differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Vincent's ulcerative gingivitis (necrotizing ulcerative gingivitis) is an acute infectious and inflammatory disease of the gums, characterized by necrosis and ulceration of the interdental papillae and marginal gingiva. The disease is accompanied by severe pain, intoxication, and rapid progression if left untreated.

1. Etiology

The main cause of the disease is the association of anaerobic microflora:

- *Fusobacteriumnucleatum*;
- *Treponemaspp.*;
- *Prevotellaintermedia*.

Risk factors:

- poor oral hygiene;
- stress and fatigue;
- smoking;
- immunodeficiency states;
- acute infectious diseases;
- hypovitaminosis (especially vitamin C).

2. Pathogenesis

The pathogenesis is associated with an imbalance between the oral microflora and the body's defense mechanisms. Under the influence of anaerobic infection, the following occurs:

- gum tissue necrosis;
- destruction of epithelium and connective tissue;
- pronounced inflammatory reaction;
- microcirculation disorder.

A rapidly progressing lesion develops with the formation of ulcerative-necrotic defects.

3. Clinical picture

The disease usually begins acutely.

Main symptoms:



- sharp pain in the gum;
- bleeding;
- unpleasant putrid odor from the mouth;
- necrosis of the interdental papillae (“crater-shaped” defects);
- grayish-white coating on the surface of the affected areas;
- enlargement of regional lymph nodes;
- fever and general weakness are possible.

4. Stages of the course

- **Acute stage**- severe pain, tissue necrosis, intoxication.
- **Subacute stage**- reduction of pain, beginning of ulcer cleansing.
- **Chronic stage**— partial tissue restoration, but residual gum deformations are possible.

5. Diagnostics

The diagnosis is established on the basis of:

- characteristic clinical picture;
- patient complaints;
- examination of the oral cavity;
- microbiological analysis (as indicated).

Differential diagnosis is carried out with:

- acute herpetic gingivostomatitis;
- agranulocytosis;
- oral diphtheria;
- ulcerative-necrotic lesions in systemic diseases.

6. Treatment

The treatment is comprehensive and includes:

Local therapy:

- professional oral hygiene;
- antiseptic rinses (chlorhexidine, etc.);
- removal of necrotic masses;
- applications of anti-inflammatory drugs.

General therapy:

- antibacterial drugs (as indicated);
- desensitization therapy;
- vitamin therapy (especially vitamin C and group B);
- strengthening the immune system.

7. Prevention

- regular oral hygiene;



- oral cavity sanitation;
- elimination of chronic foci of infection;
- correction of the general condition of the body;
- quitting smoking;
- proper nutrition and a work and rest regime.

Conclusion

Vincent's ulcerative gingivitis is a severe, acute form of inflammatory gum disease that requires timely and comprehensive treatment. Early diagnosis and elimination of risk factors help prevent complications and the progression to chronic periodontal disease.

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2. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.
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Lecture 5. Periodontitis

The purpose of the lecture:

To develop in students a systematic understanding of periodontitis as an inflammatory and destructive disease of the periodontium, its etiology, pathogenesis, clinical forms, diagnosis and treatment principles.

The issues under consideration:

1. The concept of periodontitis and its place in the structure of periodontal diseases.
2. Etiology and risk factors for the development of periodontitis.
3. Pathogenesis of periodontitis.
4. Clinical forms and classification of periodontitis.
5. Diagnostics and differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Periodontitis is a chronic inflammatory disease of the periodontal tissues, characterized by progressive destruction of the periodontium and alveolar bone, the formation of periodontal pockets and, if left untreated, tooth loss.

1. Etiology



The main etiological factor of periodontitis is microbial biofilm (dental plaque) containing pathogenic anaerobic microorganisms.

Additional factors include:

- poor oral hygiene;
- tartar;
- malocclusion;
- traumatic occlusion;
- smoking;
- systemic diseases (diabetes mellitus, blood diseases);
- stress and decreased immunity.

2. Pathogenesis

Periodontitis develops as a result of the interaction of microbial factors and the body's immune response.

Main stages:

1. Formation of dental plaque and its maturation.
2. Activation of the inflammatory response in the gums.
3. Spread of inflammation to deeper periodontal tissues.
4. Destruction of the connective tissue attachment of the tooth.
5. Formation of periodontal pockets.
6. Alveolar bone resorption.

The following play an important role:

- cytokines (IL-1, TNF- α);
- prostaglandins;
- enzymes of neutrophils and macrophages.

3. Clinical picture

Main features:

- bleeding gums;
- bad breath;
- tooth mobility;
- formation of periodontal pockets;
- exposure of tooth roots;
- purulent discharge from pockets (during exacerbation).

4. Classification of periodontitis

Downstream:

- spicy;
- chronic;
- exacerbated chronic.



By prevalence:

- localized;
- generalized.

By severity:

- light;
- average;
- heavy.

5. Diagnostics

Diagnostics includes:

- clinical examination;
- determination of the depth of periodontal pockets;
- assessment of tooth mobility;
- X-ray examination (orthopantomography);
- hygiene and inflammation indices.

Differential diagnosis is carried out with:

- gingivitis;
- periodontosis;
- systemic periodontal lesions.

6. Treatment

Treatment of periodontitis is complex and includes:

Conservative treatment:

- professional oral hygiene;
- removal of dental plaque;
- antiseptic therapy;
- anti-inflammatory drugs;
- systemic antibiotic therapy (as indicated).

Surgical treatment:

- curettage of periodontal pockets;
- patch operations;
- regenerative methods.

Orthopedic treatment:

- splinting of loose teeth;
- occlusion correction.

7. Prevention

- regular oral hygiene;
- professional teeth cleaning;
- timely treatment of gingivitis;



- elimination of risk factors;
- control of systemic diseases.

Conclusion

Periodontitis is one of the leading causes of tooth loss in adults. The disease is chronic and progressive and requires a comprehensive treatment approach. Early diagnosis and prevention play a key role in preserving periodontal tissue.

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Lecture 6. Periodontal disease

The purpose of the lecture:

To develop students' understanding of periodontosis as a degenerative disease of the periodontium, its etiology, pathogenesis, clinical manifestations, diagnosis, differential diagnosis and treatment principles.

The issues under consideration:

1. The concept of periodontosis and its place in the classification of periodontal diseases.
2. Etiology and risk factors for the development of periodontosis.
3. Pathogenesis of dystrophic changes in the periodontium.
4. Clinical picture of periodontosis.
5. Diagnostics and differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Periodontosis is a chronic, degenerative disease of the periodontal tissues, characterized primarily by atrophic changes without a pronounced inflammatory component. The disease is less common than inflammatory forms of periodontal disease, but it is progressive and can lead to tooth loss.

1. Etiology



The exact cause of periodontal disease has not been definitively established. The disease is considered a multifactorial condition.

Main risk factors:

- disturbances of microcirculation in periodontal tissues;
- age-related changes;
- endocrine disorders (diabetes mellitus, thyroid dysfunction);
- atherosclerotic changes in blood vessels;
- hereditary predisposition;
- tissue hypoxia;
- systemic diseases of the body.

2. Pathogenesis

The pathogenesis is based on dystrophic processes in periodontal tissues.

Main mechanisms:

- disruption of the blood supply to the periodontium;
- decrease in metabolic processes;
- degeneration of periodontal collagen fibers;
- gradual resorption of alveolar bone;
- absence of a pronounced inflammatory response in the early stages.

3. Clinical picture

Periodontosis develops slowly and can remain asymptomatic for a long time.

Main features:

- paleness and hardening of the gums;
- gum recession (exposure of the necks and roots of the teeth);
- wedge-shaped defects;
- increased tooth sensitivity;
- absence of significant bleeding;
- slowly progressive tooth mobility in the later stages.

4. Stages of periodontal disease

- **Initial stage:** minor gum recession, minimal complaints.
- **Developed stage:** severe gum atrophy, exposure of tooth roots.
- **Late stage:** significant bone resorption, mobility and loss of teeth.

5. Diagnostics

Diagnostics includes:



- clinical examination;
- assessment of gum recession;
- X-ray examination (uniform atrophy of bone tissue);
- assessment of tooth mobility;
- exclusion of inflammatory periodontal diseases.

Differential diagnosis is carried out with:

- chronic periodontitis;
- age-related gum atrophy;
- systemic periodontal lesions.

6. Treatment

Treatment of periodontosis is aimed at improving tissue trophism and stabilizing the process.

Conservative treatment:

- improving microcirculation (vascular drugs);
- vitamin therapy;
- physiotherapy (laser therapy, darsonvalization);
- gum massage;
- elimination of risk factors.

Orthopedic treatment:

- splinting of teeth in case of mobility;
- prosthetics of dental defects.

Surgical treatment (as indicated):

- gum plastic surgery;
- directed tissue regeneration.

7. Prevention

- control of systemic diseases;
- maintaining normal microcirculation;
- regular oral hygiene;
- preventive dental examinations;
- healthy lifestyle.

Conclusion

Periodontosis is a chronic, degenerative disease of the periodontium that progresses slowly. The absence of significant inflammation in the early stages



makes early diagnosis difficult. Timely detection and comprehensive treatment aimed at improving tissue nutrition and preserving teeth are crucial.

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Lecture 7. Periodontolysis

The purpose of the lecture:

To develop students' understanding of periodontolysis as a severe, progressive, destructive periodontal lesion, its causes, mechanisms of development, clinical manifestations, diagnosis, and principles of patient management.

The issues under consideration:

1. The concept of periodontolysis and its place in periodontal pathology.
2. Etiological factors in the development of periodontolysis.
3. Pathogenesis of destructive processes in the periodontium.
4. Clinical picture of the disease.
5. Diagnostics and differential diagnostics.
6. Treatment principles and prognosis.

Introduction

Periodontolysis is a severe, progressive disorder of periodontal tissues characterized by rapid and extensive destruction of all periodontal structures: the gums, periodontium, alveolar bone, and dental ligaments. The disease is considered a destructive form of periodontal pathology and often leads to early tooth loss.

1. Etiology

Periodontolysis is a polyetiological disease.

Main reasons:

- severe systemic diseases (leukemia, immunodeficiency);
- genetic disorders of connective tissue;
- severe endocrine disorders;



- severe disturbances of the immune response;
- aggressive microflora of the oral cavity;
- long-standing untreated inflammatory processes of the periodontium.

Risk factors:

- poor oral hygiene;
- stress;
- hypovitaminosis;
- general exhaustion of the body.

2. Pathogenesis

Periodontolysis is based on a combination of inflammatory and destructive processes with a predominance of tissue destruction.

Main mechanisms:

- activation of aggressive microflora;
- severe immune dysfunction;
- uncontrolled inflammatory response;
- destruction of collagen fibers of the periodontium;
- accelerated resorption of alveolar bone;
- tissue regeneration disorder.

The process is rapidly progressive and affects all periodontal structures simultaneously.

3. Clinical picture

Periodontolysis develops quickly and is characterized by a severe course.

Main symptoms:

- severe bleeding of the gums;
- sharp pain;
- purulent discharge from periodontal pockets;
- rapid formation of deep periodontal pockets;
- high degree of tooth mobility;
- exposure of tooth roots;
- bad breath;
- rapid loss of teeth.

The patient's general condition may worsen: weakness, subfebrile temperature, signs of intoxication.

4. Diagnostics



The diagnosis is based on a comprehensive assessment:

- clinical examination;
- assessment of the depth of periodontal pockets;
- degrees of tooth mobility;
- X-ray examination (pronounced destruction of bone tissue);
- laboratory tests (if indicated - immunological and hematological tests).

Differential diagnosis is carried out with:

- aggressive periodontitis;
- ulcerative-necrotic lesions of the periodontium;
- systemic blood diseases;
- severe periodontitis.

5. Treatment

Treatment of periodontolysis is complex and is carried out in a specialized dental care setting.

Conservative treatment:

- intensive antimicrobial therapy;
- anti-inflammatory drugs;
- immunocorrective therapy;
- antiseptic treatment of the oral cavity;
- professional hygiene.

Surgical treatment:

- curettage and open curettage of periodontal pockets;
- patch operations;
- removal of hopeless teeth.

Orthopedic treatment:

- splinting of teeth (if possible to preserve);
- subsequent prosthetics.

6. Forecast

The prognosis for periodontolysis is generally unfavorable and depends on:

- timeliness of diagnosis;
- severity of the underlying disease;
- the state of the patient's immune system;
- quality of the treatment provided.

Conclusion



Periodontolysis is one of the most severe forms of destructive periodontal disease, characterized by the rapid destruction of all periodontal structures. The disease requires early detection, a comprehensive approach to treatment, and close collaboration between the dentist and other specialists.

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1. Periodontology: national guide / ed. O.O. Yanushevich. - M.: GEOTAR-Media, 2018.
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Lecture 8. Local treatment of periodontal diseases

The purpose of the lecture:

To develop in students a systematic understanding of the principles, methods, and means of local treatment of periodontal diseases, as well as the skills to select rational treatment tactics depending on the clinical form and severity of the process.

The issues under consideration:

1. General principles of local treatment of periodontal diseases.
2. Stages of oral cavity rehabilitation in periodontal diseases.
3. Professional oral hygiene.
4. Antiseptic and anti-inflammatory therapy.
5. Mechanical and surgical methods of local treatment.
6. Orthopedic and auxiliary methods in complex therapy.

Introduction

Local treatment of periodontal diseases is a necessary and fundamental part of comprehensive therapy. It aims to eliminate the underlying factors in the oral cavity, suppress inflammation, restore the anatomical and functional state of periodontal tissues, and create conditions for their regeneration.

1. General principles of local treatment

The main principles include:

- elimination of microbial biofilm;



- removal of dental plaque;
- elimination of local traumatic factors;
- reduction of the inflammatory response;
- restoration of normal microflora in the oral cavity;
- individual selection of hygiene products.

2. Stages of local treatment

Treatment is carried out in stages:

1. Professional oral hygiene.
2. Removal of tartar and plaque (ultrasonic and manual treatment).
3. Treatment of periodontal pockets.
4. Anti-inflammatory therapy.
5. Hygiene control and patient education.

3. Professional oral hygiene

It is a mandatory stage of treatment.

Includes:

- removal of soft and hard dental plaque;
- polishing of tooth surfaces;
- enamel fluoridation;
- teaching the patient how to brush his teeth properly.

4. Antiseptic and anti-inflammatory therapy

Local medications are used:

- antiseptic solutions (chlorhexidine, miramistin);
- gels and ointments with anti-inflammatory effect;
- enzyme preparations for cleaning periodontal pockets;
- keratoplastic agents to stimulate regeneration.

5. Mechanical and surgical methods

For more severe forms of periodontal disease, the following are used:

- closed and open curettage;
- scaling and root planning (treatment of tooth roots);
- patch operations;
- elimination of periodontal pockets;
- tooth extraction with poor prognosis.



6. Orthopedic and auxiliary methods

To stabilize the treatment results the following are used:

- temporary and permanent dental splinting;
- occlusion correction;
- manufacturing of prostheses;
- use of mouth guards and splints.

7. The importance of oral hygiene

Personal hygiene is a key factor in successful treatment. The patient must:

- choose the right toothbrush and toothpaste;
- use dental floss and irrigators;
- brush your teeth regularly at least twice a day;
- undergo professional cleaning every 6 months.

Conclusion

Local treatment of periodontal diseases is the foundation of comprehensive therapy and aims to eliminate the underlying etiological factors in the oral cavity.

Treatment effectiveness largely depends on the quality of professional hygiene and the patient's commitment to maintaining personal hygiene.

References (GEOTAR-Media):

1. Periodontology: national guide / ed. O.O. Yanushevich. - M.: GEOTAR-Media, 2018.
2. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
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Lecture 9. General treatment of periodontal diseases

The purpose of the lecture:

To develop students' understanding of the principles and methods of general (systemic) treatment of periodontal diseases, the role of drug therapy, and the influence of the general condition of the body on the effectiveness of treatment.

The issues under consideration:

1. The concept of general treatment of periodontal diseases and its importance.
2. Indications for systemic therapy.



3. Antibacterial therapy.
4. Anti-inflammatory and immunocorrective therapy.
5. Vitamin therapy and metabolic support.
6. Treatment of concomitant systemic diseases.

Introduction

General treatment of periodontal diseases is an important component of comprehensive therapy and is aimed at addressing the body as a whole. It is carried out taking into account the etiology, pathogenesis, and severity of the disease, as well as the presence of concomitant somatic pathologies. The effectiveness of local treatment is significantly increased by appropriate systemic therapy.

1. The importance of general treatment

General treatment is necessary for:

- suppression of pathogenic microflora;
- correction of immune disorders;
- reducing the severity of the inflammatory reaction;
- improvement of metabolic processes in periodontal tissues;
- increasing the body's regenerative capabilities.

2. Indications for systemic therapy

General treatment is prescribed for:

- moderate and severe periodontitis;
- aggressive forms of periodontal diseases;
- exacerbation of a chronic process;
- the presence of severe intoxication;
- concomitant systemic diseases.

3. Antibacterial therapy

Antibiotics are used to suppress pathogenic microflora.

The most commonly used are:

- drugs of the metronidazole group;
- tetracyclines;
- amoxicillin and its combinations;
- macrolides.

Principles of appointment:

- validity;



- course application;
- taking into account the sensitivity of microflora;
- combination with local therapy.

4. Anti-inflammatory and immunocorrective therapy

They are used to reduce inflammation activity and normalize the immune response.

Used:

- nonsteroidal anti-inflammatory drugs;
- immunomodulators;
- drugs that normalize phagocytosis and cellular immunity.

5. Vitamin therapy and metabolic support

Prescribed to improve the trophism of periodontal tissues:

- B vitamins (B1, B6, B12);
- vitamin C (ascorbic acid);
- vitamin D;
- antioxidants.

Metabolic therapy helps improve microcirculation and tissue regeneration.

6. Treatment of concomitant diseases

Correction of general somatic pathology is of great importance:

- endocrine disorders (diabetes mellitus, thyroid disease);
- diseases of the gastrointestinal tract;
- blood diseases;
- immunodeficiency states.

Treatment is carried out in collaboration with doctors of related specialties.

7. Integrated approach

The most effective combination is:

- local treatment;
- general treatment;
- physiotherapy;
- orthopedic correction;
- preventive measures.

Conclusion



General treatment of periodontal disease plays a key role in achieving sustained remission and stabilizing the pathological process. Only a comprehensive approach, including systemic therapy and local interventions, can achieve effective treatment results and prevent relapse.

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4th year, 8th term

Lecture 1 (4th year, 8th semester). Structure of the oral mucosa (OM).

Examination methods

The purpose of the lecture:

To develop in students a systematic understanding of the structure of the oral mucosa, its functional characteristics, and to master the basic methods of clinical examination of the oral mucosa.

The issues under consideration:

1. Anatomical and histological structure of the oral mucosa.
2. Classification of oral mucosal diseases by functional and morphological characteristics.
3. Features of the structure of various parts of the oral cavity.
4. Functions of the oral mucosa.
5. Methods of clinical examination of the oral cavity.
6. Additional methods for diagnosing oral mucosal diseases.

Introduction

The oral mucosa (OM) is a complex structural and functional system that provides protection, participates in digestion, provides sensitivity, and supports immune defense. Understanding its structure is essential for the diagnosis and treatment of oral diseases.

1. Structure of the oral mucosa



The SOPR consists of three main layers:

1. Epithelium

Stratified squamous epithelium, which can be:

- keratinizing (gums, hard palate);
- non-keratinizing (cheeks, lips, floor of the mouth).

Functions of the epithelium: protective, barrier, regenerative.

2. Lamina propria

It consists of connective tissue and contains:

- blood vessels;
- nerve endings;
- cellular elements of the immune system.

3. Submucosa

Not present in all parts of the oral mucosa. It ensures the mobility of the mucosa and contains fatty tissue and glands.

2. Classification of the SOPR

According to functional features, the following are distinguished:

- **Chewing mucosa**(gum, hard palate);
- **Integumentary mucosa**(cheeks, lips, floor of the mouth);
- **Specialized mucous membrane**(dorsal surface of the tongue).

3. Features of different departments

- **Gum**- dense, immobile, keratinized mucous membrane.
- **Cheeks and lips**- mobile, non-keratinizing mucous membrane.
- **Language**- contains papillae, participates in taste sensitivity.
- **Hard sky**- dense chewing mucosa with pronounced fixation to the periosteum.

4. Functions of the SOPR

Main functions:

- protective (barrier against mechanical and microbial factors);
- sensory (perception of pain, temperature, taste);
- secretory (involvement of the salivary glands);
- immune (local immunity);
- regenerative (high recovery capacity).

5. Methods of examination of the oral cavity



Clinical methods:

- collection of complaints and anamnesis;
- visual inspection;
- palpation;
- assessment of color, moisture, and integrity of the mucous membrane;
- determination of pain sensitivity.

Instrumental methods:

- stomatoscopy;
- fluorescent diagnostics;
- staining of the mucous membrane (iodine tests, etc.).

6. Additional diagnostic methods

- cytological examination;
- histological examination of biopsies;
- microbiological examination;
- immunological tests;
- PCR diagnostics (for infectious lesions).

Conclusion

The oral mucosa is an important anatomical and functional system that ensures the protection and normal functioning of the oral cavity. Understanding its structure and examination methods is the basis for diagnosing a wide range of dental diseases.

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Lecture 2 (4th year, 8th semester). Classification of diseases of the oral mucosa (OM). Morphological elements of lesions

The purpose of the lecture:

To develop students' understanding of modern principles for classifying diseases of



the oral mucosa, and to master the morphological elements of oral mucosal lesions necessary for clinical diagnosis.

The issues under consideration:

1. Principles of classification of diseases of the oral mucosa.
2. The main groups of diseases of the oral mucosa.
3. Primary morphological elements of the lesion.
4. Secondary morphological elements of the lesion.
5. Clinical significance of morphological elements in diagnostics.
6. Differential diagnostics of lesions of the oral mucosa.

Introduction

Diseases of the oral mucosa (OM) represent a broad group of pathologies with varying etiologies and clinical courses. Correct classification and the ability to identify the morphological elements of lesions are the foundation of clinical diagnostics in dentistry.

1. Classification of diseases of the oral mucosa

Diseases of the oral mucosa are classified according to several principles:

1.1 By etiology:

- infectious (viral, bacterial, fungal);
- allergic;
- traumatic;
- autoimmune;
- systemic;
- tumor and precancerous.

1.2. Downstream:

- sharp;
- chronic;
- recurring.

1.3. By the nature of the lesion:

- inflammatory;
- dystrophic;
- hyperplastic;
- ulcerative-necrotic.

2. Main groups of oral mucosal diseases

- infectious and inflammatory diseases (stomatitis);



- viral infections (herpes infections, etc.);
- fungal infections (candidiasis);
- allergic reactions;
- traumatic injuries;
- precancerous conditions;
- tumor processes.

3. Morphological elements of the lesion of the oral mucosa

Morphological elements are divided into primary and secondary.

3.1 Primary morphological elements

They occur immediately at the beginning of the pathological process:

- **Macula**- change in the color of the mucous membrane without changing the relief.
- **Papule**- a dense, raised formation up to 5 mm.
- **tubercle**- a deeper infiltrative formation.
- **Knot**- a large dense formation in the deep layers.
- **Vesicula**— a cystic formation with serous contents.
- **Bubble (bulla)**- a large cystic formation.
- **Pustule**- a cystic formation with purulent contents.

3.2 Secondary morphological elements


They are formed as a result of the evolution of primary elements:

- **Erosion**- superficial epithelial defect without scarring.
- **Ulcer**- a deep defect with damage to all layers of the mucosa.
- **Crack**- linear tissue defect.
- **Crust**- dried exudate on the surface of the lesion.
- **Flake**- rejected horny epithelial cells.
- **Scar**- replacement of normal tissue with connective tissue.
- **Atrophy**- thinning of the mucous membrane.

4. Clinical significance of morphological elements

The definition of morphological elements allows:

- to establish the nature of the pathological process;
- determine the stage of the disease;
- conduct differential diagnostics;
- choose a treatment tactic.

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5. Differential diagnostics

Morphological elements help to distinguish:

- infectious and non-infectious lesions;
- benign and malignant processes;
- acute and chronic diseases;
- specific and nonspecific lesions of the oral mucosa.

Conclusion

Classification of oral mucosal diseases and knowledge of the morphological elements of lesions form the basis of a dentist's clinical judgment. Correct interpretation of lesion elements enables timely diagnosis and determination of optimal treatment strategies.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 3 (4th year, 8th semester). Traumatic lesions of the oral mucosa (OM)

The purpose of the lecture:

To develop students' understanding of the causes, mechanisms of development, clinical manifestations, diagnosis and principles of treatment of traumatic lesions of the oral mucosa.

The issues under consideration:

1. The concept of traumatic lesions of the oral mucosa.
2. Classification of traumatic injuries of the mucous membrane.
3. Etiology and risk factors.
4. Pathogenesis of traumatic injuries.
5. Clinical picture of various forms.
6. Diagnostics and differential diagnostics.
7. Principles of treatment and prevention.

Introduction



Traumatic lesions of the oral mucosa (MLOS) are a group of injuries resulting from mechanical, chemical, thermal, or physical factors. They are among the most common pathological conditions in clinical dentistry.

1. Classification of traumatic lesions of the oral mucosa

1.1 By the nature of the damaging factor:

- mechanical;
- chemical;
- thermal;
- physical (electrical, radiation).

1.2. Downstream:

- sharp;
- chronic.

1.3. By depth of damage:

- superficial (erosions, abrasions);
- deep (ulcers, necrosis).

2. Etiology and risk factors

Mechanical factors:

- sharp edges of teeth;
- incorrectly manufactured dentures;
- biting the mucous membrane;
- orthodontic structures.

Chemical factors:

- exposure to acids and alkalis;
- medications when used incorrectly.

Thermal factors:

- hot food and drinks;
- burns of the mucous membrane.

Physical factors:

- ionizing radiation;
- electrical effects (rare).

3. Pathogenesis

Under the influence of a traumatic factor the following occurs:

- damage to the epithelium of the mucous membrane;
- development of an inflammatory reaction;



- microcirculation disorder;
- secondary infection;
- with prolonged exposure - chronic inflammation and ulceration.

4. Clinical picture

Acute traumatic injuries:

- pain at the site of injury;
- hyperemia and edema;
- erosions or ulcers;
- bleeding;
- difficulty eating.

Chronic traumatic injuries:

- long-term non-healing ulcers;
- compaction of the edges of the lesion;
- granulation;
- possible hyperkeratotic reaction.

5. Diagnostics

The diagnosis is established on the basis of:

- clinical examination;
- anamnesis (presence of a traumatic factor);
- localization of the lesion;
- dynamics of healing after eliminating the cause.

Differential diagnosis is carried out with:

- aphthous stomatitis;
- infectious lesions of the oral mucosa;
- precancerous conditions;
- specific infections.

6. Treatment

Basic principles of treatment:

- elimination of the traumatic factor;
- antiseptic treatment;
- anti-inflammatory therapy;
- keratoplastic drugs to accelerate healing;
- painkillers if necessary.

For chronic lesions:



- mandatory exclusion of oncopathology;
- biopsy for long-term non-healing ulcers.

7. Prevention

- correction of sharp edges of teeth;
- high-quality prosthetics;
- compliance with safety precautions during dental treatment;
- elimination of bad habits (biting cheeks, lips);
- regular preventive examinations.

Conclusion

Traumatic lesions of the oral mucosa are a common pathology caused by various external factors. Eliminating the underlying cause is key to successful treatment. In chronic cases, it is imperative to exclude precancerous and malignant processes.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 4 (4th year, 8th semester). Herpes simplex. Shingles.

The purpose of the lecture:

To develop students' understanding of the etiology, pathogenesis, clinical manifestations, diagnosis, differential diagnosis and principles of treatment of herpetic lesions of the oral mucosa.

The issues under consideration:

1. General characteristics of herpes infections of the oral mucosa.
2. Etiology of herpes simplex and herpes zoster.
3. Pathogenesis of herpes infection.
4. Clinical picture of herpes simplex.
5. Clinical picture of herpes zoster.
6. Diagnostics and differential diagnostics.



7. Principles of treatment and prevention.

Introduction

Herpetic lesions of the oral mucosa are viral infections caused by viruses of the Herpesviridae family. The most significant in dental practice are herpes simplex and herpes zoster, which differ in etiology, course, and clinical manifestations.

1. Herpes simplex

Etiology

The causative agent is the herpes simplex virus (HSV-1 and HSV-2), most often HSV-1.

Infection occurs through contact, airborne droplets or vertical transmission.

Pathogenesis

After the initial infection, the virus remains latent in the nerve ganglia (trigeminal nerve). Under the influence of provoking factors (stress, hypothermia, weakened immunity), the virus is reactivated.

Clinical picture

- burning and itching in the affected area;
- the appearance of groups of bubbles on a hyperemic base;
- the blisters quickly burst, forming erosions;
- pain;
- possible increase in temperature (in case of primary infection).

Most often, the mucous membrane of the lips, cheeks, and palate is affected.

2. Herpes zoster (shingles)

Etiology

The causative agent is the Varicella Zoster Virus (VZV), which also causes chickenpox. After infection, the virus persists in the nerve ganglia.

Pathogenesis

Viral reactivation occurs when immunity is weakened. The virus spreads along the nerves, causing inflammation and damage to the corresponding dermatome or innervation zone.

Clinical picture

- severe neuralgic pain along the nerve;
- unilateral lesion;
- group vesicular eruptions;
- erosions and crusts after opening of blisters;



- possible hyperthermia and intoxication;
- damage strictly in the innervation zone (often the trigeminal nerve).

3. Diagnostics

The diagnosis is established on the basis of:

- clinical picture;
- anamnesis (relapses, immune status);
- localization and nature of the rash;
- if necessary - laboratory methods (PCR, serology).

Differential diagnosis is carried out with:

- aphthous stomatitis;
- traumatic lesions of the oral mucosa;
- allergic reactions;
- bacterial infections.

4. Treatment

General treatment:

- antiviral drugs (acyclovir, valacyclovir);
- immunomodulators;
- analgesics for severe pain (especially with shingles);
- vitamin therapy.

Local treatment:

- antiseptic treatment;
- antiviral ointments and gels;
- keratoplastic agents;
- pain-relieving applications.

5. Prevention

- strengthening the immune system;
- elimination of stress factors;
- timely treatment of chronic diseases;
- maintaining oral hygiene;
- preventing contact with patients in the acute phase of infection.

Conclusion



Oral herpetic lesions are a common viral condition with a recurring course. Early diagnosis and timely antiviral therapy can reduce the severity of the disease and prevent complications.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.
4. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.

Lecture 5 (4th year, 8th semester). HIV infection in the oral cavity

The purpose of the lecture:

To develop students' understanding of the clinical manifestations of HIV infection in the oral cavity, the characteristics of pathogenesis, diagnosis, differential diagnosis, and principles of patient care.

The issues under consideration:

1. General characteristics of HIV infection and its importance in dentistry.
2. Etiology and pathogenesis of HIV infection.
3. Classification of oral lesions in HIV infection.
4. The main clinical manifestations in the oral cavity.
5. Diagnosis and the role of the dentist in identifying HIV infection.
6. Differential diagnostics.
7. Principles of treatment and prevention.

Introduction

HIV infection is a chronic infectious disease caused by the human immunodeficiency virus, leading to progressive damage to the immune system. The oral cavity is often one of the first areas to show signs of immunodeficiency, so dentists play a crucial role in early detection.

1. Etiology and pathogenesis

Etiology

The causative agent is the human immunodeficiency virus (HIV-1, HIV-2), which belongs to retroviruses.



Pathogenesis

The virus infects CD4+ T lymphocytes, resulting in:

- decreased immune protection;
- development of opportunistic infections;
- the occurrence of tumor processes;
- chronic progressive immunodeficiency (AIDS).

2. Classification of oral lesions in HIV

Lesions are divided into:

- fungal;
- viral;
- bacterial;
- neoplastic;
- idiopathic.

3. Clinical manifestations in the oral cavity

3.1 Fungal infections

- candidiasis (pseudomembranous, erythematous, hyperplastic);
- frequent relapses and resistance to treatment.

3.2. Viral lesions

- herpes infections (frequent relapses, severe course);
- Hairy leukoplakia of the tongue (associated with Epstein-Barr virus).

3.3. Bacterial lesions

- ulcerative necrotic gingivitis;
- ulcerative necrotic periodontitis with rapid tissue destruction.

3.4. Tumor lesions

- Kaposi's sarcoma (bluish-violet lesions on the mucous membrane);
- non-Hodgkin's lymphomas.

3.5. Idiopathic lesions

- aphthous and ulcerative lesions of unknown etiology.

4. The role of the dentist in diagnosis

A dentist may be the first to suspect HIV infection if:

- multiple recurrent lesions of the oral mucosa;
- severe candidiasis;
- ulcerative-necrotic processes;
- atypical tumor-like formations.



If there is a suspicion, the patient is sent for laboratory testing (ELISA, PCR).

5. Diagnostics

Based on:

- clinical data;
- anamnesis;
- immunological status (CD4+);
- laboratory confirmation of HIV infection.

6. Differential diagnostics

Held from:

- candidiasis of other etiology;
- herpetic lesions;
- Vincent's ulcerative necrotic gingivitis;
- oncological diseases of the oral mucosa;
- systemic blood diseases.

7. Treatment

The treatment is comprehensive and includes:

General treatment:

- antiretroviral therapy (ART);
- treatment of opportunistic infections;
- immunocorrective therapy.

Local treatment:

- antiseptic treatment;
- antifungal and antiviral drugs;
- anti-inflammatory therapy;
- painkillers if necessary.

8. Prevention

- compliance with infection safety standards;
- use of personal protective equipment;
- early detection of HIV infection;
- regular monitoring of patients at risk;
- health education work.

Conclusion



HIV infection is important in dental practice because it often manifests in the oral cavity in the early stages of immunodeficiency. Dentists must be able to recognize characteristic oral mucosal lesions, promptly refer patients for examination, and ensure safe medical care.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
4. Clinical Dentistry: A Textbook / edited by A.I. Abdurakhmanov. — Moscow: GEOTAR-Media, 2019.

Lecture 6 (4th year, 8th semester). Impetigo. Chancriform pyoderma

The purpose of the lecture:

To develop students' understanding of pustular lesions of the skin and oral mucosa, their clinical manifestations, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. Concept and general characteristics of pyoderma.
2. Etiology of impetigo and chancroid pyoderma.
3. Pathogenesis of pustular lesions.
4. Clinical picture of impetigo.
5. Clinical picture of chancroid pyoderma.
6. Diagnostics and differential diagnostics.
7. Principles of treatment and prevention.

Introduction

Pyoderma is a group of pustular skin and mucous membrane conditions caused by bacteria (most often staphylococci and streptococci). In the oral cavity and perioral region, they can mimic other infectious and specific diseases, requiring careful diagnosis.

1. Impetigo



Etiology

Pathogens:

- Streptococcus pyogenes;
- Staphylococcus aureus;
- mixed flora.

Pathogenesis

The infection penetrates through microtraumas of the skin and mucous membranes, causing superficial purulent inflammation with the formation of blisters and crusts.

Clinical picture

- small vesicles with serous-purulent contents;
- rapid opening with the formation of erosions;
- "honey" yellowish crusts;
- moderate itching;
- The skin around the mouth is most often affected.

2. Chancriform pyoderma

Etiology

Pathogens: staphylococci and streptococci, more often with decreased immunity.

Pathogenesis

A deep infiltrate with tissue necrosis is formed, which makes the lesion similar to hard chancre (syphilis).

Clinical picture

- a single ulcer with a dense infiltrated base;
- clear, dense edges;
- painlessness or mild pain;
- serous-purulent discharge;
- enlargement of regional lymph nodes.

3. Diagnostics

Based on:

- clinical picture;
- bacteriological examination;
- anamnesis;
- exclusion of specific infections (syphilis, tuberculosis).

4. Differential diagnostics

Held from:



- primary syphilis;
- tuberculous ulcers;
- traumatic lesions of the oral mucosa;
- oncological processes.

5. Treatment

General treatment:

- antibiotics (penicillins, macrolides);
- antihistamines;
- general strengthening therapy.

Local treatment:

- antiseptic treatment;
- antibacterial ointments;
- removal of crusts and cleansing of lesions.

6. Prevention

- maintaining hygiene;
- timely treatment of microtraumas;
- strengthening the immune system;
- sanitation of foci of chronic infection.

Conclusion

Impetigo and chancroid pyoderma are bacterial pustular lesions that can mimic specific diseases. Prompt diagnosis and differential diagnosis with syphilis and other infections are essential.

References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 7 (4th year, 8th semester). Oral tuberculosis

The purpose of the lecture:

To develop students' understanding of the manifestations of tuberculosis in the oral



cavity, the characteristics of its clinical course, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. General characteristics of tuberculosis as an infectious disease.
2. Routes of infection of the oral mucosa.
3. Pathogenesis of tuberculous lesions of the oral mucosa.
4. Clinical forms of tuberculosis in the oral cavity.
5. Diagnostics and differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Tuberculosis is a chronic infectious disease caused by *Mycobacterium tuberculosis*. Oral lesions are rare and typically secondary, developing following pulmonary tuberculosis.

1. Routes of infection

- hematogenous route;
- lymphogenous pathway;
- contact route (through sputum in active pulmonary tuberculosis).

2. Pathogenesis

The development of the tuberculosis process in the oral mucosa is associated with:

- decreased immunity;
- penetration of mycobacteria into the damaged mucous membrane;
- the formation of specific granulomatous inflammation;
- tissue necrosis (caseous necrosis).

3. Clinical picture


Basic forms:

3.1 Primary tuberculosis of the oral cavity (rare)

- ulcer with undermined edges;
- dense base;
- moderate pain;
- slow healing.

3.2. Secondary tuberculosis (more common)

- tuberculous ulcers on the tongue, cheeks, palate;
- pain;

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- serous-purulent discharge;
- granulation and tissue necrosis.

4. Diagnostics

- clinical examination;
- anamnesis (presence of pulmonary tuberculosis);
- bacteriological examination (MBT);
- tuberculin tests;
- histological examination (granulomas with caseous necrosis).

5. Differential diagnostics

Held from:

- syphilis;
- oncological ulcers;
- traumatic injuries;
- actinomycosis.

6. Treatment

Conducted in conjunction with a phthisiologist:

General treatment:

- anti-tuberculosis therapy (isoniazid, rifampicin, etc.);
- general strengthening therapy.

Local treatment:

- antiseptics;
- painkillers;
- treatment of ulcerated surfaces.

7. Prevention

- early detection of tuberculosis;
- vaccination (BCG);
- compliance with sanitary and hygienic standards;
- protection of medical personnel.

Conclusion

Tuberculous lesions of the oral cavity are rare but clinically significant conditions that require mandatory differential diagnosis with oncological and syphilitic lesions. Early diagnosis plays a key role in the prognosis.



References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 8 (4th year, 8th semester). Syphilis in the oral cavity (primary period)

The purpose of the lecture:

To develop students' understanding of the clinical manifestations of primary syphilis in the oral cavity, the characteristics of its course, diagnosis and differential diagnosis.

The issues under consideration:

1. General characteristics of syphilis as an infectious disease.
2. Pathogen and routes of transmission of infection.
3. Pathogenesis of syphilis in the oral cavity.
4. Clinical manifestations of primary syphilis.
5. Diagnostics and laboratory confirmation.
6. Differential diagnostics.
7. Principles of treatment and prevention.

Introduction

Syphilis is a chronic infectious disease caused by *Treponema pallidum*. Oral lesions can be observed at all stages of the disease and are important diagnostically.

1. Etiology and routes of infection

The causative agent is *Treponema pallidum*. Transmission routes:

- sexual;
- contact (including oral);
- vertical (from mother to fetus).

2. Pathogenesis



After the pathogen penetrates the mucous membrane, it multiplies and forms a primary lesion—a hard chancre. The infection then spreads lymphogenously and hematogenously.

3. Clinical picture of primary syphilis

The main manifestation is hard chancre:

- single painless ulcer;
- dense cartilaginous base;
- smooth, raised edges;
- smooth bottom;
- serous discharge;
- regional lymphadenitis (painless).

Localization in the oral cavity: lips, tongue, tonsils.

4. Diagnostics

- clinical picture;
- microscopy (dark-field microscopy);
- serological reactions (RW, RPR, TPHA);
- PCR diagnostics.

5. Differential diagnostics

Held from:

- chancroid pyoderma;
- tuberculous ulcers;
- traumatic injuries;
- oncological ulcers.

6. Treatment

- penicillin therapy (main method);
- antibacterial therapy according to regimens;
- observation by a venereologist;
- Oral cavity sanitation.

Conclusion

Primary syphilis in the oral cavity is manifested by a characteristic hard chancre and requires mandatory laboratory confirmation and specific treatment.



References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
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Lecture 9 (4th year, 8th semester). Syphilis in the oral cavity (secondary and tertiary stages)

The purpose of the lecture:

To develop students' understanding of the clinical manifestations of secondary and tertiary syphilis in the oral cavity, diagnostic features, differential diagnostics, and treatment principles.

The issues under consideration:

1. Pathogenesis of secondary and tertiary syphilis.
2. Clinical manifestations of secondary syphilis in the oral cavity.
3. Clinical manifestations of tertiary syphilis.
4. Diagnosis of syphilitic lesions of the oral mucosa.
5. Differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Secondary and tertiary syphilis are characterized by systemic disease and frequent involvement of the oral mucosa. These stages have pronounced clinical manifestations and diagnostic significance.


1. Secondary syphilis

Clinical manifestations in the oral cavity:

- mucous plaques (papular elements);
- erosions and superficial ulcers;
- whitish coating;
- syphilitic tonsillitis (tonsil damage);
- high infectivity.

Characteristic:

- painlessness;
- multiplicity of elements;

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- tendency to relapse.

2. Tertiary syphilis

The main manifestation is gumma:

- deep nodes in the tissues;
- subsequent disintegration with the formation of ulcers;
- dense infiltrates;
- pronounced tissue destruction.

In the oral cavity:

- tongue lesion (gummatous glossitis);
- destruction of bone tissue;
- deformations of soft tissues and palate.

3. Diagnostics

- serological reactions (strongly positive);
- clinical picture;
- medical history;
- consultation with a venereologist;
- PCR and microscopy (as indicated).

4. Differential diagnostics

Held from:

- tuberculosis;
- oncological lesions;
- actinomycosis;
- traumatic ulcers;
- HIV-associated lesions.

5. Treatment

- long-term penicillin therapy;
- specific treatment by a venereologist;
- symptomatic therapy;
- oral cavity sanitation;
- dispensary observation.

Conclusion



Secondary and tertiary syphilis are characterized by diverse and severe lesions of the oral mucosa. Timely diagnosis is of great epidemiological and clinical importance.

References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.

5th year, 9th term

Lecture 1 (5th year, 9th semester). Classification of diseases of the oral mucosa (OM)

The purpose of the lecture:

To develop in students a systematic understanding of modern principles of classification of diseases of the oral mucosa, their etiological and clinical-morphological features.

The issues under consideration:

1. Principles of classification of diseases of the oral mucosa.
2. Classification by etiological features.
3. Classification by morphological changes.
4. Classification by the course of the disease.
5. Classification by clinical forms of lesions.
6. The importance of classification in clinical practice.

Introduction

Diseases of the oral mucosa (OM) represent a large and clinically diverse group of pathologies, including inflammatory, infectious, autoimmune, degenerative, and neoplastic processes. Proper classification allows for systematization of knowledge and facilitates diagnosis.

1. Principles of classification of diseases of the oral mucosa

The classification of oral mucosal diseases is based on several principles:

- etiological;



- pathogenetic;
- morphological;
- clinical;
- by the nature of the flow.

2. Etiological classification

The following groups of diseases are distinguished:

- infectious (viral, bacterial, fungal);
- traumatic;
- allergic;
- autoimmune;
- systemic;
- precancerous and tumor processes;
- idiopathic lesions.

3. Morphological classification

Depending on the nature of the lesion, the following are distinguished:

- inflammatory processes;
- dystrophic changes;
- hyperplastic processes;
- ulcerative necrotic lesions;
- atrophic changes.

4. Classification by flow

- acute forms;
- chronic forms;
- recurrent forms.

5. Classification by clinical forms

- stomatitis of various etiologies;
- glossitis;
- cheilitis;
- leukoplakia and other precancerous conditions;
- specific infections (syphilis, tuberculosis);
- tumor lesions.

6. The meaning of classification



The classification of oral mucosal diseases allows:

- systematize clinical data;
- facilitate diagnosis;
- determine the treatment tactics;
- conduct differential diagnostics;
- to develop clinical thinking of a dentist.

Conclusion

The classification of oral mucosal diseases is the foundation of clinical dentistry. Knowledge of this classification allows one to accurately navigate the diversity of pathological processes and select optimal patient management strategies.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 2 (5th year, 9th semester). Traumatic lesions of the oral mucosa (OM)

The purpose of the lecture:

To develop students' understanding of traumatic lesions of the oral mucosa, their causes, mechanisms of development, clinical manifestations, diagnosis, and treatment principles.

The issues under consideration:

1. The concept of traumatic lesions of the oral mucosa.
2. Etiology and risk factors.
3. Pathogenesis of traumatic injuries.
4. Classification of traumatic injuries.
5. Clinical manifestations.
6. Diagnostics and differential diagnostics.
7. Principles of treatment and prevention.

Introduction

Traumatic lesions of the oral mucosa (MLOS) are a group of pathological conditions resulting from exposure to various mechanical, chemical, and physical



factors. They are one of the most common causes of inflammatory and destructive changes in the mucosa.

1. Etiology and risk factors

Mechanical factors:

- sharp edges of teeth;
- incorrectly manufactured dentures;
- orthodontic appliances;
- biting the mucous membrane.

Chemical factors:

- exposure to aggressive substances (acids, alkalis);
- medications when used incorrectly.

Thermal factors:

- burns from hot food and drinks;
- exposure to high temperatures.

Physical factors:

- injuries;
- radiation exposure;
- electrical damage (rare).

2. Pathogenesis

Under the influence of a traumatic factor the following occurs:

- damage to the epithelium of the mucous membrane;
- development of acute inflammation;
- microcirculation disorder;
- secondary infection;
- with prolonged exposure - chronicity of the process and development of ulcerative-necrotic changes.

3. Classification of traumatic injuries


Downstream:

- sharp;
- chronic.

By depth of damage:

- superficial (erosions, abrasions);
- deep (ulcers, necrosis).

By nature of impact:

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- mechanical;
- chemical;
- thermal;
- combined.

4. Clinical manifestations

Acute traumatic injuries:

- pain at the site of injury;
- hyperemia and swelling of the mucous membrane;
- erosions or superficial ulcers;
- bleeding;
- difficulty eating.

Chronic traumatic injuries:

- long-term non-healing ulcers;
- edge sealing;
- granulation;
- possible hyperkeratotic reaction;
- risk of malignancy in the long term.

5. Diagnostics

- clinical examination;
- careful collection of anamnesis (identification of the traumatic factor);
- assessment of the dynamics after eliminating the cause;
- in case of long-term course - cytology and biopsy.

6. Differential diagnostics

Held from:

- aphthous stomatitis;
- infectious lesions of the oral mucosa;
- leukoplakia;
- syphilitic and tuberculous lesions;
- tumor processes.

7. Treatment

The main principle is to eliminate the cause.

Local treatment:

- antiseptic treatment;



- anti-inflammatory drugs;
- keratoplastic agents;
- pain-relieving gels and ointments.

General treatment (as indicated):

- vitamin therapy;
- general tonics.

Surgical intervention:

- removal of sharp edges of teeth;
- correction or replacement of prostheses;
- biopsy if a malignant process is suspected.

8. Prevention

- elimination of local traumatic factors;
- high-quality prosthetics;
- regular dental checkups;
- giving up bad habits (biting the mucous membrane);
- Oral cavity sanitation.

Conclusion

Traumatic lesions of the oral mucosa are a common pathology, in which eliminating the underlying cause is key to successful treatment. In chronic cases, precancerous and neoplastic processes must be excluded.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 3 (5th year, 9th semester). Leukoplakia. Etiology, clinical features, and treatment.

The purpose of the lecture:

To develop students' understanding of leukoplakia as a precancerous disease of the oral mucosa, its etiology, clinical forms, diagnosis, and treatment principles.

The issues under consideration:



1. The concept of leukoplakia and its place among diseases of the oral mucosa.
2. Etiology and risk factors for the development of leukoplakia.
3. Pathogenesis of the disease.
4. Clinical forms and manifestations.
5. Diagnostics and differential diagnostics.
6. Principles of treatment.
7. Prevention and dispensary observation.

Introduction

Leukoplakia is a chronic disease of the oral mucosa characterized by persistent keratinization of the epithelium, appearing as white spots or plaques that do not disappear with mechanical action. It is considered a facultative precancerous condition and requires mandatory monitoring.

1. Etiology and risk factors

The main causes of leukoplakia development:

- chronic mechanical trauma (sharp edges of teeth, dentures);
- smoking (the most significant factor);
- alcohol abuse;
- chronic chemical irritants;
- hypovitaminosis A and group B;
- endocrine disorders;
- occupational hazards.

2. Pathogenesis

Under the influence of prolonged irritation the following occurs:

- violation of epithelial differentiation;
- increased keratinization processes (hyperkeratosis);
- possible development of epithelial dysplasia;
- risk of malignancy in the long term.

3. Clinical forms of leukoplakia

3.1. Flat form

- white homogeneous areas;
- do not rise above the mucous membrane;
- asymptomatic course.

3.2. Verrucous form



- dense, thickened plaques;
- rough surface;
- tendency to progress.

3.3. Erosive-ulcerative form

- presence of erosions and ulcers;
- pain;
- high risk of malignancy.

4. Clinical picture

- persistent white keratinized areas;
- dense or rough surface;
- localization: mucous membrane of the cheeks, tongue, lips;
- possible burning sensation;
- with progression - cracks, erosions.

5. Diagnostics

- clinical examination;
- elimination of the traumatic factor with assessment of the dynamics;
- cytological examination;
- biopsy (mandatory if dysplasia is suspected);
- histological examination.

6. Differential diagnostics

Held from:


- lichen planus;
- candidiasis of the mucous membrane;
- chronic traumatic injuries;
- syphilitic lesions;
- early stages of oral cancer.

7. Treatment

General treatment:

- elimination of the etiological factor;
- quitting smoking and drinking alcohol;
- vitamin therapy (A, E, group B);
- normalization of metabolic processes.

Local treatment:

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- antiseptic treatment;
- keratoplastic drugs;
- anti-inflammatory drugs.

Surgical treatment:

- laser destruction;
- cryodestruction;
- surgical excision for dysplasia.

8. Prevention

- elimination of chronic trauma;
- giving up bad habits;
- regular preventive examinations;
- oral cavity sanitation;
- monitoring of patients at risk.

Conclusion

Leukoplakia is a significant precancerous condition of the oral mucosa. Early diagnosis, elimination of underlying factors, and regular monitoring can prevent malignancy and complications.

References (GEOTAR-Media):

1. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 4 (5th year, 9th semester). Acute herpetic stomatitis. Chronic herpetic stomatitis.

The purpose of the lecture:

To develop students' understanding of the etiology, pathogenesis, clinical manifestations, diagnosis and principles of treatment of acute and chronic forms of herpetic stomatitis.

The issues under consideration:

1. Etiology of herpes infection.
2. Pathogenesis of acute and chronic herpetic stomatitis.
3. Clinical picture of acute herpetic stomatitis.



4. Clinical picture of chronic herpetic stomatitis.
5. Diagnostics and differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Herpetic stomatitis is one of the most common viral infections of the oral mucosa, caused by the herpes simplex virus (HSV-1). The disease can occur in acute or chronic, recurring forms.

1. Etiology

Pathogen: herpes simplex virus (Herpes simplex virus, most often HSV-1).

Transmission routes:

- airborne;
- contact;
- domestic.

2. Pathogenesis

After the initial infection, the virus remains latent in the nerve ganglia. When the immune system weakens, the virus reactivates and a relapse occurs.

3. Acute herpetic stomatitis

Clinical picture:


- acute onset;
- increase in body temperature;
- weakness, intoxication;
- soreness of the mucous membrane;
- multiple small bubbles;
- rapid opening of bubbles with the formation of erosions;
- hypersalivation, bad breath.

More common in children.

4. Chronic herpetic stomatitis

Clinical picture:

- recurrent course;
- the appearance of blisters due to stress, hypothermia;
- limited lesions;
- burning and itching before the rash;
- erosions after opening of blisters;

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- absence of pronounced intoxication.

5. Diagnostics

- clinical picture;
- anamnesis (relapses);
- cytological examination (multinucleated cells);
- PCR diagnostics;
- serological methods.

6. Differential diagnostics

Held from:

- aphthous stomatitis;
- traumatic lesions of the oral mucosa;
- allergic lesions;
- enterovirus infections.

7. Treatment

General treatment:

- antiviral drugs (acyclovir, valacyclovir);
- immunomodulators;
- antipyretic drugs (in acute cases);
- vitamin therapy.

Local treatment:

- antiseptics;
- antiviral gels;
- keratoplastic agents;
- painkillers.

8. Prevention

- strengthening the immune system;
- elimination of risk factors (stress, hypothermia);
- maintaining oral hygiene;
- timely treatment of chronic diseases.

Conclusion



Herpetic stomatitis is characterized by high prevalence and a tendency to recur. Early diagnosis and comprehensive treatment can reduce the frequency of exacerbations and improve patients' quality of life.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 5 (5th year, 9th semester). Syphilis. Etiology, clinical picture, and treatment.

The purpose of the lecture:

To develop students' understanding of syphilis as a systemic infectious disease, its etiology, clinical manifestations in the oral cavity, and treatment principles.

The issues under consideration:

1. Etiology of syphilis.
2. Routes of infection transmission.
3. Pathogenesis of the disease.
4. Clinical manifestations of syphilis in different periods.
5. Oral lesions in syphilis.
6. Diagnostics and differential diagnostics.
7. Principles of treatment and prevention.

Introduction


Syphilis is a chronic infectious disease caused by *Treponemapallidum*, characterized by a staged course and systemic damage to the body, including the oral mucosa.

1. Etiology

Pathogen: *Treponema pallidum*.

2. Routes of transmission

- sexual route (main);

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- contact (including oral contact);
- vertical (from mother to fetus);
- rarely - everyday life.

3. Pathogenesis

After the pathogen is introduced, it multiplies, spreads through the lymphatic and circulatory systems, and causes systemic damage with alternating stages of the disease.

4. Clinical manifestations of syphilis

Primary period:

- hard chancre (a painless ulcer with a hard base);
- regional lymphadenitis.

Secondary period:

- mucous papules;
- erosions in the oral cavity;
- syphilitic tonsillitis;
- high infectivity.

Tertiary period:

- gums;
- deep ulcers;
- destruction of tissue and bones.

5. Oral lesions

- hard chancre on the lips, tongue, tonsils;
- papular rashes of the mucous membrane;
- gummatous lesions of the tongue and palate;
- pronounced tissue destruction in late stages.

6. Diagnostics

- serological reactions (RW, RPR, TPHA);
- PCR;
- microscopy (dark field);
- clinical picture;
- anamnesis.

7. Differential diagnostics



Held from:

- tuberculosis;
- oncological lesions;
- traumatic ulcers;
- chancroid pyoderma.

8. Treatment

- penicillin therapy (main method);
- antibacterial therapy according to regimens;
- treatment by a venereologist;
- oral cavity sanitation;
- dispensary observation.

9. Prevention

- safe sexual behavior;
- early detection and treatment;
- examination of contact persons;
- health education work.

Conclusion

Syphilis is a systemic disease with characteristic oral lesions at all stages. Dentists play a crucial role in early diagnosis and referral of patients for specialized treatment.

References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 6 (5th year, 9th semester). Tuberculosis. Etiology, clinical picture, and treatment.



The purpose of the lecture:

To develop students' understanding of tuberculosis as a chronic infectious disease, its etiology, clinical manifestations in the oral cavity, and treatment principles.

The issues under consideration:

1. Etiology of tuberculosis.
2. Routes of infection and pathogenesis.
3. Clinical manifestations of tuberculosis in the oral cavity.
4. Diagnostics and differential diagnostics.
5. Principles of treatment.
6. Prevention.

Introduction

Tuberculosis is a chronic infectious disease caused by *Mycobacterium tuberculosis*. Oral lesions are rare and are most often secondary to active pulmonary tuberculosis.

1. Etiology

Pathogen: *Mycobacterium tuberculosis* (Koch's bacillus).

2. Routes of infection and pathogenesis

Routes of infection:

- aerogenic (main);
- hematogenous;
- lymphogenous;
- contact (rare).

Pathogenesis is associated with:

- penetration of mycobacteria into the body;
- formation of granulomatous inflammation;
- development of caseous necrosis.

3. Clinical manifestations in the oral cavity

- tuberculous ulcers (usually on the tongue, mucous membrane of the cheeks, palate);
- painful, slow-healing defects;
- undermined edges of ulcers;
- granulation at the bottom;
- serous-purulent discharge;



- regional lymphadenitis.

4. Diagnostics

- clinical examination;
- anamnesis (presence of pulmonary tuberculosis);
- bacterioscopy (detection of MBT);
- PCR diagnostics;
- tuberculin tests;
- histological examination.

5. Differential diagnostics

Held from:

- syphilis;
- oncological ulcers;
- actinomycosis;
- traumatic lesions of the oral mucosa.

6. Treatment

General treatment:

- anti-tuberculosis therapy (isoniazid, rifampicin, ethambutol, etc.);
- observation by a phthisiatrician;
- general strengthening therapy.

Local treatment:

- antiseptics;
- painkillers;
- treatment of ulcerated surfaces.

7. Prevention

- vaccination (BCG);
- early detection of patients;
- compliance with sanitary and epidemiological standards;
- protection of medical personnel.

Conclusion

Tuberculous lesions of the oral cavity are rare but clinically significant. Their timely diagnosis is important for identifying systemic disease and initiating specific therapy.



References (GEOTAR-Media):

1. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
2. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 7 (5th year, 9th semester). Candidiasis. Etiology, clinical picture, and treatment.

The purpose of the lecture:

To develop students' understanding of oral mucosal candidiasis, its etiology, clinical forms, diagnosis, and treatment principles.

The issues under consideration:

1. Etiology of candidiasis.
2. Risk factors for developing the disease.
3. Pathogenesis of candidal infection.
4. Clinical forms of oral candidiasis.
5. Diagnostics and differential diagnostics.
6. Principles of treatment.
7. Prevention.

Introduction

Oral candidiasis is a fungal infection caused by yeast-like fungi of the genus *Candida*, most commonly *Candida albicans*. The disease can be either acute or chronic, especially in immunocompromised patients.

1. Etiology

Pathogen: *Candida albicans* and other *Candida* species.

2. Risk factors

- decreased immunity;
- long-term use of antibiotics;
- diabetes mellitus;
- wearing removable dentures;



- hypovitaminosis;
- HIV infection;
- violation of oral hygiene.

3. Pathogenesis

The development of candidiasis is associated with:

- imbalance of microflora;
- decreased local and general immunity;
- active reproduction of fungi;
- damage to the epithelium of the mucous membrane.

4. Clinical forms

4.1 Acute pseudomembranous candidiasis

- white coating (difficult to remove);
- hyperemia of the mucous membrane;
- burning, discomfort.

4.2. Acute atrophic candidiasis

- severe hyperemia;
- pain;
- absence of pronounced plaque.

4.3. Chronic hyperplastic candidiasis

- dense white plaques;
- do not come off when scraped;
- risk of malignancy.

4.4 Chronic atrophic candidiasis

- more often in patients with prostheses;
- redness of the mucous membrane under the prosthesis.

5. Diagnostics

- clinical picture;
- smear microscopy (Candida fungi);
- cultural study;
- PCR (as indicated).

6. Differential diagnostics

Held from:

- leukoplakia;



- lichen planus;
- syphilitic lesions;
- traumatic lesions of the oral mucosa.

7. Treatment

General treatment:

- antifungal drugs (fluconazole, nystatin, itraconazole);
- immune system correction;
- treatment of concomitant diseases.

Local treatment:

- antiseptics;
- antifungal solutions and gels;
- sanitation of the oral cavity and dentures.

8. Prevention

- rational antibiotic therapy;
- maintaining oral hygiene;
- correction of prostheses;
- chronic disease control.

Conclusion

Oral candidiasis is a common fungal infection, especially in immunocompromised patients. Timely diagnosis and comprehensive treatment can prevent chronicity and complications.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 8 (5th year, 9th semester). Erythema multiforme. Etiology, clinical features, and treatment.

The purpose of the lecture:

To develop students' understanding of erythema multiforme exudative (EME), its



etiology, pathogenesis, clinical manifestations in the oral cavity, diagnosis and treatment principles.

The issues under consideration:

1. Etiology of erythema multiforme exudative.
2. Pathogenesis of the disease.
3. Clinical forms of MEE.
4. Lesions of the oral mucosa.
5. Diagnostics and differential diagnostics.
6. Principles of treatment.
7. Prevention and prognosis.

Introduction

Erythema multiforme exudative (EME) is an acute immune-mediated disease of the skin and mucous membranes, characterized by polymorphic rashes and frequent lesions of the oral cavity.

1. Etiology

Main reasons:

- viral infections (herpes simplex virus is the most common cause);
- bacterial infections;
- medications (sulfonamides, antibiotics, NSAIDs);
- allergic reactions.

2. Pathogenesis

The disease develops through an immune complex mechanism:

- formation of circulating immune complexes;
- damage to blood vessels and epithelium;
- development of inflammation and tissue necrosis.

3. Clinical forms

3.1. Mild form

- skin and mucous membrane lesions;
- moderate symptoms.

3.2. Severe form (Stevens-Johnson syndrome)

- severe general condition;
- extensive erosions of the mucous membranes;
- high temperature;
- intoxication.



4. Oral lesions

- multiple painful erosions;
- hemorrhagic crusts on the lips;
- blisters that burst quickly;
- severe pain when eating;
- salivation;
- difficulty speaking and swallowing.

5. Diagnostics

- clinical picture;
- anamnesis (infections, medication intake);
- cytological examination;
- exclusion of other diseases of the oral mucosa.

6. Differential diagnostics

Held from:

- herpetic stomatitis;
- pemphigus;
- aphthous stomatitis;
- allergic lesions;
- syphilis.

7. Treatment

General treatment:

- antihistamines;
- glucocorticosteroids (in severe forms);
- antiviral therapy (in case of herpes association);
- detoxification therapy.

Local treatment:

- antiseptics;
- pain-relieving gels;
- keratoplastic drugs;
- erosion treatment.

8. Prevention

- timely treatment of infections;
- elimination of drug allergens;



- strengthening the immune system;
- dispensary observation of patients with relapses.

Conclusion

MEE is an acute immune-mediated disease with severe damage to the oral mucosa. Timely diagnosis and comprehensive treatment can reduce the risk of severe complications.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

Lecture 8 (5th year, 9th semester). Erythema multiforme. Etiology, clinical features, and treatment.

The purpose of the lecture:

To develop students' understanding of erythema multiforme exudative (EME), its etiology, pathogenesis, clinical manifestations in the oral cavity, diagnosis and treatment principles.

The issues under consideration:

1. Etiology of erythema multiforme exudative.
2. Pathogenesis of the disease.
3. Clinical forms of MEE.
4. Lesions of the oral mucosa.
5. Diagnostics and differential diagnostics.
6. Principles of treatment.
7. Prevention and prognosis.

Introduction

Erythema multiforme exudative (EME) is an acute immune-mediated disease of the skin and mucous membranes, characterized by polymorphic rashes and frequent lesions of the oral cavity.

1. Etiology



Main reasons:

- viral infections (herpes simplex virus is the most common cause);
- bacterial infections;
- medications (sulfonamides, antibiotics, NSAIDs);
- allergic reactions.

2. Pathogenesis

The disease develops through an immune complex mechanism:

- formation of circulating immune complexes;
- damage to blood vessels and epithelium;
- development of inflammation and tissue necrosis.

3. Clinical forms

3.1. Mild form

- skin and mucous membrane lesions;
- moderate symptoms.

3.2. Severe form (Stevens-Johnson syndrome)

- severe general condition;
- extensive erosions of the mucous membranes;
- high temperature;
- intoxication.

4. Oral lesions

- multiple painful erosions;
- hemorrhagic crusts on the lips;
- blisters that burst quickly;
- severe pain when eating;
- salivation;
- difficulty speaking and swallowing.

5. Diagnostics

- clinical picture;
- anamnesis (infections, medication intake);
- cytological examination;
- exclusion of other diseases of the oral mucosa.

6. Differential diagnostics



Held from:

- herpetic stomatitis;
- pemphigus;
- aphthous stomatitis;
- allergic lesions;
- syphilis.

7. Treatment

General treatment:

- antihistamines;
- glucocorticosteroids (in severe forms);
- antiviral therapy (in case of herpes association);
- detoxification therapy.

Local treatment:

- antiseptics;
- pain-relieving gels;
- keratoplastic drugs;
- erosion treatment.

8. Prevention

- timely treatment of infections;
- elimination of drug allergens;
- strengthening the immune system;
- dispensary observation of patients with relapses.

Conclusion

MEE is an acute immune-mediated disease with severe damage to the oral mucosa. Timely diagnosis and comprehensive treatment can reduce the risk of severe complications.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Infectious diseases in dentistry / edited by V.N. Trezubov. — M.: GEOTAR-Media, 2021.
3. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.



4. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

5th year, 10th semester

Lecture 1 (5th year, 10th semester). Lichen planus. Clinical presentation.

Differential diagnosis and treatment.

The purpose of the lecture:

To develop students' understanding of lichen planus of the oral mucosa, its clinical forms, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. Etiology and pathogenesis of lichen planus.
2. Clinical forms of lesions of the oral mucosa.
3. Clinical picture of the disease.
4. Differential diagnostics.
5. Principles of treatment.
6. Prevention and dispensary observation.

Introduction

Lichen planus (LP) is a chronic inflammatory and degenerative disease of the oral mucosa and skin. It is autoimmune in nature and prone to prolonged progression and recurrence. In dental practice, LP is important as a potentially precancerous condition.

1. Etiology and pathogenesis

The exact cause of the disease is unknown. The main factors are:

- autoimmune reactions;
- stressful influences;
- chronic infections;
- endocrine disorders;
- drug reactions;
- genetic predisposition.

Pathogenesis:

- immune damage to the basal layer of the epithelium;
- T-cell cytotoxicity;
- chronic inflammation;
- violation of keratinization.



2. Clinical forms of LP

- **Typical (reticular):** white lace stripes (Wickham mesh);
- **Exudative-hyperemic:** severe hyperemia and edema;
- **Erosive-ulcerative:** painful erosions and ulcers;
- **Plaque:** dense whitish foci;
- **Bullous (rare):** bubble elements.

3. Clinical picture

- white papules and reticular elements on the mucous membrane of the cheeks;
- a burning sensation and discomfort;
- erosions in the erosive form;
- chronic relapsing course;
- increased symptoms during stress and irritants.

4. Differential diagnostics

Held from:

- leukoplakia;
- candidiasis;
- syphilitic lesions;
- lupus erythematosus;
- chronic traumatic lesions of the oral mucosa;
- erythema multiforme exudative.

5. Treatment

General treatment:

- elimination of stress factors;
- sedatives;
- antihistamines;
- immunomodulators;
- vitamin therapy (A, E, group B).

Local treatment:

- glucocorticosteroid ointments and gels;
- antiseptics;
- keratoplastic agents;
- painkillers for the erosive form.

Additionally:



- laser therapy;
- physiotherapy (as indicated).

6. Prevention

- exclusion of chronic injury;
- control of stress factors;
- treatment of concomitant diseases;
- regular dental checkups;
- dispensary observation of patients with erosive forms.

Conclusion

Lichen planus is a chronic immune-mediated inflammatory disease with a variety of clinical forms. Erosive forms require special attention due to the risk of malignancy and the need for long-term monitoring.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 2 (5th year, 10th semester). Lupus erythematosus. Clinical presentation. Differential diagnosis and treatment.

The purpose of the lecture:

To develop students' understanding of lupus erythematosus with lesions of the oral mucosa, its clinical manifestations, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. Etiology and pathogenesis of lupus erythematosus.
2. Clinical forms of damage to the oral mucosa.
3. Clinical picture of the disease.
4. Differential diagnostics.
5. Principles of treatment.
6. Prevention and dispensary observation.



Introduction

Lupus erythematosus is a chronic autoimmune disease of connective tissue that can affect the skin and oral mucosa. In dental practice, the discoid and systemic forms are most significant.

1. Etiology and pathogenesis

Etiology:

- autoimmune disorders;
- genetic predisposition;
- ultraviolet radiation;
- hormonal changes;
- viral factors (presumably).

Pathogenesis:

- formation of autoantibodies;
- immune complex tissue damage;
- inflammation of blood vessels and epithelium;
- atrophy and scarring of the mucosa.

2. Clinical forms of damage to the oral mucosa

- discoid lupus erythematosus;
- systemic lupus erythematosus;
- chronic mucocutaneous form.


3. Clinical picture

- erythematous lesions with clear boundaries;
- atrophy of the mucous membrane;
- hyperkeratosis at the periphery of the lesion;
- erosions and soreness;
- burning sensation;
- localization: mucous membrane of the cheeks, lips, palate.

4. Differential diagnostics

Held from:

- lichen planus;
- leukoplakia;
- candidiasis;
- syphilis;

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- erythema multiforme exudative.

5. Treatment

General treatment:

- glucocorticosteroids;
- immunosuppressants;
- antimalarial drugs (hydroxychloroquine);
- vitamin therapy;
- UV protection.

Local treatment:

- topical corticosteroids;
- antiseptics;
- keratoplastic agents;
- pain-relieving gels for erosions.

6. Prevention

- protection from solar radiation;
- dispensary observation;
- control of immune status;
- treatment of concomitant diseases.

Conclusion

Lupus erythematosus is a systemic autoimmune disease that can affect the oral mucosa. Early diagnosis and comprehensive treatment can help slow the progression of the disease.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 3 (5th year, 10th semester). Pemphigus. Clinical presentation. Differential diagnosis and treatment.



The purpose of the lecture:

To develop students' understanding of pemphigus, its clinical manifestations in the oral cavity, diagnosis, differential diagnosis and treatment principles.

The issues under consideration:

1. Etiology and pathogenesis of pemphigus.
2. Clinical forms of the disease.
3. Clinical picture of damage to the oral mucosa.
4. Differential diagnostics.
5. Principles of treatment.
6. Prognosis and prevention of complications.

Introduction

Pemphigus is a severe autoimmune disease characterized by the formation of intraepithelial blisters due to acantholysis. Oral mucosal lesions are often the first manifestation.

1. Etiology and pathogenesis

Etiology:

- autoimmune processes;
- formation of antibodies to desmogleins;
- genetic predisposition.

Pathogenesis:

- destruction of intercellular connections (acantholysis);
- formation of intraepithelial blisters;
- their rapid opening with the formation of erosions.

2. Clinical forms

- pemphigus vulgaris (the most common);
- vegetative form;
- leaf-shaped;
- seborrheic form (rare).

3. Clinical picture

- primary blisters on unchanged mucous membrane;
- rapid rupture of bubbles;
- painful erosions;
- positive Nikolsky's symptom;



- severe pain when eating;
- salivation and unpleasant odor.

4. Differential diagnostics

Held from:

- erythema multiforme exudative;
- herpetic stomatitis;
- aphthous stomatitis;
- bullous pemphigoid;
- syphilis.

5. Treatment

General treatment:

- systemic glucocorticosteroids (the basis of therapy);
- immunosuppressants (azathioprine, cyclosporine);
- plasmapheresis (as indicated);
- symptomatic therapy.

Local treatment:

- antiseptics;
- pain-relieving gels;
- epithelializing agents;
- gentle oral care.

6. Prognosis and prevention

- the disease is chronic and requires long-term therapy;
- Prevention of exacerbations includes monitoring of the immune status and constant observation;
- Without treatment, serious complications are possible.

Conclusion

Pemphigus is a severe autoimmune disease with a high risk of complications. Early diagnosis in the oral cavity is key to initiating systemic therapy.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.



3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 4 (5th year, 10th semester). Dermatitis herpetiformis (Duhring's disease). Clinical presentation. Differential diagnosis and treatment.

The purpose of the lecture:

To develop in students an in-depth understanding of Duhring's dermatitis herpetiformis, the characteristics of its lesions of the oral mucosa, clinical manifestations, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. Etiology and pathogenesis of Duhring's dermatitis herpetiformis.
2. Clinical manifestations on the skin and oral mucosa.
3. Characteristics of the elements of damage to the oral cavity.
4. Differential diagnostics.
5. Principles of treatment.
6. Prognosis and prevention.

Introduction

Dermatitis herpetiformis Duhring (Duhring's disease) is a chronic autoimmune disease of the skin and mucous membranes, characterized by clustered blistering lesions, intense itching, and a recurring course. It is important in dentistry due to the frequent involvement of the oral mucosa.

1. Etiology and pathogenesis

The disease belongs to autoimmune enteropathy.

Main mechanisms:

- formation of IgA immune complexes;
- association with gluten enteropathy (celiac disease);
- IgA deposition in the papillary dermis;
- neutrophil activation;
- formation of subepithelial blisters.

Provoking factors:

- gluten consumption;
- genetic predisposition;
- immune disorders.



2. Clinical picture

Skin manifestations:

- grouped vesicles and papules;
- severe itching (the main symptom);
- symmetry of lesions;
- localization: elbows, knees, buttocks, back.

Lesions of the oral mucosa:

- less common than skin manifestations;
- small bubbles that quickly burst;
- painful erosions;
- burning sensation of the mucous membrane;
- elements are grouped ("herpetiform" character);
- localization: cheeks, tongue, soft palate.

3. Diagnostics

- clinical picture (itching + grouped vesicles);
- immunological study (IgA deposits);
- skin/mucous membrane biopsy;
- association with celiac disease;
- blood test (eosinophilia).

4. Differential diagnostics

Held from:

- erythema multiforme exudative;
- pemphigus;
- bullous pemphigoid;
- herpetic stomatitis;
- allergic lesions of the oral mucosa.

5. Treatment

Main therapy:

- sulfones (dapsone is the drug of choice);
- gluten-free diet (required for celiac disease);
- antihistamines;
- in severe cases - glucocorticosteroids.

Local treatment:

- antiseptics;



- anti-inflammatory and pain-relieving gels;
- epithelializing agents.

6. Prognosis and prevention

- the course is chronic, recurrent;
- Dietary control significantly improves the prognosis;
- long-term observation is required;
- Prevention includes eliminating gluten and controlling immune disorders.

Conclusion

Dermatitis herpetiformis (Dühring's disease) is a systemic autoimmune disease with characteristic cutaneous and mucosal manifestations. Early recognition of erosive oral lesions and referral to a dermatologist are essential for dentists.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 5 (5th year, 10th semester). Pemphigoid. Clinical presentation. Differential diagnosis and treatment.

The purpose of the lecture:

To develop students' in-depth knowledge of oral mucosal pemphigoid, its clinical manifestations, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. Etiology and pathogenesis of pemphigoid.
2. Clinical forms of the disease.
3. Clinical manifestations in the oral cavity.
4. Differential diagnostics.
5. Principles of treatment.
6. Prognosis and prevention.

Introduction



Pemphigoid (mucous membrane pemphigoid) is a chronic autoimmune disease in which the basement membranes of the epithelium are damaged, leading to the formation of subepithelial blisters. It most commonly affects the mucous membranes of the oral cavity and eyes.

1. Etiology and pathogenesis

An autoimmune disease.

Main mechanisms:

- formation of autoantibodies to components of the basement membrane (BP180, BP230);
- complement activation;
- destruction of the connection between the epithelium and the basement membrane;
- formation of subepithelial blisters (as opposed to pemphigus).

2. Clinical picture

Oral lesions:

- tense blisters on the mucous membrane;
- the blisters are denser than in pemphigus;
- long-lasting bubbles;
- after opening - painful erosions;
- localization: gums (often desquamative gingivitis), cheeks, palate;
- severe pain when eating;
- possible bleeding gums.

3. Clinic Features

- chronic course;
- predominantly gingival lesions (desquamative gingivitis);
- slow healing of erosions;
- absence of pronounced Nikolsky's symptom (unlike pemphigus or weakly positive).

4. Diagnostics

- clinical picture;
- biopsy (subepithelial blisters);
- immunofluorescence study (linear deposits of IgG and C3);
- serological tests.



5. Differential diagnostics

Held from:

- pemphigus;
- erythema multiforme exudative;
- herpetic stomatitis;
- lichen planus (erosive form);
- candidiasis.

6. Treatment

General treatment:

- glucocorticosteroids (the basis of therapy);
- immunosuppressants (azathioprine, methotrexate);
- in severe cases - systemic immunosuppression;
- symptomatic therapy.

Local treatment:

- antiseptics;
- topical corticosteroids;
- pain-relieving gels;
- epithelialization agents.

7. Prognosis and prevention

- chronic disease;
- requires long-term treatment;
- eye damage is possible (a dangerous complication);
- constant supervision by a specialist is required.

Conclusion

Pemphigoid is an autoimmune disease affecting the basement membrane, characterized by subepithelial blisters and a chronic course. Timely diagnosis is important to prevent complications, especially those affecting the eyes and mucous membranes.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.



3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.

4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 6 (5th year, 10th semester). Glossitis. Folded tongue. Black (hairy) tongue. Clinical presentation. Treatment

The purpose of the lecture:

To develop students' in-depth knowledge of glossitis, its clinical forms (folded and black hairy tongue), etiology, pathogenesis, clinical manifestations, diagnosis and treatment principles.

The issues under consideration:

1. The concept of glossitis and its classification.
2. Folded tongue: etiology, clinical picture, features.
3. Black (hairy) tongue: causes and pathogenesis.
4. Clinical picture of glossitis.
5. Differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Glossitis is a group of inflammatory and degenerative diseases of the tongue characterized by changes in its shape, surface, and structure. Some forms are congenital or functional, while others are acquired and associated with microbial flora, poor hygiene, or systemic diseases.

1. Folded tongue

Etiology:

- congenital feature;
- genetic predisposition;
- association with syndromes (eg, Melkersson-Rosenthal syndrome);
- age-related changes.

Pathogenesis:

- formation of deep grooves on the surface of the tongue;
- retention of food residues in the folds;
- secondary inflammation due to poor hygiene.

Clinical picture:

- pronounced longitudinal and transverse folds;
- increase in tongue volume;
- sometimes a burning sensation;



- plaque deep in the folds;
- bad breath due to poor hygiene.

Peculiarities:

- often asymptomatic;
- discovered by chance during inspection.

2. Black (hairy) tongue

Etiology:

- poor oral hygiene;
- smoking;
- long-term use of antibiotics;
- dysbacteriosis of the oral cavity;
- hyposalivation.

Pathogenesis:

- hypertrophy and elongation of the filiform papillae of the tongue;
- keratin accumulation;
- staining with plaque from bacteria and food pigments.

Clinical picture:

- elongated "hair-like" papillae on the back of the tongue;
- dark brown or black coating;
- foreign body sensation;
- dry mouth;
- unpleasant odor;
- possible burning sensation.

3. Diagnostics

- clinical examination;
- oral hygiene assessment;
- collection of anamnesis (medications, smoking);
- plaque microscopy (as indicated).

4. Differential diagnostics

Held from:

- pigmented lesions of the tongue;
- candidiasis;
- leukoplakia of the tongue;
- melanosis;



- oncological lesions (rare).

5. Treatment

General treatment:

- elimination of risk factors (smoking, antibiotics);
- correction of dysbacteriosis;
- vitamin therapy (B-group);
- normalization of salivation.

Local treatment:

- careful tongue hygiene;
- mechanical cleaning of the tongue (scrapers);
- antiseptic solutions;
- keratolytic agents for severe changes;
- use of enzyme preparations (as indicated).

6. Prevention

- regular hygiene of the oral cavity and tongue;
- quitting smoking;
- rational use of antibiotics;
- oral cavity sanitation;
- preventive examinations.

Conclusion

Glossitis, including fissured and black hairy tongue, is often functional or secondary. Treatment focuses on eliminating the underlying factors and maintaining oral hygiene.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 7 (5th year, 10th semester). Glossitis. Desquamative glossitis. Rhomboid glossitis. Clinical presentation. Differential diagnosis. Treatment.



The purpose of the lecture:

To develop students' in-depth knowledge of desquamative and rhomboid glossitis, their clinical manifestations, diagnosis, differential diagnosis, and treatment.

The issues under consideration:

1. Etiology and pathogenesis of glossitis.
2. Desquamative glossitis: clinical presentation and characteristics.
3. Rhomboid glossitis: clinical characteristics.
4. Differential diagnostics.
5. Principles of treatment.
6. Prevention and prognosis.

Introduction

Desquamative and rhomboid glossitis are chronic dystrophic diseases of the tongue, accompanied by changes in its epithelium, disruption of keratinization processes and inflammatory reactions.

1. Desquamative glossitis

Etiology:

- gastrointestinal diseases;
- endocrine disorders;
- vitamin deficiency (B group);
- allergic reactions;
- stress.

Pathogenesis:

- focal desquamation of the epithelium;
- alternation of areas of keratinization and atrophy;
- migration of lesions ("geographic tongue").


Clinic:

- areas of red atrophy with a white ridge along the periphery;
- variability of foci (migration);
- burning sensation when eating;
- increased sensitivity to irritants.

2. Rhomboid glossitis

Etiology:

- chronic candidal infection;
- congenital features of language development;

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- smoking;
- decreased immunity.

Pathogenesis:

- atrophy of the filiform papillae in the posterior third of the tongue;
- formation of a diamond-shaped area without papillae;
- possible fungal colonization.

Clinic:

- a clearly defined diamond-shaped area;
- smooth, shiny surface;
- absence of papillae;
- often asymptomatic;
- sometimes burning.

3. Differential diagnostics

Held from:

- candidiasis of the tongue;
- leukoplakia;
- lichen planus;
- syphilitic glossitis;
- tumor processes.

4. Treatment

General treatment:

- treatment of diseases of the gastrointestinal tract and endocrine system;
- vitamin therapy (B1, B2, B6, B12);
- correction of immune status;
- for candidal form - antifungal drugs.

Local treatment:

- antiseptics;
- keratoplastic agents;
- antifungal drugs (for diamond-shaped form);
- elimination of irritating factors.

5. Prevention

- oral cavity sanitation;
- nutritional correction;
- quitting smoking;



- treatment of concomitant diseases;
- regular tongue hygiene.

Conclusion

Desquamative and rhomboid glossitis are chronic tongue conditions often associated with systemic disorders. Successful treatment depends on eliminating the underlying factors and a comprehensive approach.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 8 (5th year, 10th semester). Exfoliative cheilitis. Glandular cheilitis. Actinic and meteorological cheilitis. Clinical presentation. Differential diagnosis. Treatment.

The purpose of the lecture:

To develop students' in-depth knowledge of chronic inflammatory and dystrophic diseases of the lips, their clinical forms, diagnosis, differential diagnosis, and treatment principles.

The issues under consideration:

1. General characteristics of cheilitis.
2. Exfoliative cheilitis: etiology, clinical features.
3. Glandular cheilitis: features of the course.
4. Actinic and meteorological cheilitis.
5. Differential diagnostics.
6. Principles of treatment and prevention.

Introduction

Cheilitis is a group of inflammatory, dystrophic and allergic diseases of the red border of the lips, which can be chronic and associated with local, systemic and external factors.

1. Exfoliative cheilitis

Etiology and pathogenesis:



- neurogenic disorders;
- psycho-emotional factors;
- endocrine disorders;
- hypovitaminosis (especially B2).

Clinic:

- damage to only the red border of the lips;
- dry (squamous) form - peeling, dryness;
- exudative form - crusts, pain;
- absence of damage to the skin and mucous membranes.

2. Glandular cheilitis

Etiology:

- hyperplasia and hyperfunction of minor salivary glands;
- chronic lip irritation;
- infections.

Clinic:

- enlarged orifices of the salivary glands;
- secretion of saliva onto the surface of the lips;
- maceration and inflammation;
- cracks, erosions;
- possible infection.

3. Actinic cheilitis

Etiology:

- prolonged exposure to ultraviolet radiation;
- more often in people working outdoors.

Clinic:

- dryness and flaking of the lower lip;
- thickening of the red border;
- cracks;
- risk of malignancy (precancerous condition).

4. Meteorological cheilitis

Etiology:

- exposure to cold, wind, humidity, heat;
- climatic factors.

Clinic:



- dry lips;
- peeling;
- feeling of tightness;
- periodic exacerbations in unfavorable weather conditions.

5. Differential diagnostics

Held from:

- candidiasis of the lips;
- herpetic lesion;
- leukoplakia;
- lichen planus;
- precancerous conditions;
- allergic cheilitis.

6. Treatment

General treatment:

- elimination of the etiological factor;
- vitamin therapy (A, B2, B6, E);
- sedatives (for neurogenic forms);
- normalization of hormonal levels (as indicated).

Local treatment:

- anti-inflammatory ointments;
- antiseptics;
- keratoplastic agents;
- protective lipsticks (UV protection for actinic cheilitis);
- physiotherapy (as indicated).

7. Prevention

- protection of lips from adverse factors;
- correction of vitamin status;
- treatment of chronic diseases;
- elimination of bad habits (licking lips, smoking);
- regular monitoring.

Conclusion



Cheilitis is a diverse group of lip disorders, often associated with external factors and systemic disorders. Early diagnosis and treatment of the underlying cause can prevent chronicity and complications.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

Lecture 9 (5th year, 10th semester). Contact allergic cheilitis. Atopic cheilitis. Eczematous cheilitis. Clinical presentation. Differential diagnosis. Treatment.

The purpose of the lecture:

To develop students' in-depth knowledge of allergic and atopic lip lesions, their clinical manifestations, diagnosis, differential diagnosis, and treatment.

The issues under consideration:

1. Etiology of allergic and atopic cheilitis.
2. Pathogenesis of diseases.
3. Clinical forms.
4. Clinical picture.
5. Differential diagnostics.
6. Principles of treatment.
7. Prevention and prognosis.


Introduction

Allergic and eczematous cheilitis is a group of inflammatory diseases of the lips that arise as a result of the body's hypersensitivity to various allergens and are characterized by a chronic recurring course.

1. Contact allergic cheilitis

Etiology:

- cosmetics;
- toothpastes, mouthwashes;
- food allergens;
- medicinal preparations;

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- materials for dental prostheses.

Pathogenesis:

- delayed hypersensitivity reaction;
- inflammation of the red border of the lips.

Clinic:

- swelling of the lips;
- hyperemia;
- itching and burning;
- cracks, erosions;
- clear connection with the allergen.

2. Atopic cheilitis

Etiology:

- hereditary predisposition to atopy;
- association with atopic dermatitis, bronchial asthma.

Clinic:

- chronic course;
- dry and flaky lips;
- cracks in the corners of the mouth;
- severe itching;
- seasonal exacerbations.

3. Eczematous cheilitis

Etiology:

- allergic reactions;
- neuroallergic disorders;
- chronic irritants.

Clinic:

- erythema and swelling of the lips;
- oozing;
- crust formation;
- severe itching;
- possible spread to the skin of the face.

4. Differential diagnostics

Held from:

- herpetic lesion of the lips;



- candidiasis;
- exfoliative cheilitis;
- actinic cheilitis;
- syphilitic lesions.

5. Treatment

General treatment:

- antihistamines;
- glucocorticosteroids (in severe forms);
- elimination of the allergen;
- hypoallergenic diet;
- sedative therapy.

Local treatment:

- corticosteroid ointments;
- antiseptics;
- anti-inflammatory drugs;
- moisturizing and protective creams.

6. Prevention

- avoiding contact with allergens;
- hypoallergenic cosmetics;
- oral cavity sanitation;
- treatment of atopic diseases;
- regular monitoring.


Conclusion

Allergic and atopic cheilitis require a comprehensive approach, including allergen elimination and anti-inflammatory therapy. Relapse prevention is also crucial.

References (GEOTAR-Media):

1. Therapeutic dentistry / ed. L.A. Dmitrieva. - M.: GEOTAR-Media, 2020.
2. Propaedeutics of dental diseases / edited by O.O. Yanushevich. - M.: GEOTAR-Media, 2019.
3. Clinical dentistry / edited by A.I. Abdurakhmanov. — M.: GEOTAR-Media, 2019.
4. Dentistry: textbook / ed. V.N. Trezubova. - M.: GEOTAR-Media, 2021.

2.2. Development of practical/seminar/laboratory classes

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5th semester

Lesson Topic 1: Organization and equipment of a therapeutic dental office.

1. Objective of the lesson: To study the principles of organizing the work of a therapeutic dental department; rules for equipping the office; sanitary and epidemiological requirements; the design of the dental unit and instruments.

2. Educational technologies:

- Pre-test.
- Demonstration of the operation of a modern dental unit.
- Working with phantoms and sets of dental instruments.
- Post-test.

3. Basic concepts that students should learn:

- **Ergonomics in dentistry:** four-handed work, correct position of the doctor and assistant.
- **Sanitary and hygienic regime:** disinfection, pre-sterilization cleaning and sterilization (sterility chain).
- **Safety precautions:** working with electrical appliances, x-rays and chemicals.
- **Equipment:** types of dental handpieces (turbine, micromotor), classification of burs and hand instruments.

4. Questions for the lesson:

- Requirements for the premises of a dental office (area per chair, lighting, ventilation).
- The structure and main components of the dental unit.
- Classification of dental instruments for examination and treatment of caries.
- Types and rules for the use of personal protective equipment (PPE) for a dentist.
- Stages of processing dental handpieces.

5. Questions for self-control:

- What is the minimum area for a main dental chair according to SanPiN?
- Differences between high-level disinfection and sterilization.
- ISO colour coding of dental burs.
- The design and purpose of aspiration systems (vacuum cleaner, saliva ejector).

6. Primary and secondary literature:

1. *Therapeutic dentistry: textbook edited by E.V. Borovsky.*
2. *Dentistry: a guide to practical training / edited by S.D. Arutyunov.*
3. *Ergonomics in Dentistry. Study Guide.*



4. *Regulatory documents: SanPiN (current version) on medical waste and the arrangement of dental clinics.*

7. List of tasks for independent work:

- Study of the classification of instruments by purpose (diagnostic, for preparation, for filling).
- Preparation of ergonomic zone diagrams (dial).
- **Topics of papers/presentations:**
 - Modern methods of sterilization of dental handpieces.
 - The evolution of the dental chair: from mechanical systems to modern installations.
 - Organization of a system for handling medical waste of classes A, B, C in dentistry.

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU.
Lesson Topic 2: Medical Ethics. Medical Records of a Dental Patient. Patient Examination Methods.

1. Objective of the lesson: Master the deontological principles of communication with patients, learn how to correctly fill out accounting documentation, and conduct a comprehensive examination of the maxillofacial area.

2. Educational technologies:

- Role-playing game "Doctor - Patient".
- Working with electronic and paper medical records (form No. 043/u).
- Practicing probing, percussion and palpation skills on phantoms.

3. Basic concepts:

- **Medical card (Form 043/u):** legal and medical significance.
- **Dental formula:** international system (ISO 3950) and the Zsigmondy-Palmer system.
- **Examination methods:** basic (questioning, examination, palpation, percussion, probing) and additional (electrode examination, radiography).

4. Questions for the lesson:

- Structure of the medical record of a dental patient.
- Rules for collecting anamnesis of life and anamnesis of the disease.
- Individual treatment plan and informed voluntary consent.
- The concept of medical confidentiality in dentistry.

5. Questions for self-control:

- What is "vertical" and "horizontal" percussion and what do they indicate?
- Hygiene indices (HI): determination methods and clinical significance.
- The order of describing the tooth status in the formula (C, P, Pt, R, Lp).



6. Literature:

- *Therapeutic dentistry. National guidelines edited by Yu. M. Maksimovsky.*

7. Topics of abstracts:

- The role of psychology in managing patient fear at a dental appointment.
- Diagnostic capabilities of visiography in therapeutic dentistry.

8. **Venue:** Room No. 209, Department of Dental Disciplines, Russian Medical University.

Lesson Topic 3: Non-carious Dental Lesions. Classification. Etiology.
Pathogenesis.

1. **Objective of the lesson:** To study the diversity of forms of non-carious lesions, their causes and mechanisms of development at different stages of tooth formation.

2. Educational technologies:

- Analysis of a set of macropreparations (extracted teeth) with various pathologies.
- Viewing video materials on the pathological anatomy of hard dental tissues.

3. Basic concepts:

- **Classification (according to V.K. Patrikeev):** 1) lesions occurring during the period of follicular development; 2) lesions occurring after teething.
- **Etiological factors:** endemic (fluorine), genetic, systemic diseases, mechanical and chemical influences.

4. Questions for the lesson:

- Endemic dental fluorosis: causes, classification of forms according to WHO.
- Hereditary disorders of dental tissue development (Stanton-Capdepon syndrome).
- Pathogenesis of wedge-shaped defect and its relationship with occlusal load.

5. Questions for self-control:

- Optimal concentration of fluoride in drinking water to prevent fluorosis.
- The difference between pathological and physiological abrasion.
- The mechanism of development of acid necrosis of enamel.

6. Literature:

- *Borovsky E.V. Therapeutic dentistry (section "Non-carious lesions").*

7. Topics of abstracts:

- The influence of somatic diseases on the condition of hard dental tissues.
- Fluorosis: modern epidemiology and methods of prevention in endemic areas.



8. Venue:Room No. 209, Department of Dental Disciplines, Russian Medical University.

Lesson Topic 4: Hypoplasia. Hyperplasia. Clinical Features. Diagnostics.
Differential Diagnostics. Treatment.

1. Objective of the lesson:Learn to diagnose and treat enamel hypoplasia and hyperplasia, and be able to distinguish them from the carious process.

2. Educational technologies:

- Work on simulators: preparation and filling of hard tissue defects.
- Analysis of clinical cases (photo protocols).

3. Basic concepts:

- **Systemic hypoplasia:**Hutchinson, Pfluger, Fournier teeth.
- **Local hypoplasia (Turner's teeth):**connection with the pathology of the deciduous tooth.
- **Enamel drops (pearls):**localization and tactics.

4. Questions for the lesson:

- Clinical forms of hypoplasia: spotted, cup-shaped, grooved.
- Differential diagnostics of spotted hypoplasia and caries in the spot stage (vital staining test).
- Treatment methods: from remineralization to direct restoration and prosthetics.

5. Questions for self-control:

- Why do spots in hypoplasia not stain with methylene blue?
- At what stage of tooth rudiment development does hypoplasia occur?
- Features of cavity preparation in case of wedge-shaped defect and hypoplasia.

6. Literature:

- *Groshikov G.I. Non-carious lesions of dental tissues.*

7. Topics of abstracts:

- Modern adhesive protocols in the treatment of enamel hypoplasia.
- Enamel microabrasion method in the treatment of spotty forms of lesions.

8. Venue:Room No. 209, Department of Dental Disciplines, Russian Medical University.

To complete your curriculum, I have prepared the remaining topics (5-9) strictly according to the structure of your sample.



Lesson Topic 5: Endemic Dental Fluorosis. Clinical Features. Diagnosis.
Differential Diagnosis. Treatment.

1. Objective of the lesson: To study the etiology and pathogenesis of fluorosis; to master the classification of disease forms, diagnostic methods, and aesthetic rehabilitation techniques.

2. Educational technologies:

- Pre-test.
- Demonstration of a professional whitening and enamel microabrasion instrument set. Post-test.

3. Basic concepts:

- **Fluorine:** essential micRoyalement, optimal concentration in water 0.7–1.2 mg/l.
- **Classification according to Patrikeev:** streaky, spotted, chalky-speckled, erosive and destructive forms.
- **Microabrasion:** a method for gentle removal of pigmented areas of enamel.

4. Questions for the lesson:

- Sanitary and hygienic measures for the prevention of fluorosis in endemic foci.
- Differential diagnostics of fluorosis with caries in the spot stage and systemic hypoplasia.
- Treatment methods: whitening, remineralizing therapy, aesthetic restoration.

5. Questions for self-control:

- What is the mechanism of influence of excess fluoride on ameloblast function?
- Indications for the production of orthopedic structures in severe forms of fluorosis.

Lesson Topic 6: Hereditary Dental Development Disorders. Clinical Presentation.
Diagnosis. Differential Diagnosis. Treatment.

1. Objective of the lesson: To study the main genetically determined pathologies of hard dental tissues, their clinical manifestations and tactics for managing such patients.

2. Educational technologies:

- Pre-test.
- Analysis of radiographs and clinical photographs of patients with hereditary pathologies. Post-test.

3. Basic concepts:

- **Amelogenesis imperfecta:** systemic disorder of the enamel structure.



- **Dentinogenesis imperfecta (Stanton-Capdepont syndrome):** progressive obliteration of the pulp chamber and tooth fragility.
- **Capdepont Dysplasia:** characteristic "amber" color of teeth and rapid wear.

4. Questions for the lesson:

- Clinical classification of amelogenesis imperfecta.
- Differential diagnostics of hereditary disorders and systemic hypoplasia.
- Prevention of complications and selection of filling material for dentinogenesis imperfecta.

5. Questions for self-control:

- Characteristic radiographic signs of Stanton-Capdepont disease.
- Features of tooth preparation in amelogenesis imperfecta.

Lesson Topic 7: Abrasion of Hard Tooth Tissue. Wedge-Shaped Defect. Dental Hyperesthesia. Clinical Presentation. Diagnostics. Differential Diagnostics. Treatment.

1. Objective of the lesson: To master the diagnosis of acquired lesions of hard tissues, methods for eliminating hypersensitivity and tactics for restoring defects.

2. Educational technologies:

- Pre-test.
- Practicing the application of desensitizers and fluoride varnishes on phantoms. Post-test.

3. Basic concepts:

- **Pathological abrasion:** forms (horizontal, vertical, mixed).
- **Abfraction:** the role of occlusal load in the formation of a wedge-shaped defect.
- **Hyperesthesia:** increased sensitivity of dentin to temperature and chemical irritants.

4. Questions for the lesson:

- Etiology and pathogenesis of wedge-shaped defect (mechanical and abfraction theories).
- Classification of hyperesthesia according to Yu.A. Fedorov.
- Modern adhesive protocols for the treatment of defects in the cervical region.

5. Questions for self-control:

- The difference between a wedge-shaped defect and cervical caries and erosion.



- The mechanism of action of modern desensitizers (sealing of dentinal tubules).

Lesson Topic 8: Dental Erosion. Necrosis of Hard Dental Tissue. Clinical Presentation. Diagnosis. Differential Diagnosis. Treatment.

1. Objective of the lesson: To study the influence of chemical and physical factors on hard dental tissues, to diagnose erosions and necroses of various etiologies.

2. Educational technologies:

- Pre-test.
- Solving situational problems in the differential diagnosis of non-carious lesions. Post-test.

3. Basic concepts:

- **Erosion:** progressive loss of enamel and dentin on the vestibular surface.
- **Acid necrosis:** damage associated with occupational hazards or somatic pathology (reflux).
- **Radiation necrosis:** tissue damage after radiation therapy of the maxillofacial region.

4. Questions for the lesson:

- Stages and activity of dental erosion.
- The role of diet (citrus fruits, carbonated drinks) in the development of erosions.
- Complex treatment of necrosis: local and general remineralizing therapy.

5. Questions for self-control:

- How does the clinical picture of erosion differ from that of a wedge-shaped defect?
- Individual measures for the prevention of acid necrosis in production.

Lesson Topic 9: Traumatic Dental Injuries. Classification. Clinical Features. Etiology. Treatment. Module 1.

1. Objective of the lesson: To study the types of dental injuries, emergency care methods, and long-term monitoring algorithms after injury.

2. Educational technologies:

- Pre-test.
- Practicing dental splinting skills for dislocated teeth using dental models. Post-test for the first module.

3. Basic concepts:



- **Acute trauma:**bruise, dislocation (complete, incomplete, impacted), fracture (crown, root).
- **Replantation:**a technique for returning a tooth to its socket in case of complete dislocation.
- **EOD (Electroodontodiagnostics):**control of pulp viability in dynamics.

4. Questions for the lesson:

- WHO classification of dental injuries.
- Features of treatment of tooth root fractures depending on the level of the fracture line.
- The doctor's tactics when opening a tooth cavity as a result of acute trauma.

5. Questions for self-control:

- Timing of follow-up examinations of a patient after a dental injury.
- Biological method of pulpitis treatment as a stage of assistance in case of crown trauma.

6. Literature on topics 5–9:

1. *Therapeutic dentistry: Textbook / Edited by E.V. Borovsky. – M.: MIA, 2015.*
2. *Therapeutic dentistry. National guidelines / Edited by G.M. Barer. – Moscow: GEOTAR-Media, 2015.*
3. *Non-carious lesions of dental tissues / G.I. Groshikov. - M.: Medicine.*

7. Topics of abstracts:

- The role of hygiene education in the prevention of erosions and wedge-shaped defects.
- Modern splinting structures in the treatment of tooth dislocations.
- Aesthetic rehabilitation in case of hereditary disorders of dental development.

8. Location of the lesson:Office No. 209, Department of Dental Disciplines, RMU. We continue to develop the curriculum based on your list of topics (10–14). All sections are formatted strictly according to the template provided for the Department of Dental Disciplines.

Lesson Topic 10: Dental Caries. Classification. Etiology. Pathogenesis.

1. Objective of the lesson:To study modern concepts about the occurrence of the carious process, its classification and the mechanisms of demineralization of hard dental tissues.

2. Educational technologies:

- Pre-test.
- Demonstration of educational pathogenesis schemes (Case's triad). Post-test.



3. Basic concepts:

- **Caries:**an infectious process characterized by demineralization and proteolysis.
- **Etiology:**interaction of microflora, dietary carbohydrates and enamel resistance.
- **Classification:**according to Black (topographic), according to the depth of the lesion, according to WHO.

4. Questions for the lesson:

- Modern theories of the origin of caries (Miller's chemical-parasitic theory).
- The role of dental plaque and microorganisms (Str. mutans) in pathogenesis.
- Critical pH level for enamel demineralization.

5. Questions for self-control:

- Name the 6 classes of cavities according to Black.
- How does saliva viscosity and composition affect caries resistance?

Lesson Topic 11: Caries in the spot stage. Clinical presentation. Treatment.

1. Objective of the lesson:Master the methods of diagnosing initial caries and protocols for conservative treatment without tissue preparation.

2. Educational technologies:

- Pre-test.
- Master class on vital enamel staining and the ICON method. Post-test.

3. Basic concepts:

- **White spot:**focal demineralization of the subsurface layer of enamel.
- **Remineralizing therapy:**restoration of the mineral composition of enamel (calcium and fluoride preparations).
- **Vital staining:**differential test using 2% methylene blue solution.

4. Questions for the lesson:

- Patient complaints and visual characteristics of the carious spot.
- Differential diagnostics of initial caries, hypoplasia and fluorosis.
- Enamel infiltration technology (ICON method).

5. Questions for self-control:

- Why is a carious spot stained with dyes, but a hypoplastic spot is not?
- Composition and methods of application of applications according to Borovsky-Volkov.



Lesson Topic 12: Superficial Caries. Clinical Presentation. Treatment.

1. Objective of the lesson: To study the clinical picture of lesions within the enamel and the rules for preparing small cavities.

2. Educational technologies:

- Pre-test.
- Practicing class I and V cavity preparation skills on phantoms. Post-test.

3. Basic concepts:

- **Caries superficialis:** defect within the enamel up to the enamel-dentin junction.
- **Chemical-mechanical preparation:** use of polymer burs or gels.

4. Questions for the lesson:

- Main complaints in superficial caries (chemical irritants).
- Results of probing and percussion for this form.
- Selection of filling material (composites, glass ionomer cements).

5. Questions for self-control:

- Is it necessary to use anesthesia when treating superficial caries?
- Requirements for cavity formation in case of superficial lesions.

Lesson Topic 13: Medium caries. Clinical presentation. Treatment.

1. Objective of the lesson: To study the clinical picture of moderate caries and master the stages of cavity formation, taking into account dentin safety zones.

2. Educational technologies:

- Pre-test.
- Demonstration of the insulating pad application steps and adhesive protocol. Post-test.

3. Basic concepts:


- **Caries media:** lesion of the mantle dentin.
- **Dentin wound:** reaction of odontoblast processes to preparation.
- **Insulating gasket:** purpose and types (GIC, flowable composites).

4. Questions for the lesson:

- Clinical picture: short-term pain from temperature and mechanical factors.
- Objective data: the presence of a carious cavity filled with softened dentin.
- Stages of carious cavity preparation according to Lukomsky.

5. Questions for self-control:

- What is the significance of probing at the enamel-dentin junction in moderate caries?
- Why is enamel beveling (rebating) performed during composite restoration?

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Lesson Topic 14: Deep Caries. Clinical Presentation. Treatment.

1. Objective of the lesson: Master the diagnosis of deep lesions and methods of preserving pulp viability.

2. Educational technologies:

- Pre-test.
- Practicing the technique of applying a therapeutic pad to the cavity floor.
- Post-test.

3. Basic concepts:

- **Caries profunda:** damage to peripulpal dentin.
- **Therapeutic pad:** preparations based on calcium hydroxide or MTA.
- **Replacement dentin:** mechanism of formation under the influence of medicinal materials.

4. Questions for the lesson:

- Differential diagnostics of deep caries and chronic pulpitis.
- Errors and complications during treatment (opening of the tooth cavity).
- Delayed filling method for deep caries.

5. Questions for self-control:

- Indications for the use of a medicinal pad.
- Why is probing the bottom of the cavity painful at one point in case of deep caries?

6. Literature on topics 10–14:

1. *Therapeutic dentistry: Textbook edited by E.V. Borovsky.*
2. *Adhesive technologies in dentistry / Nikolaev A.I.*
3. *Practical therapeutic dentistry / A.I. Nikolaev, L.M. Tsepov.*

7. Topics of abstracts:

- The role of oral hygiene in the prevention of caries.
- Modern adhesive systems: classification and application protocols.
- Non-invasive methods of caries treatment: myth or reality?

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU.

Lesson Topic 15: Filling Materials.

1. Objective of the lesson: To study the classification, properties and methods of application of modern filling materials used in therapeutic dentistry.

2. Educational technologies:


- Pre-test.
- Demonstration of sets of materials (composites, glass ionomer cements, adhesives).



- Practicing mixing and material addition skills on phantoms. Post-test.
- 3. Basic concepts that students should learn:**
- **Classification of materials:**for temporary fillings, for gaskets, for permanent fillings.
 - **Composites:**chemical and light curing, nanohybrids, bulk-fill.
 - **Glass ionomer cements (GIC):**adhesion mechanism and fluoride-releasing effect.
 - **Adhesive systems:**generations of adhesives, total and self-etching techniques.
- 4. Questions for the lesson:**
- Requirements for modern filling materials.
 - Composition and properties of light-cured composites.
 - Physicochemical properties of dental cement.
 - Rules for polymerization of composite materials (factors affecting quality).
- 5. Questions for self-control:**
- What is polymerization shrinkage and how to minimize it?
 - In what clinical cases is the use of glass ionomer cements indicated?
 - Sequence of stages of the adhesive protocol.

Lesson Topic 16: Errors and Complications in Caries Treatment.

- 1. Objective of the lesson:**To study the causes of errors at the diagnostic and treatment stages, methods for their elimination and prevention.
- 2. Educational technologies:**
- Pre-test.
 - Analysis of radiographs and clinical cases with filling defects.
 - Simulation work on correction of overhanging filling edges. Post-test.
- 3. Basic concepts that students should learn:**
- **Preparation errors:**cavity perforation, insufficient removal of necrotic dentin.
 - **Sealing errors:**lack of contact point, overhanging edges, “white line” at the edge of the restoration.
 - **Complications after treatment:**postoperative sensitivity, development of pulpitis, loss of filling.
- 4. Questions for the lesson:**
- Reasons for opening a tooth cavity during caries treatment and the doctor's tactics.
 - Why does secondary caries (recurrence of caries) occur?

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- Prevention of interdental papilla injury during treatment of class II and III cavities.

5. Questions for self-control:

- Reasons for pain when biting after placing filling material.
- How to avoid tooth wall chipping after restoration?

Lesson Topic 17: Caries Prevention.

1. Objective of the lesson: To study methods of individual and professional caries prevention, the role of hygiene and nutrition in maintaining dental health.

2. Educational technologies:

- Pre-test.
- Training in teeth cleaning methods using jaw models.
- Professional hygiene (Airflow, ultrasound) on a phantom. Post-test.

3. Basic concepts that students should learn:

- **Primary prevention:** remineralizing therapy, fluoridation, fissure sealing.
- **Hygiene methods:** Pakhomov's standard method of brushing teeth, using floss and interdental brushes.
- **Preventive measures:** classification of toothpastes and mouthwashes.

4. Questions for the lesson:

- The role of fluoride in the prevention of caries (local and systemic use).
- Fissure sealing method: indications, contraindications, technique.
- Professional oral hygiene as the main stage of prevention.

5. Questions for self-control:

- Composition of modern remineralizing gels.
- How often should a patient with an average risk of caries undergo professional hygiene?

Lesson Topic 18: Oral Cavity Sanitation.

1. Objective of the lesson: To study the principles of planned and emergency oral sanitation, and the criteria for evaluating the effectiveness of the measures taken.

2. Educational technologies:

- Pre-test.
- Development of individualized treatment plans based on clinical objectives. Post-test.

3. Basic concepts that students should learn:

- **Sanitation:** a set of therapeutic and preventive measures to improve oral health.



- **Forms of rehabilitation:** individual, planned (in schools, at enterprises), based on requests.
- **Clinical examination:** groups for dispensary observation at the dentist.

4. Questions for the lesson:

- Stages of complete oral cavity sanitation.
- Features of sanitation in pregnant women and patients with somatic pathology.
- Performance indicators of a dentist (KPU index).

5. Questions for self-control:

- What does the term "sanitized" mean in medical documentation?
- Criteria for removing a patient from dispensary register.

6. Literature on topics 15-18:

1. *Therapeutic dentistry: Textbook edited by E.V. Borovsky.*
2. *Adhesive technologies in dentistry / Nikolaev A.I.*
3. *Prevention of dental diseases / Kuzmina I.N.*

7. Topics of abstracts:

- Mistakes when selecting the color of composite material and how to avoid them.
- Comparative characteristics of modern adhesive systems.
- The role of probiotics in the prevention of dental diseases.

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU. 6th semester

Lesson Topic 1: Introduction to Endodontics. Root Canal Anatomy. Endodontic Access.

1. Objective of the lesson: To study the tasks of endodontics, the detailed internal anatomy of teeth of various groups and the rules for forming endodontic access.

2. Educational technologies:

- Pre-test.
- Demonstration of trepanation of crowns on extracted teeth. Post-test.

3. Basic concepts:

- **Endodontist:** a complex of tissues including pulp and dentin, related morphologically and functionally.
- **Anatomy:** apical constriction, apical foramen, deltoid branches, lateral canals.
- **Access:** creation of a straight entrance to the root canals with maximum preservation of healthy tissue.

4. Questions for the lesson:



- Anatomical features of the structure of the cavities of the teeth of the upper and lower jaws.
- Classification of root canal types according to Wein and Vertucci.
- Instruments and stages of opening the tooth cavity.

5. Questions for self-control:

- Where is the fourth canal most often located in the maxillary first molar (MB2)?
- What is the "law of symmetry" when searching for root canal orifices?

Lesson Topic 2: Endodontic Instruments. Classification. Operating Rules.

1. Objective of the lesson: To study the ISO classification of endodontic instruments, the physical properties of metals and the rules for safe use.

2. Educational technologies:

- Pre-test.
- Working with hand and machine tool sets. Post-test.

3. Basic concepts:

- **ISO standards:** color coding, geometric parameters (length, taper, tip diameter).
- **Alloys:** stainless steel and nickel-titanium (NiTi).
- **Instrument groups:** for expansion of the orifice, passage, dilation and obturation.

4. Questions for the lesson:

- Geometric characteristics of tools: K-Reamer, K-File, Hedstroem-File.
- Rules for working with hand tools (movements such as "winding a watch", "sweeping").
- Machine endodontics: torque, rotation speed and reciprocal movements.

5. Questions for self-control:

- What diameter in millimeters does the pink color of the tool handle correspond to?
- What is the advantage of nickel-titanium instruments over steel ones?

Lesson Topic 3: Methods for Determining the Working Length of the Root Canal.

1. Objective of the lesson: To master the techniques for accurately determining the distance from the coronal landmark to the apical constriction.

2. Educational technologies:

- Pre-test.
- Apex locator practice on phantoms. Post-test.



3. Basic concepts:

- **Working length:**the distance from the cutting edge or cusp to the physiological apex.
- **Apex Locator:**an electronic device that operates on the principle of measuring the resistance of a circuit.

4. Questions for the lesson:

- Calculation-tabular method (average anatomical data).
- Radiographic method of determining length (diagnostic file).
- Tactile method and paper pin method.

5. Questions for self-control:

- Why should the working length not reach the anatomical apex by 0.5–1 mm?
- What factors can distort the readings of an electronic apex locator?

Lesson Topic 4: Mechanical Root Canal Preparation. Preparation Techniques.

1. Objective of the lesson:To study the objectives of machining and master classical and modern channel expansion techniques.

2. Educational technologies:

- Pre-test.
- Practicing techniques on phantom blocks (endoblocks). Post-test.

3. Basic concepts:

- **Taper:**giving the channel a funnel shape.
- **Step-back technique:**expansion "from apex to mouth".
- **Crown-down technique:**expansion "from the mouth to the apex".

4. Questions for the lesson:

- Biological and mechanical goals of root canal preparation.
- Creation of an "apical stop": purpose and technique.
- Advantages of the Crown-down technique in infected canals.

5. Questions for self-control:

- What is a glide path and why is it needed?
- What is the minimum ISO size to which the apical portion of the canal must be enlarged?

Lesson Topic 5: Medicinal Treatment of Root Canals. Irrigation.

1. Objective of the lesson:To study chemical methods of cleaning the root canal system and the properties of irrigation solutions.

2. Educational technologies:



- Pre-test.
- Demonstration of solution activation (ultrasonic, sonic). Post-test.

3. Basic concepts:

- **Irrigation:**flushing the canal to remove sawdust, biofilm and smear layer.
- **Smear layer:**layer of dentin and microorganisms on the walls after mechanical processing.

4. Questions for the lesson:

- Irrigation solutions: sodium hypochlorite (NaOCl), EDTA, chlorhexidine.
- Irrigation protocol: sequence and concentrations of solutions.
- Complications during irrigation ("hypochlorite accident") and their prevention.

5. Questions for self-control:

- Why use EDTA in root canal treatment?
- Why can't sodium hypochlorite and chlorhexidine be mixed?

Lesson Topic 6: Temporary Root Canal Filling. Medications.

1. Objective of the lesson:To study the indications for temporary insertion of medicinal products into root canals and the types of preparations.

2. Educational technologies:

- Pre-test.
- Practice applying pastes into the canal using a root canal filler and paper points. Post-test.

3. Basic concepts:

- **Antiseptic dressing:**temporary filling of the channel between visits.
- **Calcium hydroxide:**"gold standard" of temporary filling (antibacterial and osteotropic effect).

4. Questions for the lesson:

- Indications for temporary filling in the treatment of periodontitis.
- Classification of drugs: based on antibiotics, antiseptics, calcium hydroxide.
- Requirements for temporary sealing materials for closing tooth cavities.

5. Questions for self-control:

- What is the mechanism of action of calcium hydroxide on the canal microflora?
- What is the maximum period for which calcium preparations can be left in the canal?

6. Literature on topics 1-6:

1. *Endodontics / Stephen Cohen, Richard Burns.*



2. *Therapeutic dentistry: Textbook edited by E.V. Borovsky.*
3. *Clinical endodontics / Holger Dennhardt.*

7. Topics of abstracts:

- Modern visualization methods in endodontics: CBCT and operating microscope.
- Nickel-titanium instruments: from 1st to 5th generation.
- The role of irrigation in the prevention of endodontic failures.

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU. Here is a ready-made curriculum for topics 7 through 18 (semester 6), designed strictly according to your template for copying.

Lesson Topic 7: Root Canal Obturation Methods. Filling Materials.

1. Objective of the lesson: To study the requirements for materials for permanent root canal filling and the classification of methods for their obturation.

2. Educational technologies:

- Pre-test.
- Demonstration of various types of sealers and fillers. Post-test.

3. Basic concepts:

- **Fillers:** solid fillers (gutta-percha pins).
- **Sealers:** endodontic sealants (based on epoxy resins, bioceramics, zinc eugenol).
- **Obturation:** creation of a hermetic barrier in the apical, middle and coronal parts of the canal.

4. Questions for the lesson:

- ISO classification of root canal filling materials.
- The role of sealer in ensuring the tightness of obturation.
- Requirements for an ideal root filler.

5. Questions for self-control:

- What are the advantages of bioceramic sealers?
- Why can't a canal be filled with paste (sealer) alone?

Lesson Topic 8: Lateral Gutta-Percha Condensation. Technique.

1. Objective of the lesson: Master the "gold standard" of endodontic treatment – the cold lateral compaction method of gutta-percha.

2. Educational technologies:

- Pre-test.
- Testing the methodology on phantom blocks using spreaders. Post-test.



3. Basic concepts:

- **Master-cone:** master pin corresponding to the size of the last master file.
- **Spreader:** Tool for lateral compaction of pins.
- **Condensation:** the process of pressing pins against the walls of a canal to create a monolithic mass.

4. Questions for the lesson:

- Selecting the master pin and checking the “tug-back” (feeling of resistance when removing it).
- Stages of the lateral condensation technique.
- Obturation quality criteria (X-ray control).

5. Questions for self-control:

- How far from the apex should the spreader be inserted?
- Errors during lateral condensation (root fracture, insufficient filling).

Lesson Topic 9: Vertical Gutta-Percha Condensation. Modern Obturation Methods.

1. Objective of the lesson: To study the methods of obturation with heated gutta-percha and the use of injection systems.

2. Educational technologies:

- Pre-test.
- Demonstration of gutta-percha heating devices (systems such as BeeFill and Calamus). Post-test.

3. Basic concepts:

- **Schilder Method:** classic vertical condensation.
- **Continuous Wave:** modern modification using pluggers.
- **Thermophile:** obturation on the carrier.

4. Questions for the lesson:

- Advantages of three-dimensional obturation with heated gutta-percha.
- Pluggers: types and selection rules.
- Squirt technique (injection of gutta-percha).

5. Questions for self-control:

- Risk of thermal damage to the periodontium: how to avoid it?
- Why does vertical condensation fill lateral channels better?



Lesson 10: Errors and Complications in Endodontics. Prevention and Elimination.
Module 1.

1. Objective of the lesson:Analyze potential failures at all stages of endodontics and methods for correcting them. Final knowledge assessment for module 1.

2. Educational technologies:

- Pre-test.
- Analysis of radiographs with complications (instrument breakage, step).
Final module test.

3. Basic concepts:

- **Step (Ledging):**deviation from the channel course.
- **Perforation:**creation of artificial communication with periodontal tissues.
- **Apical push:**removal of material or sawdust beyond the top.

4. Questions for the lesson:

- Causes of instrument breakage in the canal and methods of their removal.
- Tactics for perforation of the bottom of the tooth cavity and root (using MTA).
- Post-treatment flare-up: causes and treatment.

5. Questions for self-control:

- How to prevent the formation of a "step" in a curved canal?
- Radiographic signs of root perforation.

Lesson Topic 11: Acute Pulpitis. Clinical Presentation. Diagnosis. Differential
Diagnosis. Treatment.

1. Objective of the lesson:To study the forms of acute pulp inflammation and methods of providing emergency care.

2. Educational technologies:

- Pre-test.
- Solving situational problems in differential diagnostics. Post-test.

3. Basic concepts:

- **Pulpitis:**inflammation of the vascular-nerve bundle of the tooth.
- **Symptoms:**spontaneous, nocturnal, paroxysmal pain.
- **Pain irradiation:**spread of pain along the branches of the trigeminal nerve.

4. Questions for the lesson:

- Clinic of focal and diffuse acute pulpitis.
- Differential diagnosis with deep caries and neuralgia.
- Treatment methods: vital extirpation (main method).

5. Questions for self-control:



- Why does pain intensify at night?
- Temperature stimuli test for acute pulpitis.

Lesson Topic 12: Chronic Pulpitis. Clinical Features. Diagnosis. Treatment.

1. Objective of the lesson: To study the characteristics of the course of chronic pulp inflammation and methods of its treatment.

2. Educational technologies:

- Pre-test.
- Study of radiographs (changes in the periodontium in pulpitis). Post-test.

3. Basic concepts:

- **Chronic fibrous pulpitis:** The most common form is complaints of pain due to temperature changes.
- **Chronic hypertrophic (pulp polyp):** tissue growth into a carious cavity.
- **Chronic gangrenous:** tissue breakdown, pain from heat.

4. Questions for the lesson:

- Pathomorphology of chronic pulp inflammation.
- The importance of EOD (electroodontodiagnostics) in the diagnosis of chronic forms.
- Features of root canal treatment in gangrenous pulpitis.

5. Questions for self-control:

- What is the difference between a pulp polyp and a gum polyp?
- EOD indicators for various forms of chronic pulpitis.

Lesson Topic 13: Periodontitis. Acute Forms. Clinical Features. Diagnosis. Treatment.

1. Objective of the lesson: To study acute inflammation of the dental ligament apparatus and the algorithm for creating exudate outflow.

2. Educational technologies:

- Pre-test.
- Demonstration of the apical foramen opening technique. Post-test.

3. Basic concepts:

- **Periodontitis:** the inflammatory process extends beyond the tooth.
- **Symptoms:** a feeling of a "growing tooth", sharp pain when biting.
- **Stages:** serous and purulent (phases of intoxication and exudation).

4. Questions for the lesson:

- Clinic of acute apical periodontitis.
- Differential diagnosis with acute pulpitis and periostitis.



- Treatment stages: creation of drainage, antiseptic treatment, temporary filling.

5. Questions for self-control:

- Why may there be no radiographic changes in acute periodontitis?
- General therapy (antibiotics, NSAIDs) in the treatment of periodontitis.

Lesson Topic 14: Chronic Periodontitis. Clinical Features. Diagnosis. Treatment.

1. Objective of the lesson: To study the classification of chronic periodontal lesions and methods of their conservative treatment.

2. Educational technologies:

- Pre-test.
- Radiograph reading: fibrous, granulating, and granulomatous periodontitis.
- Post-test.

3. Basic concepts:

- **Granuloma/Cystogranuloma:** a clearly defined area of bone tissue destruction.
- **Fistulous tract:** a sign of granulating periodontitis.
- **Fibrous periodontitis:** widening of the periodontal space.

4. Questions for the lesson:

- X-ray diagnostics of various forms of chronic periodontitis.
- The use of calcium hydroxide preparations for destructive forms.
- Criteria for success of treatment in one and several visits.

5. Questions for self-control:

- What is the difference between a true cyst and a granuloma on an x-ray?
- When is root apex resection indicated?

Lesson Topic 15: Root Canal Retreatment. Indications. Methods.

1. Objective of the lesson: To study the algorithms for endodontic retreatment (Retreatment) and methods of root canal filling.

2. Educational technologies:

- Pre-test.
- Gutta-percha extraction practice using solvents and machine tools.
- Post-test.

3. Basic concepts:

- **Indications:** the presence of a periapical process with unsatisfactory obturation, instrument breakage.
- **Solvents:** chemical solvents for gutta-percha and cements.

4. Questions for the lesson:



- Methods for removing gutta-percha, pastes and cements from the canal.
- Prevention of perforations during unsealing.
- Using ultrasound to remove old posts and inlays.

5. Questions for self-control:

- In what cases is retreatment considered inappropriate?
- Difficulties in unsealing canals obturated with resorcinol-formaldehyde paste.

Lesson Topic 16: Endodontic Treatment of Complicated Cases (Curved Canals, Obliteration, Perforations).

1. Objective of the lesson: Master the tactics of managing "difficult" channels and the use of special tools.

2. Educational technologies:

- Pre-test.
- Working with NiTi instruments with increased flexibility. Post-test.

3. Basic concepts:

- **Obliteration:** narrowing or complete closure of the canal lumen by secondary dentin.
- **Pre-bending:** pre-bending of a steel tool to pass through curved areas.

4. Questions for the lesson:

- Methods of passing obliterated channels (chelating agents, microscope).
- Treatment tactics for teeth with incomplete root formation (apexification).
- Using MTA (Mineral Trioxide Aggregate) to seal perforations.

5. Questions for self-control:

- How to avoid apex "transportation" in a highly curved canal?
- The concept of "anti-curvature" preparation.

Lesson Topic 17: Modern technologies in endodontics (apex locators, microscope, NiTi systems).

1. Objective of the lesson: Explore high-tech equipment that improves the accuracy and success of endodontic treatment.

2. Educational technologies:

- Pre-test.
- Working with an operating microscope or binocular loupes. Post-test.

3. Basic concepts:

- **Operating microscope:** Magnification and illumination to find hidden channels.



- **NiTi systems:** tools with shape memory and high fracture resistance.
- **3D endodontics:** use of CBCT for treatment planning.

4. Questions for the lesson:

- Advantages of using a microscope at the stage of searching for orifices and extracting instruments.
- Modern NiTi systems: controlled metal memory.
- The operating principle of multi-frequency apex locators.

5. Questions for self-control:

- How does a microscope help in diagnosing root cracks?
- Differences between hand and machine NiTi instruments.

Lesson Topic 18: Modern Research Methods in Endodontics.

1. Objective of the lesson: To master the interpretation of modern diagnostic data for diagnosis and evaluation of treatment results.

2. Educational technologies:

- Pre-test.
- Analysis of CBCT (cone beam computed tomography) data using specialized software. Post-test.

3. Basic concepts:

- **CBCT:** gold standard of visualization in endodontics (no shadowing).
- **Radiovisiography (RVG):** Reduction of radiation exposure and digital processing of the image.
- **Laser Doppler flowmetry:** method for assessing blood flow in the pulp.

4. Questions for the lesson:

- Advantages and disadvantages of 2D and 3D X-ray diagnostics.
- Assessment of the PAI (Periapical Index) based on radiographic data.
- The role of ultrasound in endodontic surgery.

5. Questions for self-control:

- Why can the second canal in a premolar be “missed” on a regular x-ray?
- The importance of histological examination of pulp and periodontal tissues.

6. Literature on topics 7-18:

1. *Cohen S. Endodontics. – 11th ed.*
2. *Borovsky E.V. Therapeutic dentistry.*
3. *Bergenholtz G. Endodontology.*

7. Topics of abstracts:

- Comparative characteristics of sealers based on bioceramics and epoxy resins.



- Psychological preparation of the patient for long-term endodontic treatment.
- Artificial intelligence capabilities in endodontic radiograph analysis.

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU.
7th semester

Lesson Topic 1: Structure and functions of periodontal tissues.

1. Objective of the lesson: To study the anatomical and morphological features of the complex of tissues surrounding the tooth and their physiological role in the body.

2. Educational technologies:

- Pre-test.
- Working with histological atlases and micropreparations of periodontal tissue. Post-test.

3. Basic concepts:

- **Periodontium:** a set of tissues that have a common origin and function (gum, periodontium, alveolar bone, dental cementum).
- **Ligamentous apparatus:** collagen fibers that hold the tooth in the socket.
- **Functions:** support-retaining, shock-absorbing, trophic, barrier, plastic.

4. Questions for the lesson:

- Anatomical structure of the gum: free, attached gingiva, interdental papilla.
- Histological structure of the periodontal junction.
- Structure and role of root cementum in the periodontal system.

5. Questions for self-control:

- What is "biological width" and what is its normal value?
- What layers does the gingival epithelium consist of?

tooth and periodontium anatomical structure. Sectional human central incisor showing the structures that form the dental tissue and the periodontal tissues. Infographic, 3D illustration with subtitles

Lesson Topic 2: Blood supply, innervation, age-related changes in periodontal tissues.

1. Objective of the lesson: To study the characteristics of the vascular network and nervous system of the periodontium, as well as the physiological involution of tissues during the aging process.

2. Educational technologies:

- Pre-test.
- Demonstration of anastomosis diagrams of maxillofacial vessels. Post-test.

3. Basic concepts:



- **Microcirculatory bed:** Features of the capillary network of the gums.
- **Gerontostomatology:** age-related gum recession and sclerotic changes in bone tissue.

4. Questions for the lesson:

- Sources of blood supply to the periodontal tissues of the upper and lower jaws.
- Features of innervation (periodontal receptor apparatus).
- The influence of age factors on the state of the ligamentous apparatus and the height of the alveolar ridge.

5. Questions for self-control:

- How does periodontal vascular permeability change with age?
- The role of the periodontomuscular reflex.

Lesson Topic 3: Methods of examination of patients with periodontal diseases.

1. Objective of the lesson: Master the algorithm for examining a periodontal patient, including specific instrumental techniques.

2. Educational technologies:

- Pre-test.
- Practicing periodontal probe skills on phantoms. Post-test.

3. Basic concepts:

- **Periodontal pocket:** true and false (gingival).
- **Probing:** Determining the pocket depth at 4-6 points for each tooth.
- **Gum recession:** determination of the level of soft tissue loss.

4. Questions for the lesson:

- Scheme for collecting anamnesis in patients with periodontal diseases.
- Determination of tooth mobility (classification according to Miller or Entin).
- X-ray examination methods (panoramic radiography, CBCT).

5. Questions for self-control:

- What is the difference between supragingival and subgingival calculus?
- Rules for filling out a periodontogram.

Lesson Topic 4: Dental indices.

1. Objective of the lesson: To master the quantitative and qualitative assessment of the condition of periodontal tissues and oral hygiene using indices.

2. Educational technologies:

- Pre-test.



- Practical determination of hygiene indices (Greene-Vermillion) and inflammation indices (PMA, SBI) using each other or models. Post-test.

3. Basic concepts:

- **Hygiene indices (HI):** Fedorova-Volodkina, Green-Vermillion (OHI-S).
- **Inflammation indices:** PMA (papillary-marginal-alveolar), bleeding index.
- **Periodontal indices:** CPITN (Critical Need for Treatment Index), PI (Russell Index).

4. Questions for the lesson:

- Method of staining dental plaque for determining IG.
- Clinical significance of the CPITN index.
- The role of indices in assessing the effectiveness of treatment.

5. Questions for self-control:

- What formula is used to calculate PMA index as a percentage?
- What does a score of 0 mean in the Greene-Vermillion Index?

Lesson Topic 5: Classification of periodontal diseases.

1. Objective of the lesson: To study the systematization of periodontal diseases according to domestic classification and international standards.

2. Educational technologies:

- Pre-test.
- Working with classification tables (ICD-10, classification of the Russian Dental Association - StAR). Post-test.

3. Basic concepts:

- **Gingivitis:** inflammation of the gums without damage to the integrity of the gingival attachment.
- **Periodontitis:** destruction of ligaments and bone tissue.
- **Periodontosis:** dystrophic process.
- **Idiopathic diseases:** lesions with rapid tissue destruction.

4. Questions for the lesson:

- The main nosological forms in the classification of periodontal diseases.
- Criteria for distinguishing between localized and generalized periodontitis.
- Severity of periodontal diseases.

5. Questions for self-control:

- What are the main differences between periodontitis and periodontal disease?
- What diseases are classified as periodontal diseases?



Lesson Topic 6: Etiology of periodontal diseases.

1. Objective of the lesson: To study local and general factors that contribute to the development of periodontal pathology.

2. Educational technologies:

- Pre-test.
- Microscopic demonstration of the composition of microbial plaque (video).
- Post-test.

3. Basic concepts:

- **Microbial factor:** periodontopathogenic bacteria (*P. gingivalis*, *T. forsythia*).
- **Traumatic factors:** malocclusion, short frenulum, overhanging edges of fillings.
- **General factors:** systemic diseases (diabetes, hormonal disorders, blood diseases).

4. Questions for the lesson:

- The role of dental plaque and tartar in periodontal tissue damage.
- The impact of smoking and stress on periodontal health.
- Iatrogenic factors in the etiology of periodontal diseases.

5. Questions for self-control:

- What is the periodontopathogenic triad?
- How does vitamin C deficiency affect periodontal tissues?

Lesson Topic 7: Pathogenesis of periodontal diseases.

1. Objective of the lesson: To analyze the mechanisms of development of inflammatory and dystrophic destruction in periodontal tissues.

2. Educational technologies:

- Pre-test.
- Study of the immune response and inflammatory mediator cascade. Post-test.

3. Basic concepts:

- **Inflammatory mediators:** cytokines, interleukins, prostaglandins.
- **Bone resorption:** the role of osteoclasts in the destruction of the alveolar ridge.
- **Immune response:** imbalance between microflora and the body's defenses.

4. Questions for the lesson:

- The mechanism of formation of periodontal pocket.
- The role of enzymes (collagenase, elastase) in the destruction of the ligamentous apparatus.



- The role of microcirculatory disorders in the pathogenesis of periodontitis.

5. Questions for self-control:

- Why does gum inflammation spread to bone tissue?
- What is the "vicious circle" in the pathogenesis of periodontal diseases?

Lesson Topic 8: Catarrhal Gingivitis. Clinical Features. Differential Diagnosis.
Treatment.

1. Objective of the lesson: Learn to diagnose the most common form of gingivitis and carry out its comprehensive treatment.

2. Educational technologies:

- Pre-test.
- Conducting professional hygiene on a phantom.
- Preparing a conservative treatment plan. Post-test.

3. Basic concepts:

- **Catarrhal gingivitis:** superficial inflammation characterized by hyperemia, swelling and bleeding.
- **Professional hygiene:** removal of supra- and subgingival deposits as the main method of treatment.

4. Questions for the lesson:

- Patient complaints and clinical signs of acute and chronic catarrhal gingivitis.
- Differential diagnosis with hypertrophic gingivitis and mild periodontitis.
- Local drug therapy: antiseptics, anti-inflammatory drugs.

5. Questions for self-control:

- Why is there no tooth mobility and bone destruction with gingivitis?
- What is the prognosis for catarrhal gingivitis with timely treatment?

6. Literature on topics 1-8:

1. *Therapeutic dentistry: Textbook edited by E.V. Borovsky.*
2. *Periodontal diseases / N.F. Danilevsky, A.V. Borisenko.*
3. *Periodontology: National Guidelines / Edited by L.A. Dmitrieva.*

7. Topics of abstracts:

- Modern concepts of the structure of the gingival attachment.
- Microbiological aspects of periodontal diseases.
- The relationship between periodontal diseases and diabetes mellitus.

8. Location of the lesson: Office No. 209, Department of Dental Disciplines, RMU.



Lesson Topic 9: Hypertrophic Gingivitis

1. Objective of the lesson: To study the etiology, forms and methods of treatment of gum tissue proliferation.

2. Educational technologies: Pre-test, clinical analysis of patients, analysis of orthopantomograms (OPTG), post-test.

3. Basic concepts:

- **Edematous form:** predominance of exudation, hyperemia, false pockets.
- **Fibrous form:** proliferation of connective tissue, gums are dense, color is unchanged.
- **RMA Index:** assessment of the prevalence of inflammation.

4. Questions for the lesson:

- Differential diagnosis of hypertrophic gingivitis and periodontitis.
- Hormonal factors (juvenile gingivitis, gingivitis of pregnant women) in the development of hypertrophy.
- Indications for gingivectomy in fibrous form.

5. Questions for self-control:

- Why do "false" pockets form with hypertrophic gingivitis?
- What classes of drugs (eg, calcium channel blockers) cause drug-induced gingival hyperplasia?

Lesson Topic 10: Ulcerative Gingivitis (Vincent's Gingivitis)

1. Objective of the lesson: Master the diagnosis and emergency care for necrotic gum lesions.

2. Educational technologies: Working with a microscope (cytological image), practicing professional hygiene skills on phantoms.

3. Basic concepts:

- **Fusospirillary symbiosis:** the main pathogens (*Borrelia vincentii* and *Fusobacterium nucleatum*).
- **Necrectomy:** removal of necrotic plaque using enzymes.

4. Questions for the lesson:

- Clinical triad: pain, foetor ex ore, necrosis of the gingival papillae.
- General therapy: the role of metronidazole and detoxification.
- The relationship between ulcerative gingivitis and immunodeficiency states (HIV infection).

5. Questions for self-control:

- What is the difference between ulcerative gingivitis and specific lesions (syphilis, tuberculosis)?



- Why are cauterizing agents contraindicated in the treatment of ulcerative gingivitis?

Lesson Topic 11: Acute Periodontitis

1. Objective of the lesson: To study the clinical manifestations of the acute phase of periodontal destruction and the relief of the acute condition.

2. Educational technologies: Demonstration of radiographs in case of abscess formation, practice of opening a periodontal abscess.

3. Basic concepts:

- **Periodontal abscess:** localized purulent inflammation in the pocket wall.
- **Collateral edema:** reaction of facial soft tissues to acute inflammation.

4. Questions for the lesson:

- Differential diagnostics of acute periodontitis and acute periodontitis.
- The doctor's tactics when detecting a periodontal abscess.
- Causes of exacerbation of the chronic process in periodontal tissues.

5. Questions for self-control:

- How to determine the degree of tooth mobility according to Entin?
- Features of the radiological picture in the acute course of the disease.

Lesson Topic 12: Chronic Periodontitis

1. Objective of the lesson: To systematize knowledge about the pathogenesis of bone tissue resorption and methods of conservative treatment.

2. Educational technologies: Preparation of a periodontogram, interpretation of CBCT data.

3. Basic concepts:

- **Periodontal pocket:** true destruction of the gingival attachment.
- **Bone resorption:** types of destruction (vertical, horizontal).

4. Questions for the lesson:

- Classification of periodontitis by severity (mild, moderate, severe).
- The role of microbial biofilm and local factors (traumatic occlusion).
- Stages of complex treatment: SRP therapy (Scaling and Root Planing).

5. Questions for self-control:

- What is the difference between probing depth and attachment loss level?
- What radiographic signs are characteristic of moderate periodontitis?



Lesson topic 13: Periodontal disease

1. Objective of the lesson: To study degenerative changes in the periodontium and their differences from inflammatory diseases.

2. Educational technologies: Analysis of panoramic images (OPTG), differential diagnostic tables.

3. Basic concepts:

- **Gum recession:** exposure of the necks of the teeth without the formation of pockets.
- **Sclerotic restructuring:** specific picture of bone tissue (fine-mesh pattern).

4. Questions for the lesson:

- The relationship between periodontosis and systemic diseases (atherosclerosis, diabetes mellitus).
- Clinical signs: wedge-shaped defects, lack of tooth mobility in the early stages.
- Methods for improving microcirculation (physiotherapy, massage).

5. Questions for self-control:

- Why do teeth with periodontal disease remain stable for a long time despite significant bone loss?
- Differential diagnostics of periodontosis and chronic periodontitis.

Lesson Topic 14: Periodontolysis. Eosinophilic Granuloma. Lether-Zieve Disease.

1. Objective of the lesson: To become familiar with idiopathic diseases with progressive lysis of periodontal tissues.

2. Educational technologies: Working with archival medical records, viewing clinical atlases.

3. Basic concepts:

- **Histiocytosis X:** a group of diseases associated with the proliferation of Langerhans cells.
- **Floating teeth:** a characteristic radiological symptom of complete loss of bone support.

4. Questions for the lesson:

- Clinical manifestations of eosinophilic granuloma in the oral cavity.
- Lether-Ziwe disease: systemic manifestations in young children.
- Dentist's tactics in case of suspected systemic periodontolysis.

5. Questions for self-control:

- Why is standard periodontal treatment ineffective for these pathologies?
- What organs, besides the jaws, are affected by Lether-Ziwe disease?



Lesson Topic 15: Papillon-Lefevre Syndrome. Hand-Schüller-Christian Disease

1. Objective of the lesson: To study genetically determined and systemic pathologies leading to early tooth loss.

2. Educational technologies: Visual diagnostics using photographs (dermatological signs).

3. Basic concepts:

- **Keratoderma:** hyperkeratosis of the palms and soles (a key feature of Papillon-Lefevre syndrome).
- **Hand-Schüller-Christian triad:** skull bone defects, exophthalmos, diabetes insipidus.

4. Questions for the lesson:

- Timing of loss of temporary and permanent teeth in Papillon-Lefevre syndrome.
- Genetic nature and prognosis of diseases.
- The role of aggressive microflora (*Aggregatibacter actinomycetemcomitans*) in the development of lysis.

5. Questions for self-control:

- How to differentiate Papillon-Lefevre syndrome from aggressive periodontitis?
- Is it possible to use implants for these conditions?

Lesson topic 16: Periodontomas. Fibromatosis of the gums

1. Objective of the lesson: To study tumor-like periodontal diseases, their diagnostic and treatment tactics.

2. Educational technologies: Preparation of a microscopic specimen (oncocytopathology), demonstration of the surgical protocol.

3. Basic concepts:

- **Fibromatosis:** a hereditary or idiopathic overgrowth of the gums that often covers the crowns of the teeth.
- **Periodontoma:** general name for tumor-like formations of the periodontium.

4. Questions for the lesson:

- Clinical differences between hereditary fibromatosis and hypertrophic gingivitis.
- The problem of recurrence after surgical treatment.
- The influence of fibromatosis on teeth eruption and bite formation.

5. Questions for self-control:



- Is gingival fibromatosis a true tumor?
- The necessary scope of surgical intervention for total fibromatosis.

Lesson Topic 17: Epulis

1. Objective of the lesson: To study the clinical and morphological forms of epulis and methods of their differential diagnosis.

2. Educational technologies: Analysis of biopsy data, analysis of clinical cases.

3. Basic concepts:

- **Angiomatous epulis:** soft, vascular, bleeds easily.
- **Fibrous epulis:** dense, slow growing.
- **Giant cell epulis (peripheral giant cell granuloma):** bluish color, bone destruction is possible.

4. Questions for the lesson:

- The role of chronic trauma (edge of filling, crown) in the development of epulis.
- Differential diagnosis of epulis and hypertrophic gingivitis.
- Surgical tactics: is it necessary to remove the "causative" tooth?

5. Questions for self-control:

- Which epulis is most common in women during pregnancy?
- Radiographic features of giant cell epulis.

Lesson Topic 18: Epulis. Periodontal Cyst

1. Objective of the lesson: To study the differential diagnosis of periodontal masses and cysts.

2. Educational technologies: Reading of targeted radiographs and CBCT, description of foci of destruction.

3. Basic concepts:

- **Lateral periodontal cyst:** odontogenic cyst located along the root of a vital tooth.
- **Eruption cyst:** soft tissue formation over an erupting tooth.

4. Questions for the lesson:

- The difference between a periodontal cyst and a radicular cyst (the condition of the dental pulp).
- Treatment methods for cysts: cystectomy and cystotomy.
- Comprehensive assessment: clinical tests (EOD) + radiology.

5. Questions for self-control:

- How is a lateral cyst visualized on an x-ray?



- What is the prevention of recurrence of epulis and cysts in periodontology?

9 sevens

Lesson Topic 1: Anatomical and physiological features of the oral mucosa

1. Objective of the lesson: To study the histological structure and functions of various parts of the mucous membrane to understand the mechanisms of pathology development.

2. Educational technologies: Microscopy of histological preparations, examination of areas with different types of keratinization in the oral cavity.

3. Basic concepts:

- **Layers of the epithelium:** basal, spinous, granular, horny.
- **Types of mucous membranes:** keratinizing (gums, palate), nonkeratinizing (cheeks, lips), specialized (tongue).
- **Lamina propria and submucosa:** role in mucosal motility.

4. Questions for the lesson:

- Protective, sensitive and absorbent functions of the oral mucosa.
- The concept of regional lymph nodes and lymph drainage pathways from various parts of the mouth.
- Features of the structure of the red border of the lips.

5. Questions for self-control:

- In which areas of the oral mucosa is the submucosal layer absent?
- What is the difference between parakeratosis and orthokeratosis at the histological level?

Lesson Topic 2: Classification of Oral and Maxillofacial Sclerosis Diseases

1. Objective of the lesson: To master the systematization of lesions of the oral mucosa in order to make a correct diagnosis.

2. Educational technologies: Working with clinical classifications (ICD-10, MMSI classification), solving situational problems.

3. Basic concepts:

- **Primary morphological elements:** spot, nodule, tubercle, knot, blister, bubble, pustule.
- **Secondary morphological elements:** erosion, ulcer, crack, crust, scale, scar.

4. Questions for the lesson:

- Principles of classification of diseases of the oral mucosa (infectious, traumatic, allergic, etc.).
- The importance of morphological elements in determining treatment tactics.
- Methodology for examining a patient with pathology of the oral mucosa.



5. Questions for self-control:

- What is the difference between a vesicle and a bulla?
- In what cases does a scar form at the site of the lesion?

Lesson Topic 3: Traumatic Lesions of the Orthodontic Retinopathy

1. Objective of the lesson: To study the general patterns of the mucous membrane's response to external stimuli.

2. Educational technologies: Demonstration of methods of antiseptic treatment and application of keratoplasty.

3. Basic concepts:

- **Traumatic erosion:** superficial epithelial defect.
- **Traumatic ulcer:** a defect penetrating into the lamina propria of the mucosa.

4. Questions for the lesson:

- General etiology of injuries (acute and chronic factors).
- Stages of healing of a wound defect on the mucous membrane.
- The role of secondary infection in the course of the traumatic process.

5. Questions for self-control:

- What groups of drugs are used to accelerate epithelialization?
- Why do ulcers on the oral mucosa heal more slowly than on the skin?

Lesson Topic 4: Mechanical Trauma of the Orthodontic Retinopathy

1. Objective of the lesson: Diagnosis and elimination of the consequences of exposure to sharp edges of teeth, dentures and bad habits.

2. Educational technologies: Grinding of sharp edges of teeth on phantoms, correction of removable dentures.

3. Basic concepts:

- **Decubital ulcer:** an ulcer caused by prolonged pressure (usually from the edge of a prosthesis).
- **Bednar disease:** aphthae of newborns due to mechanical damage to the palate.

4. Questions for the lesson:

- Clinic of acute mechanical trauma (biting, injury with an instrument).
- Chronic mechanical trauma: "denture" stomatitis, leukoplakia from pressure.
- Peculiarities of ulcer localization due to the harmful habit of cheek biting.

5. Questions for self-control:

- How to differentiate between decubital ulcer and cancerous ulcer?



- What is the doctor's approach when an ulcer is detected that does not heal for more than 2 weeks after the irritant has been removed?

Lesson Topic 5: Chemical Damage to the OCR

1. Objective of the lesson: To study the clinical picture of chemical burns and algorithms for providing emergency care.

2. Educational technologies: Compilation of a table of antidotes (neutralizers) for various chemical substances.

3. Basic concepts:

- **Coagulative necrosis:** caused by the action of acids (a dense scab is formed).
- **Liquefactive necrosis:** caused by exposure to alkalis (deep damage, loose necrosis).

4. Questions for the lesson:

- Household and professional chemical injuries (acids, alkalis, medications in dentistry).
- First aid when aggressive liquids come into contact with mucous membranes.
- Features of burns with arsenic paste and resorcinol-formaldehyde mixture.

5. Questions for self-control:

- Why is an alkali burn considered more dangerous than an acid burn?
- How to neutralize a burn with citric acid?

Lesson Topic 6: Physical Damage to the Orthodontic System

1. Objective of the lesson: To study the influence of temperature factors, electric current and radiant energy on the ocular surface resistance.

2. Educational technologies: Analysis of clinical cases of radiation stomatitis and galvanism.

3. Basic concepts:

- **Thermal burn:** damage from hot food or steam.
- **Galvanism:** the occurrence of microcurrents in the presence of dissimilar metals in prostheses.
- **Radiation mucositis:** mucosal reaction to radiation therapy.

4. Questions for the lesson:

- Clinical signs of galvanosis: metallic taste, burning sensation, impaired salivation.
- The effect of low temperatures (cryodestruction) on tissues.



- Radiation injuries: clinical picture of dry mouth and hyperemia.
- **5. Questions for self-control:**
- What device is used to measure the potential difference in the oral cavity?
- What is the treatment strategy for a patient with suspected galvanosis?

Lesson Topic 7: Leukoplakia

1. Objective of the lesson: To study the etiology and forms of precancerous lesions of the mucous membrane, and tactics of oncological alertness.

2. Educational technologies: Fluorescent diagnostics (Wood's lamp), stomatoscopy.

3. Basic concepts:

- **Flat leukoplakia:** a white spot that does not come off when scraped.
- **Verrucous form:** warty or plaque-like growths (high risk of malignancy).
- **Erosive-ulcerative form:** the most dangerous in terms of malignancy.

4. Questions for the lesson:

- Endogenous and exogenous factors in the development of leukoplakia (smoking, gastrointestinal pathologies).
- Tappeiner's leukoplakia (nicotine stomatitis): localization and clinic.
- Indications for biopsy in various forms of leukoplakia.

5. Questions for self-control:

- What is the difference between leukoplakia and lichen planus?
- What changes in the epithelium occur with leukoplakia (hyperkeratosis, acanthosis)?

Lesson Topic 8: Viral Diseases of the Oral and Maxillofacial Sclerosis

1. Objective of the lesson: Diagnosis of herpetic lesions and differentiation of acute and chronic course.

2. Educational technologies: Cytological examination (detection of Tzanck cells), preparation of an antiviral therapy regimen.

3. Basic concepts:

- **AHS (Acute herpetic stomatitis):** primary infection, severe intoxication, lymphadenitis.
- **CHRS (Chronic Recurrent Herpes):** localized rashes associated with risk factors (hypothermia, stress).

4. Questions for the lesson:

- Periods of development of acute respiratory viral infections: incubation, prodromal, peak, fading, convalescence.



- Local and general therapy: use of acyclovir, interferons and painkillers.
- Features of a diet for painful rashes.

5. Questions for self-control:

- Why does herpes infection often recur in the same areas?
- What diseases should be differentiated from herpetic stomatitis in children?

Lesson Topic 9: Herpangina. Foot-and-mouth disease

1. Objective of the lesson: To study the differential diagnosis of rare viral lesions of the pharynx and mucous membrane.

2. Educational technologies: Comparative analysis of clinical photo archives, study of epidemiological chains.

3. Basic concepts:

- **Coxsackie virus (group A):** the main causative agent of herpetic angina.
- **Foot-and-mouth disease virus:** a zoonotic infection characterized by vesicular eruptions on the oral mucosa and skin of the extremities.

4. Questions for the lesson:

- Localization of rashes in herpetic sore throat (soft palate, arches, uvula).
- Routes of transmission of foot-and-mouth disease (contact, alimentary through raw milk).
- General and local therapy: antiseptic rinses and symptomatic treatment.

5. Questions for self-control:

- Why is acyclovir ineffective against herpetic angina?
- What elements of the lesion are characteristic of the "aphthous" period of foot-and-mouth disease?

Lesson Topic 10: Syphilis (SPO)

1. Objective of the lesson: Learn to identify specific signs of syphilis at different stages of the disease and adhere to epidemiological safety measures.

2. Educational technologies: Development of an algorithm for collecting material for testing for pale treponema (*T. pallidum*).

3. Basic concepts:

- **Chancre:** primary syphilis (a painless ulcer with a dense base).
- **Secondary syphilides:** roseola, papules (extremely contagious).
- **Gumma:** tertiary period, leading to tissue destruction (perforation of the hard palate).

4. Questions for the lesson:

- Differential diagnosis of hard chancre and decubital ulcer.
- Specific blood reactions (RW, RIF, RIT).



- Dentist's tactics when a specific infection is suspected.
- **5. Questions for self-control:**
- How does a syphilitic papule on the tongue differ from the elements of lichen planus?
- What is the consistency of regional lymph nodes in primary syphilis?

Lesson topic 11: Tuberculosis of the oral mucosa

1. Objective of the lesson: To study the clinical picture of secondary tuberculosis of the oral cavity and methods of protecting the physician.

2. Educational technologies: Demonstration of lung radiographs, analysis of cytological findings (Pirogov-Langhans cells).

3. Basic concepts:

- **Tuberculous lupus:** soft tubercles (lupomas), "apple jelly" symptom.
- **Miliary-ulcerative tuberculosis:** extremely painful ulcers with undermined edges and Trell grains.

4. Questions for the lesson:

- Routes of entry of mycobacteria into the oral mucosa (intracanalicular, hematogenous).
- Differential diagnosis of tuberculous ulcer and cancer.
- The importance of the Mantoux test and Diaskintest in diagnostics.

5. Questions for self-control:

- What is the "drop-out" phenomenon in lupus erythematosus?
- Why is specific treatment carried out only in specialized dispensaries?

Lesson Topic 12: Candidiasis of the Oral Mucosa

1. Objective of the lesson: To study the forms of fungal infection and their relationship with the general condition of the body (immunity).

2. Educational technologies: Microscopic examination of scrapings for the presence of mycelium of Candida fungi.

3. Basic concepts:

- **Acute milk stomatitis:** white coating, easily removed (in the early stages).
- **Chronic hyperplastic candidiasis:** plaques tightly fused with the underlying tissue.

4. Questions for the lesson:

- Causes of candidiasis development (antibiotic therapy, diabetes, use of dentures).



- Use of local antifungals (nystatin, clotrimazole) and systemic drugs (fluconazole).

- Diet for candidiasis: carbohydrate restriction.

5. Questions for self-control:

- How to distinguish plaque from candidiasis from plaque from leukoplakia?
- What are "candidal angular cheilitis" and how to treat them?

Lesson Topic 13: Allergic diseases of the oral mucosa

1. Objective of the lesson: To systematize knowledge about immediate and delayed reactions in dentistry.

2. Educational technologies: Skin testing (theoretical analysis), collection of allergy history.

3. Basic concepts:

- **Quincke's edema:** angioedema (immediate type).
- **Contact stomatitis:** reaction to the plastic of the prosthesis or filling material.

4. Questions for the lesson:

- Emergency care for anaphylactic shock in the dentist's chair.
- Drug allergy: fixed and diffuse erythema.
- The role of elimination therapy.

5. Questions for self-control:

- Which antihistamines are preferred for the treatment of stomatitis?
- What is the difference between a toxic-allergic reaction and a true allergy?

Lesson Topic 14: Erythema Multiforme Exudative (EME)

1. Objective of the lesson: To study the clinical presentation of acute immunoallergic disease with lesions of the skin and mucous membranes.

2. Educational technologies: Differential analysis with pemphigus and herpetic stomatitis.

3. Basic concepts:

- **The "target" (cockade) symptom:** characteristic rashes on the skin.
- **Stevens-Johnson syndrome:** severe form of MEE with involvement of the eyes and urethra.

4. Questions for the lesson:

- Infectious-allergic and toxic-allergic forms of MEE.
- The nature of the lesion of the oral mucosa: extensive erosions, massive bloody crusts on the lips.



- Use of corticosteroids and desensitizing therapy.
- **5. Questions for self-control:**
- Why is Nikolsky's symptom negative in MEE?
- Seasonality of the disease and prevention of relapses.

Lesson Topic 15: Recurrent Aphthous Stomatitis (RAS)

1. Objective of the lesson: To study the etiology and treatment tactics of chronic aphthae.

2. Educational technologies: Analysis of clinical protocols for the management of patients with ASD, selection of agents for local therapy.

3. Basic concepts:

- **Aphtha:** a superficial defect surrounded by a red rim and covered with fibrinous plaque.
- **Setton's aphthae:** severe cicatricial form (deep ulcers).

4. Questions for the lesson:

- The role of gastrointestinal pathology and stress in the etiology of ASD.
- Periods of aphtha development: prodromal, rash period, healing.
- The difference between aphthous stomatitis and herpetic stomatitis (number of elements, localization).

5. Questions for self-control:

- How long does it take for a typical canker sore to heal on average?
- What agents are used to stimulate epithelialization (keratoplasty)?

Lesson Topic 16: Sore throat in exogenous intoxications

1. Objective of the lesson: Diagnosis of mucosal lesions caused by heavy metal salts.

2. Educational technologies: Study of the "professional" anamnesis, examination of the gingival margin.

3. Basic concepts:

- **Lead (bismuth) rim:** gray-black stripe along the edge of the gum.
- **Mercury stomatitis:** pronounced salivation, metallic taste, ulcerative process.

4. Questions for the lesson:

- The mechanism of metal deposition in periodontal tissues (interaction with hydrogen sulfide).
- General symptoms of intoxication (damage to the central nervous system, kidneys).



- Principles of detoxification and specific antidotes (unithiol).
- **5. Questions for self-control:**
- Why, with good oral hygiene, the rim may be absent even in cases of poisoning?
- What disease should mercury stomatitis be differentiated from?

Lesson Topic 17: Somatic Retinopathy in Hypovitaminosis

1. Objective of the lesson: Associate vitamin deficiency with characteristic changes in the epithelium and vessels of the oral mucosa.

2. Educational technologies: Analysis of symptoms according to the "vitamin table", analysis of cases of glossitis.

3. Basic concepts:

- **Scurvy (Vit. C deficiency):** hemorrhagic syndrome, gum proliferation, tooth mobility.
- **Ariboflavinosis (Vit. B2):** angular cheilitis, bright red tongue.
- **Pellagra (Vit. PP):** "varnished" tongue, dermatitis, dementia.

4. Questions for the lesson:

- The effect of Vitamin A on keratinization processes (hyperkeratosis due to deficiency).
- Vitamin B12 deficiency anemia: Gunther-Müller glossitis.
- Complex vitamin therapy in dental practice.

5. Questions for self-control:

- Which vitamins are responsible for epithelial regeneration?
- Signs of vitamin K deficiency in the oral cavity.

Lesson Topic 18: Occipital Prostatic Hypertension in Systemic Diseases

1. Objective of the lesson: To study changes in the mucous membrane as a "mirror" of somatic pathology.

2. Educational technologies: Interpretation of a complete blood count for leukemia and anemia.

3. Basic concepts:

- **Hematological masks:** gingival hyperplasia in leukemia, papillary atrophy in anemia.
- **Endocrine manifestations:** dryness in diabetes, swelling in hypothyroidism.
- **Gastrointestinal-associated changes:** coating on the tongue, desquamative glossitis.

4. Questions for the lesson:



- Features of ulcerative-necrotic processes in blood diseases.
- Addison's disease: pigmentation of the mucous membrane.
- Dentist's tactics: when is it necessary to refer a patient to a general practitioner or hematologist?

5. Questions for self-control:

- Why is tooth extraction contraindicated in acute leukemia without special preparation?
- What does the tongue look like with chronic gastritis with low acidity?

10th semester

Lesson topic 1: Leukoplakia

1. Objective of the lesson: To study the pathomorphology of mucosal keratinization and the management tactics for patients with precancerous conditions.

2. Educational technologies: Dentistry, fluorescent diagnostics (assessment of luminescence extinction in areas of destruction), analysis of biopsy cards.

3. Basic concepts:

- **Dyskeratosis:** disruption of normal keratinization (a sign of possible malignancy).
- **Tappeiner Form:** Nicotinic leukokeratosis of the palate (reversible form upon cessation of smoking).

4. Questions for the lesson:

- Differential diagnosis of flat leukoplakia with lichen planus and candidiasis.
- Clinical criteria for the transition of the warty form to the erosive-ulcerative form.
- Modern methods of destruction of foci: cryodestruction, laser ablation.

5. Questions for self-control:

- Why is leukoplakia more common in men over 40?
- In what cases of leukoplakia is immediate excision of the lesion within healthy tissue indicated?

Lesson Topic 2: Lichen Planus (LP)

1. Objective of the lesson: To study the clinical forms and treatment tactics of chronic dermatosis in the oral cavity.

2. Educational technologies: Testing with acetic acid, studying the Koebner phenomenon on the mucous membrane.

3. Basic concepts:

- **Wickham Grid:** specific pattern of whitish lines (hyperkeratosis).
- **Typical form:** papules in the form of "frost patterns" or "webs".



4. Questions for the lesson:

- Classification of forms: typical, exudative-hyperemic, erosive-ulcerative, bullous.
- The role of psychosomatics and liver pathology in the pathogenesis of liver disease.
- Differential diagnosis with lupus erythematosus and leukoplakia.

5. Questions for self-control:

- How do papules in lichen planus differ from papules in secondary syphilis?
- Local treatment tactics for erosive form of lichen planus.

Lesson Topic 3: Lupus Erythematosus

1. Objective of the lesson: To study the dental manifestations of a systemic disease and its difference from other hyperkeratoses.

2. Educational technologies: Analysis of immunograms and identification of specific signs of damage (atrophy, hyperkeratosis, inflammation).

3. Basic concepts:

- **Triad of signs:** erythema, hyperkeratosis (at the edges), atrophy (in the center).
- **Besnier-Meshchersky rim:** whitish dotted lines along the periphery of the lesion.

4. Questions for the lesson:

- Clinical forms: typical, exudative-hyperemic, erosive-ulcerative.
- Diagnosis of systemic lupus erythematosus (SLE) by blood test (LE cells, antinuclear factor).
- The influence of insolation on the aggravation of the process.

5. Questions for self-control:

- The difference between a lupus erythematosus lesion and flat leukoplakia.
- What quinoline drugs are used in therapy?

Lesson Topic 4: Pemphigus (Acantholysis)

1. Objective of the lesson: Learn to diagnose a life-threatening disease that often begins with oral lesions.

2. Educational technologies: Cytological examination (search for Tzanck cells), checking Nikolsky's symptom.

3. Basic concepts:

- **Acantholysis:** destruction of connections between cells of the spinous layer.



- **Pemphigus vulgaris:** formation of flaccid bubbles that quickly develop into erosions.

4. Questions for the lesson:

- Pathogenesis: autoantibodies to desmosomes.
- Nikolsky's symptom and its modifications (marginal, Asboe-Hansen symptom).
- The tactics of "shock" doses of corticosteroids in treatment.

5. Questions for self-control:

- Why is it rare to see a whole blister on the oral cavity surface in cases of true pemphigus?
- Differential diagnosis with MEE and herpetic stomatitis.

Lesson Topic 5: Dermatitis Herpetiformis

1. Objective of the lesson: To study a benign lesion with pronounced polymorphism and hypersensitivity to iodine.

2. Educational technologies: Jadassohn test (with iodine), blood eosinophilia analysis.

3. Basic concepts:

- **Subepithelial vesicle:** Unlike pemphigus, the connections between cells are preserved.
- **Eosinophilia:** increased eosinophil content in the contents of the blisters.

4. Questions for the lesson:

- The disease is associated with gluten enteropathy (cereal protein intolerance).
- Clinical polymorphism: spots, papules, vesicles.
- Use of sulfone drugs (Dapsone).

5. Questions for self-control:

- What is the difference in the location of the blister in pemphigus and Duhring's dermatitis?
- What diet should patients with this diagnosis follow?

Lesson 6: Pemphigoid

1. Objective of the lesson: To study a group of non-acantholytic bladder diseases.

2. Educational technologies: Comparative table of types of pemphigoid (bullous, mucous-synechial).

3. Basic concepts:

- **Cicatricial pemphigoid:** risk of adhesion of the conjunctiva of the eyes (symblepharon).



- **Lever's bullous pemphigoid:**The lesion is more common in elderly people.

4. Questions for the lesson:

- Differential diagnosis of pemphigoid and true pemphigus.
- Negative Nikolsky's sign and absence of Tzanck cells.
- Local hormonal therapy and cytostatics.

5. Questions for self-control:

- Why is the blister in pemphigoid more tense and takes longer to open than in pemphigus?
- Risk of eye damage in mucous synechial pemphigoid.

Lesson Topic 7: Folded Tongue

1. Objective of the lesson:To study congenital anomalies of the tongue structure and methods for preventing inflammation in the grooves.

2. Educational technologies:Practicing tongue hygiene with special scrapers, analysis of Melkersson-Rosenthal syndrome.

3. Basic concepts:

- **Macroglossia:**pathological enlargement of the tongue.
- **Melkersson-Rosenthal syndrome:**a combination of a folded tongue, lip swelling (Rossolimo syndrome) and facial nerve paralysis.

4. Questions for the lesson:

- Classification of folds (median, transverse).
- Etiology of candidiasis and glossitis in deep folds.
- Differential diagnosis with glossitis in systemic diseases.

5. Questions for self-control:

- Does a fissured tongue require specific treatment even if there are no complaints?
- How to properly perform antiseptic treatment of deep grooves?

Lesson Topic 8: Black (Hairy) Tongue

1. Objective of the lesson:To study the mechanisms of filiform papillae hyperplasia and impaired desquamation.

2. Educational technologies:Macrophotography of the tongue surface, microscopy of "hairs" (papillae).

3. Basic concepts:

- **Hyperkeratosis of filiform papillae:**elongation of papillae up to 1–2 cm.
- **Chromogenic bacteria:**the reason for the specific coloring (from brown to jet black).



4. Questions for the lesson:

- Etiological factors: smoking, gastrointestinal disorders, taking antibiotics, candidiasis.
- Differential diagnosis with plaque from infections and chemical staining from food.
- Treatment methods: mechanical cleaning, keratolytics (salicylic alcohol), elimination of irritants.

5. Questions for self-control:

- Can hairy tongue be a sign of HIV infection (hairy leukoplakia)?
- Why do patients often complain of a gag reflex with this pathology?

Lesson Topic 9: Desquamative Glossitis (Geographic Tongue)

1. Objective of the lesson: To study the etiology and dynamics of migratory lesions of the dorsum of the tongue.

2. Educational technologies: Analysis of clinical photographs (dynamics of spots), work with gastrointestinal tract examination charts of patients.

3. Basic concepts:

- **Desquamation:** focal rejection of the epithelium of the filiform papillae.
- **Migration:** constant change in the outlines of desquamation zones ("world map").

4. Questions for the lesson:

- The role of somatic pathology (gastritis, helminthic invasion, endocrine disorders) in the development of glossitis.
- Clinical picture: appearance of "islands" of desquamation with a whitish rim.
- Why is desquamative glossitis often associated with a fissured tongue?
- Treatment tactics: is active intervention necessary in the absence of complaints?

5. Questions for self-control:

- What forms of lichen planus differentiate desquamative glossitis?
- What antiseptic and keratoplastic agents are indicated when pain occurs?
- Is this condition a true inflammation or a neurodystrophic process?

Lesson Topic 10: Rhomboid Glossitis

1. Objective of the lesson: To study the structural variants and pathologies of the middle part of the tongue.

2. Educational technologies: Differential diagnostics of forms on models, oncoscreening (dentoscopy).



3. Basic concepts:

- **Median malformation:**embryonic hypothesis of origin.
- **Forms:**smooth (flat), bumpy (papillomatous).

4. Questions for the lesson:

- Localization: why is the lesion always strictly along the midline in the posterior third of the dorsum of the tongue?
- The role of fungal flora (Candida) in maintaining the hyperplastic form.
- Differential diagnostics with oncological processes and specific infections.
- Surgical treatment: indications for excision of the tuberous form.

5. Questions for self-control:

- What is the risk of malignancy of rhomboid glossitis?
- Why does flat feet usually not require medication?
- What examination methods can rule out tongue cancer in this case?

Lesson Topic 11: Exfoliative Cheilitis

1. Objective of the lesson:To study a chronic disease of the red border of the lips associated with the psycho-emotional sphere.

2. Educational technologies:Collection of psychoneurological anamnesis, work with tables of nervous system types.

3. Basic concepts:

- **Dry form:**formation of thin transparent scales ("mica").
- **Exudative form:**massive yellowish-gray crusts that do not extend onto the skin.

4. Questions for the lesson:

- Pathogenesis: the role of thyrotoxicosis, depression and anxiety.
- Why are the corners of the mouth and skin never affected in exfoliative cheilitis?
- Treatment methods: psychotherapy, tranquilizers, acupuncture.
- Local therapy: use of laser, Bucky therapy and ointments.

5. Questions for self-control:

- How to distinguish the dry form from meteorological cheilitis?
- Why do patients with the exudative form often keep their mouth half-open?

Lesson Topic 12: Glandular Cheilitis

1. Objective of the lesson:Diagnosis of pathologies of the minor salivary glands of the lip.



2. Educational technologies: Palpation of the lips (the “cobblestone” symptom), a test with staining of the gland openings.

3. Basic concepts:

- **Dew Symptom:** secretion of droplets of saliva from the dilated mouths of the glands.
- **Primary and secondary glandular cheilitis:** differences in etiology.

4. Questions for the lesson:

- Congenital hypertrophy and heterotopia of the minor salivary glands (Volkman syndrome).
- Complication: purulent glandular cheilitis and abscess formation.
- Treatment methods: electrocoagulation, laser ablation or surgical excision of the glands.

5. Questions for self-control:

- What is the relationship between glandular cheilitis and leukoplakia of the lips?
- Why is there constant dryness of the red border with this disease?

Lesson Topic 13: Actinic and Meteorological Cheilitis

1. Objective of the lesson: To study the influence of natural factors (sun, wind, cold) on lip tissue.

2. Educational technologies: Selection of photoprotective agents, luminescent diagnostics.

3. Basic concepts:

- **Insolation:** the main cause of actinic cheilitis.
- **Photosensitivity:** increased sensitivity to UV rays.

4. Questions for the lesson:

- Forms of actinic cheilitis: dry and exudative.
- Risk of malignancy (transition to abrasive precancerous disease of Manganotti).
- Prevention: use creams with SPF and avoid working outdoors.
- Differential diagnosis with contact allergic cheilitis.

5. Questions for self-control:

- At what time of year does actinic cheilitis worsen?
- Why is meteorological cheilitis more common in people with the bad habit of licking their lips?



Lesson Topic 14: Contact Allergic Cheilitis

1. Objective of the lesson:Diagnosis of delayed-type hypersensitivity reactions to chemical irritants.

2. Educational technologies:Conducting application tests with components of lipsticks, plastics and toothpastes.

3. Basic concepts:

- **Haptens:**substances that cause allergies when in contact with skin proteins.
- **Angular cheilitis:**concomitant lesion of the corners of the mouth.

4. Questions for the lesson:

- Main allergens: lipstick dyes (fluorescein), fragrances, metal inclusions.
- Clinical picture: severe erythema, itching, small blisters.
- Principles of elimination therapy (exclusion of contact).
- Local treatment: low potency corticosteroid ointments.

5. Questions for self-control:

- What is the difference between allergic cheilitis and simple irritant stomatitis?
- How long after contact does a reaction usually appear?

Lesson topic 15: Atopic cheilitis

1. Objective of the lesson:To study the manifestations of atopic dermatitis in the maxillofacial region.

2. Educational technologies:Clinical examination of the skin (elbow folds, popliteal fossa) to confirm the diagnosis.

3. Basic concepts:

- **Lichenification:**thickening of the skin and accentuated skin markings at the corners of the mouth.
- **Erythematous border:**skin lesions around the red border of the lips.

4. Questions for the lesson:

- Hereditary predisposition and connection with food allergies.
- Age dynamics: course in childhood and adolescence.
- Differential diagnosis with exfoliative cheilitis and eczema.
- Diet therapy and systemic desensitizing agents.

5. Questions for self-control:

- Why is it that with atopic cheilitis, not only the red border is affected, but also the surrounding skin?
- What changes in a general blood test are characteristic of atopy?



Lesson Topic 16: Eczematous Cheilitis. Macrocheilitis

1. Objective of the lesson: To study severe inflammatory and neurodystrophic lesions of the lips.

2. Educational technologies: Analysis of the Melkersson-Rosenthal triad, demonstration of lymphatic drainage techniques.

3. Basic concepts:

- **Lip eczema:**oozing, crusting and "serous wells".
- **Macrocheilitis:**persistent enlargement of the lip (lymphedema).

4. Questions for the lesson:

- Stages of eczema: acute, subacute and chronic.
- Etiology of macrocheilitis: infectious-allergic factors and genetic predisposition.
- Differential diagnosis of macrocheilitis with Quincke's edema and erysipelas.
- Complex treatment of Melkersson-Rosenthal syndrome (glucocorticoids, antibiotics, physiotherapy).

5. Questions for self-control:

- What is the difference between Quincke's edema and macrocheilitis in terms of duration?
- Characteristic appearance of the tongue surface in Melkersson-Rosenthal syndrome.

Lesson Topic 17: Occupational Diseases of the Occupational Therapy

1. Objective of the lesson:To study the influence of harmful industrial factors on the condition of the oral cavity.

2. Educational technologies:Solving situational problems in occupational pathology (galvanic shops, chemical plants).

3. Basic concepts:

- **Occupational hazards:**acids, alkalis, dust, heavy metal salts, radiation.
- **Specific indicators:**"benzene" anemia, "acid" enamel necrosis.

4. Questions for the lesson:

- Damage to the oral mucosa when exposed to acid vapors (change in color, sensitivity).
- The influence of indoor dustiness on the development of chronic gingivitis and cheilitis.
- Personal protective measures and the role of hygiene in the prevention of occupational diseases.



- Organization of dispensary observation of workers in hazardous industries.
- 5. Questions for self-control:**
- What changes in the OCR are typical for workers in glass and porcelain production?
 - What is the role of mouth breathing in increasing the impact of occupational hazards?

Lesson Topic 18: Prevention of Oral and Maxillofacial Sclerosis Diseases

1. Objective of the lesson: To systematize methods for preventing mucosal pathologies and early diagnosis of cancer.

2. Educational technologies: Teaching patients oral self-examination and developing hygiene programs.

3. Basic concepts:

- **Oncoalertness:** the rule of inspecting all departments of the SPR during each visit.
- **Oral cavity sanitation:** as a basic stage in the prevention of injuries and infections.

4. Questions for the lesson:

- Primary, secondary and tertiary prevention of oral mucosal diseases.
- The role of eliminating local irritants (fillings, dentures) in the prevention of precancer.
- The importance of a balanced diet and giving up bad habits (smoking, chewing tobacco).
- Methods of early detection (screening) of mucosal pathologies.

5. Questions for self-control:

- How often should a patient with leukoplakia visit the dentist?
- What hygiene products (mouthwashes, toothpastes) are recommended for patients with xerostomia?

3. Methodological recommendations/instructions for students

3.1. Methodological recommendations for students on studying the discipline

The theoretical component of the "Therapeutic Dentistry" course is designed not only to deepen and consolidate the knowledge acquired in the classroom, but also to promote the development of students' clinical thinking, initiative, and skills in organizing the dentist's working time.



- **Working with lectures:**The material taken during lectures must be regularly reviewed and supplemented with information from specialized periodicals (magazines “Dentistry”, “Endodontics”, etc.).
- **Preparation for the topics:**When studying a new topic, it is necessary to first read the recommended literature and make a brief summary of the main provisions, classifications (for example, the Black classification of caries or ICD-10) and treatment protocols.
- **Workbook:**Each student maintains a workbook (practical classes diary), the design of which must meet the following requirements:
 - Availability of a title page indicating full name, group and course.
 - Numbering of each work, recording of the date and topic of the lesson.
 - Recording the title of the work, the purpose, description of the clinical situation or stages of preparation/filling.
 - **Graphic part:**Presentation of odontoglyphic diagrams, graphic representation of carious cavities, filling in the dental formula.
 - **Conclusions:**At the end of each work, a justification for the chosen treatment method or a brief conclusion based on the results of the clinical analysis is formulated.

3.2. Methodological recommendations for completing practical classes

Practical classes in therapeutic dentistry follow the lecture course and serve as explanatory, generalizing, and reinforcing elements. They can be held in either virtual classrooms or in the clinic.

Lesson preparation plan:

1. Studying lecture notes and a textbook on the topic (for example, “Pulp diseases” or “Periodontitis”).
2. Study of the anatomical and morphological features of the teeth discussed in this topic.
3. Familiarization with the instruments and materials required to perform manipulations.
4. Preparing answers to self-assessment questions.

3.3. Methodological recommendations for completing independent work (IWS)

When studying the discipline "Therapeutic Dentistry", the following types of independent work are used:

- Study of theoretical material from lecture notes and textbooks.
- **Practicing manual skills** on dental dummies and phantoms (preparation, filling, root canal treatment).



- Independent study of specific topics (for example, “Modern methods of teeth whitening” or “The use of lasers in endodontics”) with the preparation of presentations.
- Analysis of clinical protocols and scientific articles on current issues in modern dentistry.
- Solving situational problems and interpreting data from additional research methods (X-rays, CBCT, EOD).

3.4. Guidelines for completing abstracts and reports

An abstract on therapeutic dentistry is an independent work that reveals the essence of the etiology, pathogenesis, clinical picture, or modern methods of diagnosis and treatment of diseases of the maxillofacial region.

Basic requirements:

- **Volume:**10–15 pages of printed text.
- **Structure:**Title page, introduction (relevance of the problem), main section (review of modern methods of treatment/diagnosis), conclusion, list of references (at least 10 sources, including publications over the past 5 years).
- **Design:**Times New Roman font, 14 pt, 1.5 spacing. Margins: left - 3 cm, right - 1.5 cm, top - 2 cm, bottom - 2.5 cm.

Evaluation criteria:depth of literature analysis, proficiency in professional terminology and quality of responses when defending the work.

3.5. Guidelines for preparation for final certification


The final assessment (pass/exam) for the discipline is conducted on the basis of current academic performance, assessment of manual skills and the results of midterm assessment.

- **Clinical stage:**Demonstration of practical skills on a phantom or in a clinic.
- **Test control:**Conducted on an online learning platform, students are encouraged to use the "practice mode" to practice MCQs.
- **Interview:**Includes theoretical questions and solving situational problems.

To successfully pass the final assessment, you must have no academic debt, a fully completed workbook, and positive grades for all modules of the course.

3.6. Methodological recommendations for student research work.

The purpose of research is the development of students' intellectual abilities through their study of the algorithm of scientific research and the acquisition of initial experience in carrying out a research project using educational material from therapeutic dentistry (cariesology, endodontics, periodontology and pathology of the oral mucosa).

	Educational institution Royal Metropolitan University
	Quality management system Educational and methodological complex of the discipline "Therapeutic Dentistry" Department of Dental Disciplines of the Educational Institution "RMU" 560004 "Dentistry"

The main objectives and results of the research work are:

- **mastery of scientific methods of cognition** and deepening theoretical knowledge on the etiology, pathogenesis and methods of treatment of dental diseases;
- **mastery of modern methods of scientific research** in dentistry (dental volumetric tomography, visiography, laser fluorescence, cytological and microbiological methods);
- **development of practical skills** independent search for scientific and medical information, conducting theoretical and experimental work (including laboratory study of the properties of modern composites and adhesives);
- **acquiring the ability to analyze results** clinical studies (assessment of hygiene indices, EOD indicators, remineralization dynamics), formulate substantiated conclusions and recommendations;
- **development of the ability to act independently** for continuous updating of knowledge in the field of innovative technologies (digital protocols, laser technologies in therapy).

When completing research work, a student must master the following basic steps:

- independent search for information on a given topic (working with PubMed, Cochrane Library, eLibrary, StAR databases);
- selection of essential information necessary for full coverage of the problem (separation of evidence-based methods from experimental ones);
- analysis and synthesis of knowledge and research on the problem (comparison of the effectiveness of various endodontic protocols or methods of treating periodontitis);
- generalization and classification of information on research problems;
- logical and consistent disclosure of the topic of scientific research;
- generalization of clinical and psychological knowledge on the problem (features of communication with patients with dentophobia) and formulation of conclusions;
- stylistically and technically correct design of scientific paper of the abstract type;
- **creating a glossary** according to the terminology of therapeutic dentistry;
- participation in role-playing games (“doctor – patient”), training on a given topic, discussions and solving situational clinical tasks.

For research work, a senior student must do the following:



- write an abstract using general scientific and special methods (clinical and statistical analysis, literature review);
- participate in the department's scientific projects on the study of the pathology of hard dental tissues and periodontium;
- prepare and deliver a report/presentation at conferences, Council of People's Commissars meetings, or round tables;
- study and analyze national concepts, prevention programs and clinical protocols (clinical guidelines) on a given topic;
- write a medical record of a dental patient (form 043/u) with the performance and interpretation of laboratory and instrumental examination (radiography, EOD, thermometry, indices).

For the purpose of conducting research work for final year students (9-10 semesters) it is recommended:

- participate in a scientific project or a specialized scientific conference;
- manage a planned or standardized patient under the guidance of a teacher, performing complex manipulations within the framework of clinical guidelines;
- **write a medical history** a patient with periodontal disease or oral mucosa disease, obtain a dynamic observation card;
- prepare and defend a protocol for comprehensive treatment of a patient using an interdisciplinary approach;
- present a report based on the results of your own clinical observations;
- to study and analyze state programs for the prevention of major dental diseases and current clinical protocols.

4. Glossary

Abfraction (Abfractio)— microscopic chipping of hard tooth tissues in the cervical region, which occurs as a result of bending loads under occlusal stress.

Adhesion— the adhesive force between two dissimilar materials (for example, between a composite and dentin), arising due to chemical or mechanical bonds.

Amelogenesis— the process of formation and maturation of tooth enamel.

Anamnesis— information about the patient's medical history and living conditions collected by the physician to make a diagnosis.

Antiseptica— a set of therapeutic and preventive measures aimed at destroying microorganisms in a carious cavity or root canal.

Apex— the apex of the tooth root.



Apexification— a method of treating root canals of teeth with incomplete root formation and necrotic pulp, aimed at creating a barrier of hard tissue.

Apical foramen (Foramenapicale)— an opening at the apex of the root through which the vascular-nerve bundle penetrates into the cavity of the tooth.

Asphyxia— a condition of suffocation that can occur during a dental appointment when foreign bodies (pieces of instruments, cotton swabs) enter the respiratory tract.

Atypical preparation— excision of affected tooth tissues without the formation of classic geometric shapes of the cavity adopted by Black (characteristic of the adhesive technique).

Bonding— the process of creating an adhesive bond between tooth tissue and filling material using special bonding agents (adhesives).

Bruxism- pathological grinding of teeth, leading to increased abrasion of hard tissues.

Vital staining— a diagnostic method based on the ability of demineralized enamel (caries in the spot stage) to absorb dyes (for example, 2% methylene blue).

Vitality (Vitalitas)- vitality of the dental pulp.

Luxation of the tooth (Luxatiodontis)— complete or partial displacement of the tooth in the socket, accompanied by rupture of the periodontal ligaments and damage to the vascular-nerve bundle.

Galvanism— a pathological condition caused by the occurrence of electric currents in the oral cavity in the presence of dentures or fillings made of dissimilar metals.

Fissure sealing— a preventative method of sealing natural depressions (fissures) on the chewing surface of teeth with special materials (sealants).

Hyperesthesia— increased sensitivity of dental tissue to temperature, chemical or mechanical irritants.

Enamel hyperplasia- excessive formation of tooth tissue during development (e.g. enamel drops).

Hypoplasia— a developmental defect consisting of quantitative underdevelopment of enamel due to a disruption of metabolic processes in the rudiments.

Gutta-percha— a thermoplastic polymer used as the main material for obturation (filling) of root canals.

Demineralization (Demineralisatio)— the release of mineral components (calcium, phosphorus) from the hydroxyapatite crystal lattice under the influence of acids.

Dentin (Dentinum)— hard tissue of the tooth, which makes up its main mass and surrounds the pulp chamber.

Dentinogenesis— the process of dentin formation by odontoblasts.



Dentinal tube (Canaliculus dentinalis)— a microscopic channel in dentin in which the odontoblast process (Toms fiber) is located.

Deontology— the doctrine of professional ethics of a physician, including rules of conduct with colleagues and patients.

Depulpation— a procedure for completely removing the pulp from a tooth for the purpose of subsequent filling of the canals.

Caries detector- an indicator dye that allows one to distinguish infected dentin (to be removed) from demineralized but healthy dentin.

Tertiary dentin— dentin produced by the pulp in response to external stimuli (caries, abrasion) to protect the tooth cavity.

Probing— a method of objectively examining the density, sensitivity and integrity of dental tissue using a dental probe.

Insulating gasket— a layer of material (usually glass ionomer cement) placed between the dentin and the main filling to protect the pulp from chemical and thermal irritants.

Infiltration (Icon method)— a method of treating initial caries by impregnating the demineralization zone with a low-viscosity polymer without using a drill.

Irrigation— a procedure for rinsing the root canal with antiseptic solutions to remove dentin sawdust and microflora.

Caries (Caries dentis)— a pathological process of demineralization and subsequent destruction of hard dental tissues with the formation of a cavity.

Carious cavity (Cavum caries)— a defect in tooth tissue resulting from the carious process.

Acid necrosis— an occupational disease or the result of chemical exposure, characterized by the gradual dissolution of enamel under the influence of acid vapors.

Wedge-shaped defect (Defectus cuneiformis)— a non-carious lesion in the cervical region of the tooth, having the shape of a wedge with smooth and hard walls.

Compound— thermoplastic impression material; in a broad sense, a composite material.

Composites (Composita)— complex polymeric materials consisting of an organic matrix and an inorganic filler, cured by light or chemically.

Conditioning— the stage of treating tooth tissue with acid (etching) to create a microrelief before applying the adhesive.

Cofferdam— a latex curtain to isolate the surgical field from saliva, gingival fluid and moist breath.



Medicinal pad— a calcium hydroxide-based material applied to the bottom of a deep carious cavity to stimulate dentinogenesis.

Macrophiles— composite materials with large filler particles, which have high strength but poor polishability.

Microleakage— penetration of microorganisms and liquids into the gap between the filling and the tooth wall due to impaired adhesion.

Necrectomy— a stage of preparation of a carious cavity, which consists of removing softened, infected dentin.

Obturation- hermetic filling of the cleaned root canal.

Odontoblasts— pulp cells responsible for the synthesis of dentin.

Periodontium— a complex of tissues surrounding the tooth root and holding it in the jaw (gums, periodontium, bone, cementum).

Pathological abrasion— intensive loss of hard tissue of all or a group of teeth, leading to a decrease in the bite height.

Pellicula— a thin, structureless organic film on the enamel, formed from salivary proteins.

Periapical tissues— tissues surrounding the apex of the tooth root (periodontium and alveolar bone tissue).

Percussion- diagnostic tapping on the tooth.

Polymerization shrinkage— reduction in the volume of the composite during its hardening.

Dissection— surgical intervention on hard dental tissues using rotary or other instruments.

Pulp (Pulpadentis)— soft tissue of the tooth, containing vessels, nerves and cellular elements, performing trophic and protective functions.

Pulpitis- inflammation of the dental pulp.

Remineralization— restoration of the mineral composition of enamel.


Restoration— restoration of the anatomical shape, function and aesthetics of the tooth using composite materials.

Gum recession- a decrease in the level of the gingival margin, leading to exposure of the tooth root.

Sealer— a sealant (paste) used when filling canals to fill the voids between gutta-percha pins.

Sclerotic dentin (transparent)- dentin with completely obliterated (overgrown with minerals) tubules, which occurs as a reaction to irritation.

Sandwich technology— a filling technique that combines the use of glass ionomer cement (as a base) and composite.

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Thermometry— checking the tooth's reaction to cold and hot water.

Etching- act on enamel or dentin with acid to prepare for adhesion.

Bruised tooth— trauma without displacement and fracture, characterized by damage to the ligamentous apparatus and swelling of the pulp.

Fissure— a natural groove or depression in the enamel on the chewing surface of the teeth.

Fluorosis— a systemic disorder of enamel development associated with excess fluoride in drinking water.

Cement (Cementum)— a specific bone tissue covering the root of the tooth.

Grinding the filling— the final stage of restoration processing to remove excess material and adjust it to the bite.

Extirpation— a method of complete removal of pulp from root canals.

Electroodontometry (EDO)— diagnostics of the pulp condition using electric current.

Enamel-dentin junction (EDJ)— the border between enamel and dentin, the most sensitive area during preparation.

Tooth erosion— progressive loss of enamel and dentin on the vestibular surface, usually of chemical or endocrine origin.

Dental aesthetics— a section of dentistry that studies the harmony of a smile and the color and spatial parameters of the dentition.



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Application 1

Change Registration Sheet Form

p/p	Document (order, order, etc. (indicating the number and date) which reflects the changes	Signature	Full name
1			
2			
3			

5. Reference materials and appendices –*are indicated as necessary.*