

**Ministry of HealthCare of the Republic of Belarus
BELARUSIAN STATE MEDICAL UNIVERSITY**

**METHODOLOGY TEXTS for Practical Training of Students
5-th year, 10-th semester**

Minsk BSMU

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Carr, Alan B. McCracken`s removable partial prosthodontics [Электронный ресурс] / Carr, Alan B., Brown, David T. - 12th ed. - Б. м. : Elsevier, 2011. - 1 электрон. опт. диск (CD-ROM). - Систем. требования: Windows 95/98/NT/ME/2000/XP; ОЗУ 64 МВ; CD-ROM drive. - Частичное съемное протезирование.

3. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.

4. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.


5. Fundamentals of fixed prosthodontics / Shillingburg, Hebert T. [и др.]. - 4th ed. - Chicago [etc.] : Quintessence Publishing Co, 2012. - 574 p. : ill. by S.E. Stone. - Index: p. 555-574. - Основы ортопедической стоматологии.

6. Nallaswamy D. V. Textbook of prosthodontics.- New Delhi, 2011.- 844 p. Ортопедическая стоматология : учебник

7. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

APPROVED by

Head of the Department, Ph.D.,
Associate Professor

 Ya.I. Timchuk
Protocol of the Methodical Meeting of
the Department № 7 December 27, 2023

**Thematic Plan of Practical Training in discipline «Prosthodontics»
for 10th semester, 5th year students**

1. Defects of hard tooth tissues. Etiology, clinics, methods of patient examination. Methods of anesthesia. Inlays, indications, features of cavity preparation. Methods of making inlays, clinical and laboratory stages of making inlays.
2. Defects of hard tooth tissues. Artificial crowns (metal stamped, acrylic, composite, metal-acrylic, porcelain-fused to metal). Indications, clinical and laboratory stages of making crowns.
3. Defects of hard tooth tissues. Prosthodontic treatment in total absence of a tooth crown. Posts, stump root inlays. Clinical and laboratory stages of making.
4. Partial defects of tooth arch. Classification, clinics, diagnostics of defects of dental arch.
5. Prosthetic treatment of partial defects of dental arch with fixed dentures. Indications, clinical and laboratory stages of bridge manufacture.
6. Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of defects of hard tooth tissues, partial defects of dental arches with fixed (bridge) dentures – seminar.
7. Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Characteristics of partial removable dentures, indications, positive and negative features. Clinical and laboratory stages of denture manufacture.
8. Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Indications for removable framework dentures, their components and the purpose of them. Ney clasp system, surveying. Methods of making clasp dentures. Clinical and laboratory stages.
9. Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Seminar.
10. Prosthodontic treatment of complete edentia. Special preparation of oral cavity for prosthetics. Methods of fixation and stabilization of complete removable dentures.
11. Prosthodontic treatment of complete edentia. Fitting of the individual tray, border moulding (according to Herbst). Taking functional impressions, their assessment. Substantiation of impression material selection for taking functional impressions. Borders of denture bases in complete edentia.
12. Prosthodontic treatment of complete edentia. Methods of centric relation registration in complete edentia. Constructing the artificial dentition in complete edentia. Analysis and correction of errors of dentist and technician during the centric relation registration procedure.
13. Prosthodontic treatment of complete edentia. Seminar.
14. Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Classification of periodontal diseases. Differential diagnostics of periodontal diseases.
15. Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Biological grounds of tooth splinting. Reserve forces of periodontium and their changes with the atrophy of alveolar bone. Interrelation between the severity of inflammation in the periodontal tissues and the pathologic tooth mobility. The role of occlusal relations in periodontal pathology. Occlusal adjustment (selective tooth grinding) as the first stage of prosthetic treatment of periodontal diseases.
16. Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Temporary and permanent splinting, indications, types and constructions of temporary and permanent splints. Orthodontic treatment in periodontal diseases.
17. Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Seminar.
18. Errors of tactics, diagnostics and technology in prosthodontics.
19. Organizational bases of prosthodontics. The structure of dental polyclinic. Analysis of the work of clinics and laboratory. The duties of the head of prosthodontics department, prosthodontist professional. Providing quality of patient treatment. Preventive value of prosthetic treatment. The definition of dispensary groups for dental, prosthodontics diseases. Dental prosthetic prevention and

organization of prosthodontics service in the city and district. Medical labor expertise. Medical errors and professional responsibility. Questions of ethics, aseptic, antiseptic in the clinic of prosthetic dentistry. (Seminar).

20. Organizational bases and medical errors. Final session.

Practical classes – 140 hours

Number of weeks – 20 weeks

Total training hours – 140 hours

APPROVED by
Head of the Department of
Orthopedic Dentistry and
Orthodontics



Ya.I. Timchuk
Protocol of the Methodical
Meeting of the Department № 8
19.01.2024

**CRITERIA FOR ASSESSING STUDENTS' KNOWLEDGE ON A 10-POINT SCALE
for the academic discipline «Prosthodontics»**

No.	Mark	Criteria
1	10 (ten) points, passed	<p>Systematized, deep and comprehensive knowledge of all sections of the educational program for academic discipline «Prosthodontics», as well as on the main issues beyond its scope;</p> <p>accurate use of scientific terminology (including in a foreign language), articulate and logically correct presentation of answers to questions, ability to make reasoned conclusions and generalizations;</p> <p>flawless mastery of the tools of the academic discipline «Prosthodontics», ability to effectively use them in the formulation and solution of scientific and professional tasks;</p> <p>strong ability to independently and creatively solve complex problems in non-standard situations;</p> <p>complete and in-depth assimilation of the primary and additional literature on the studied academic discipline «Prosthodontics»;</p> <p>ability to freely navigate theories, concepts, and directions related to the studied academic discipline «Prosthodontics» and provide them with an analytical assessment, using scientific achievements from other dental disciplines;</p> <p>creative independent work during practical classes, active creative participation in group discussions, high level of task performance culture.</p>

2	9 (nine) points, passed	<p>Systematized, deep and comprehensive knowledge of all sections of the educational program for the academic discipline «Prosthodontics»;</p> <p>accurate use of scientific terminology (including in a foreign language), articulate and logically correct presentation of answers to questions,</p> <p>mastery of the tools of academic discipline «Prosthodontics», ability to effectively use them in the formulation and solution of scientific and professional tasks;</p> <p>ability to independently and creatively solve complex problems in non-standard situations;</p> <p>complete assimilation of the primary and additional literature on the studied academic discipline «Prosthodontics»;</p> <p>ability to freely navigate theories, concepts, and directions related to the studied academic discipline «Prosthodontics» and provide them with an analytical assessment,</p> <p>creative independent work during practical classes, active creative participation in discussions, high level of task performance culture.</p>
3	8 (eight) points, passed	<p>Systematized, deep and comprehensive knowledge of all sections of the educational program for academic discipline «Prosthodontics»,</p> <p>accurate use of scientific terminology (including in a foreign language), articulate and logically correct presentation of answers to questions, ability to make reasoned conclusions and generalizations;</p> <p>assimilation of primary and additional literature recommended by the educational program for the academic discipline «Prosthodontics»;</p> <p>ability to navigate through the main theories, concepts, and directions within the academic discipline «Prosthodontics» and provide their analytical assessment;</p> <p>independent work during practical classes, participation in group discussions, high level of task execution culture.</p>

4	7 (seven) points, passed	<p>systematic, deep, and comprehensive knowledge in all sections of the educational program for the academic discipline «Prosthodontics»;</p> <p>use of scientific terminology (including foreign language), articulate and logically correct presentation of answers to questions, ability to make well-founded conclusions and generalizations;</p> <p>mastery of the toolkit of academic discipline «Prosthodontics», ability to use it in setting and solving scientific and professional tasks;</p> <p>proficient command of typical solutions within the framework of the educational program for the academic discipline «Prosthodontics»;</p> <p>assimilation of primary and additional literature recommended by the educational program for the academic discipline «Prosthodontics»;</p> <p>ability to navigate through the main theories, concepts, and directions within the academic discipline «Prosthodontics» and provide their analytical assessment;</p> <p>independent work during practical classes, participation in group discussions, high level of task execution culture.</p>
5	6 (six) points, passed	<p>comprehensive knowledge in all sections of the educational program for the academic discipline «Prosthodontics»;</p> <p>use of scientific terminology, correct presentation of answers to questions, ability to make well-founded conclusions and generalizations;</p> <p>mastery of the toolkit of the academic discipline «Prosthodontics», ability to use it in setting and professional tasks;</p> <p>independent command of typical solutions within the framework of the educational program for the academic discipline «Prosthodontics»</p> <p>assimilation of primary literature recommended by the educational program for the academic discipline «Prosthodontics»;</p> <p>ability to navigate through the main theories, concepts, and directions within the academic discipline «Prosthodontics» and provide their assessment;</p> <p>active work during practical classes, participation in group discussions, high level of task execution culture.</p>

6	5 (five) points, passed	<p>Sufficient knowledge in all sections of the educational program for the academic discipline «Prosthodontics»; use of terminology, presentation of answers to questions, ability to make conclusions and generalizations; mastery of the toolkit of the academic discipline «Prosthodontics», ability to use it in solving professional tasks; command of typical solutions within the framework of the educational program for the academic discipline «Prosthodontics»; assimilation of primary literature recommended by the educational program for the academic discipline «Prosthodontics»; ability to navigate through the main theories, concepts, and directions within the academic discipline «Prosthodontics» independent work during practical classes, participation in group discussions, high level of task execution culture.</p>
7	4 (four) points, passed	<p>Sufficient level of knowledge within the educational program for the academic discipline «Prosthodontics»; assimilation of primary literature recommended by the educational program for academic discipline «Prosthodontics»; use of scientific terminology, logical presentation of answers to questions, ability to draw conclusions without significant errors; mastery of the toolkit of the academic discipline «Prosthodontics», ability to use it in solving standard tasks; ability to solve standard tasks under the guidance of the instructor; understanding of the main theories, concepts, and directions within the academic discipline «Prosthodontics» and providing their assessment; work under the guidance of the instructor during practical classes, acceptable level of task execution culture.</p>
8	3 (three) points, passed	<p>Insufficient level of knowledge within the educational program for the academic discipline «Prosthodontics»; knowledge of some of the primary literature recommended by the educational program for the academic discipline «Prosthodontics»; use of scientific terminology, presentation of answers to questions with significant logical errors; weak mastery of the toolkit of the academic discipline «Prosthodontics», incompetence in solving standard tasks; inability to navigate the main theories, concepts, and directions within academic discipline «Prosthodontics» passivity in practical and laboratory classes, low level of task execution culture.</p>

9	2 (two) points, passed	<p>Fragmentary knowledge within the educational program for the academic discipline «Prosthodontics»</p> <p>knowledge of some of the primary literature recommended by the educational program for the academic discipline «Prosthodontics»</p> <p>inability to use scientific terminology of academic discipline «Prosthodontics», presence of significant logical errors in the answers;</p> <p>passivity in practical and laboratory classes, low level of task execution culture;</p>
10	1 (one) point, passed	<p>lack of knowledge and competencies within the educational program for academic discipline «Prosthodontics», refusal to answer, absence from assessment without valid reason.</p>

Class 1

Subject of the class: Defects of hard tooth tissues. Etiology, clinics , methods of patient examination. Methods of anesthesia. Inlays, indications, features of cavity preparation. Veneers, indications. Methods of making inlays and veneers, clinical and laboratory stages of making inlays and veneers.

Objective: To improve and consolidate the knowledge and skills of students on the methods of the patient examination, diagnosis, clinical stages of prosthetic treatment with inlays, to improve knowledge of the laboratory stages of their manufacture.

Entry knowledge control:

1. Topographical features of the defects of the tooth crown.
2. Characteristics of carious and non-carious lesions of dental hard tissues.
3. Dental hard tissue safety zones by NG Abolmasov, BS Klyuyev.
4. Basic methods of anesthesia used in prosthetic dentistry when preparing the teeth.
5. Modelling materials used in the manufacture of the inlay by the direct method, the requirements to them.
6. Methods of taking impressions in the manufacture of inlays by the indirect method, the materials used.

Control questions:

1. Etiology, clinical picture and methods of examination of patients with diseases of the hard tissues of the tooth.
2. Indications for the restoration of tooth crown defects with artificial crowns and veneers.
3. Basic principles of formation of cavities for inlays, depending on the topography of the defect and the distribution of the forces of occlusal load.
4. Methods and sequence of inlay manufacturing.
5. Methods of manufacturing veneers. Stages and tools for tooth preparation for veneers. Criteria for assessing the quality of the tooth preparation. The fitting and fixation of veneers, luting materials.
6. Errors and complications in prosthetic treatment of defects of the tooth crown with inlays and veneers.

Case studies

1. Patient A., 46 years old, worker of the electrotpe shop contacted the dental clinic with complaints of "wearing off" of the tooth enamel. Objectively: the enamel surface of the teeth 12, 11, 21, 22 is matt, in areas of missing enamel the dentin is brown, teeth cutting edges are grinded off. Orthognathic bite. The rest of the teeth are intact. Specify the causative factor of "wearing of" of the enamel. Set your diagnosis.
2. Patient D. underwent an endodontic treatment of the tooth 45 about half a year ago. Complaints about trapping of food, unpleasant aching pain in the gum near

the tooth. Examination of the tooth 45 reveals: amalgam filling, restoring a combined loss of occlusal and two of the interproximal surfaces. Contact points in the area of the tooth 45 are missing, the interdental papilla is swollen and bleeds after probing. Assess the clinical situation. What research methods are necessary to carry out on this patient? Possible treatment solutions?

3. Patient M. has a cavity in the tooth 46 class I by Black with the index of destruction of the occlusal surface of 0.3. After removing of the softened dentin and the creation of parallelism of the walls there is a painful probing of the bottom of the cavity and the unpleasant feeling when pressure is applied with a blunt instrument at the bottom of the cavity. Specify the topography of the defect. How to calculate IDOST? What complications can occur in the manufacture of the inlay to the patient, and what is the prevention of this complication?

4. The patient N. After the removal of necrotic tissue in caries cavity preparation objectively: the caries of the dentin in the tooth 26 in the center of the occlusal surface, in which the damaged area is 50% of the surface. The tooth 26 is inclined to the vestibular side about 20°. Classify the type of defect by the classifications of Black and Kurlandsky. Calculate IDOST. How should the cavity be formed in this case?

5. After the modeling of the inlay by the direct method the doctor could not remove the inlay composition from the cavity. What material is used in the modeling of the inlay in the direct method? What are the possible causes of the problem? Your actions on the correction of these errors.

6. At the fitting of the inlay made by the indirect method, there was a chipping off the tooth cavity wall. Give an explanation of the possible causes of complications. Define further treatment plan.

7. After the formation of the cavity for the inlay located on the distal-approximal and occlusal surface of the tooth 36, the doctor made a working and auxiliary impressions with alginate material, they were poured after 30 minutes. Specify the type of defect by the classifications of Black and Kurlandsky. What inlay manufacturing method will be used in this case? Give an assessment of professional actions.

8. Patient M., age 25, complaints for pain in tooth 16 when biting on it. Three months ago a metal inlay was made. Examination established that the defect of the tooth crown of the tooth 16 (II class by Black) is restored with an inlay. There is a strip of cement between the bottom of the cavity and the inlay. Percussion of the tooth 16 is painful. Assess the situation, your tactics?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 2

Subject of the class: Defects of hard tooth tissues. Artificial crowns (metal stamped, acrylic, composite, metal-acrylic, porcelain-fused to metal). Indications, clinical and laboratory stages of making crowns.

Objective: To analyze the theoretical knowledge and practical skills of students in prosthetic treatment of dental hard tissues with artificial crowns. To consolidate the skills of patient examination, diagnosis, determination of indications for various types of artificial crowns. To improve the knowledge of laboratory stages of crown manufacture.

Entry knowledge control:

1. Anatomy of the tooth crowns, occlusion and articulation.
2. Conditions for safe preparation of teeth.
3. Preparation (methods of retraction) and taking impressions, requirements for impressions and impression materials.
4. Characteristics of the materials used for the manufacture of artificial crowns.
5. Characteristics of the materials used for fixing crowns.

Control questions:

1. Indications and contraindications for manufacturing of metal crowns. Clinical and laboratory stages of manufacturing stamped metal crowns.
2. Plastic (acrylic) crowns, indications and contraindications for their use. Clinical and laboratory stages of the manufacture of plastic (acrylic) crowns.
3. Indications and contraindications for the manufacture of combined crowns. Clinical and laboratory stages of manufacturing combined crowns (by Belkin, Borodyuk, Velichko).
4. Cast metal, MA and PFM crowns and their characteristics. Indications and contraindications for the manufacture of cast metal, MA and PFM crowns.
5. The principles and conditions for the preparation for making cast metal, MA and PFM crowns.
6. Clinical and laboratory stages of manufacturing cast metal, MA and PFM crowns.

Case studies

1. After preparation of the tooth for the metal stamped crown this tooth is taken out of occlusion, the occlusal surface is reduced to 1/3 of the height of the tooth crown and the medial surface was prepared at the angle of 70 ° to the vertical axis. Which errors and complications of tooth preparation were made? Your tactics?
2. After preparation of the tooth for a metal stamped crown a gingival shoulder at the neck of the tooth was made. Your tactics?
3. Acrylic crown was fitted on the tooth 22, the color of the crown at that time matched the natural tooth color. After the fixing of the crown a divergence in color was observed. Tactics of the dentist in this situation?

4. Patient M. complains on the aesthetic defect. On examination: tooth 21 crown is covered with a combined crown. The color of the crown facing doesn't match the color of the adjacent teeth of the patient. When and which mistake was made? Your treatment plan.
5. During the oral inspection the dentist detected a discrepancy between the shape of PFM crown and the normal anatomical shape of the tooth. What is the dentist's tactics?
6. On examination there was discovered a discrepancy of color of the metal-ceramic (PFM) crown to the natural teeth. When and which mistake was made? What is your tactics?
7. When checking the bite during trial fit of an artificial metal-ceramic (PFM) crown on the tooth 12 a highspot of the bite in the central occlusion is observed. What is your tactics?
8. Patient K. complains for frequent un-fixation (de-cementing) of the PFM crown made on the tooth 11. What reasons can lead to this complication?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 3

Subject: Defects of hard tooth tissues. Prosthodontic treatment in total absence of a tooth crown. Posts, stump root inlays. Clinical and laboratory stages of making.

Objective: to check out previously learned theoretical knowledge and clinical skills in prosthetic treatment of patients with complete absence of the tooth crown. To improve skills of patient examination, diagnosis, determination of indications for the choice of different post designs, clinical stages of prosthetics with post constructions, to consolidate the knowledge of the laboratory stages of their manufacture.

Entry knowledge control:

1. Types of post teeth and their distinctive features.
2. The rules of root canal preparation for a post, possible complications during the preparation of the root canal and their prevention.
3. Clinical and laboratory stages of manufacturing of simple post teeth and post teeth by Richmond, Ilina-Markosyan and Akhmedov.
4. Benefits of stump posts to the post teeth.
5. Clinical and laboratory stages of manufacturing of stump posts.

Control questions:

1. Requirements for the root and surrounding tissues in the manufacture of stump post constructions.
2. Indications for stump post of various designs depending on the condition of supragingival tooth tissue, the wall thickness and the type of bite.
3. Give the comparative characteristic of stump post constructions and post teeth.
4. Features of preparation of hard tissues and preparing of the root canal for the stump post structure.
5. Methods of manufacturing of stump post constructions, materials used.

Case studies

1. Patient T., 31 years old, complains of broke off crown of the tooth 12. The tooth was previously endodontically treated. In the X-ray the root canal is sealed untightly for 2/3 of the root length, around the root apex there is a defect of bone tissue 1mm in diameter. Bite is orthognatic. The remaining root walls are above the gum about 1-2 mm. Your tactics? Which dentures can be used in this case?
2. Patient A., complains for frequent loss of plastic post tooth, decementing from the root of tooth 12, construction was made a year ago. On examination of the oral cavity: the root of tooth 12 is restored with a plastic tooth, mounted on a post from clasp wire. On the X-ray of the tooth 12 - post sits in the root canal in 1/2 of its length. The construction is mobile, easily removed. Hard tissues of the root are prepared to the gum level at 90 degree angle to the axis of the tooth. Your recommendations for prosthetic treatment of this tooth.

3. Patient S., 25 years old, a teacher by profession, appealed with a request for one-visit correction of the defect caused by braking off of the tooth crown of the tooth 12. Objectively: the clinical crown of the tooth 12 is missing completely, the root walls of tooth 12 are located on the gingival level, no pathologic mobility. Orthognathic bite. Radiographic studies show the presence of filling material all over the length of the root canal and the absence of pathological changes in the periapical tissues. Name the types of dentures that can be made by the dentist in one visit. What materials can be used for such dentures? Rate the forecast of treatment with these dentures designs.

4. While fitting of the stump inlay on the tooth 12 the root was fractured. Specify the possible causes of these complication. Tactics of the dentist.

5. Patient O., during the manufacturing of the stump post construction on the tooth 22, after preparing of the root canal for 2/3 of its length, the dentist started the modelling of the inlay with modelling wax "Lavaks". After removing the wax composition from the root canal he noticed that the wax post length is 1/3 of the length of the root canal. Specify the possible causes of this complication.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 4

Subject of the class: Partial defects of tooth arch. Classification, clinical picture, diagnostics of dental arch defects.

Objective: analysis of theoretical knowledge and practical skills of students for prosthetic treatment of partial absence of teeth with fixed dentures, improvement of the skills of examination of patients, setting the diagnosis and indications of prosthetic treatment of the patients with defects of dental arch.

Entry knowledge control:

1. Definitions of articulation, occlusion, bite
2. Changes in TMJ after tooth loss
3. Special prosthetic preparation of the oral cavity for prosthodontic treatment
4. Odontoparodontogramma, filling in the blank. Diagnosis and substantiation of the choice of the bridge construction

Control questions:

1. Etiology and pathogenesis of the partial absence of teeth (edentia).
2. Classification of defects of dentition (Kennedy, Gavrilov).
3. Clinical picture of the partial absence of teeth.
4. The secondary deformation of dentition, pathogenesis, clinical features.
5. Indications for prosthetic treatment with bridge constructions depending on topography and the kind of the defect.

Case study

1. Patient H., 38 years, contacted the dental clinic with complaints of the presence of multiple defects of dentition, no prosthodontic treatment was previously performed. Teeth 17, 15, 14, 11, 25, 26 are lost due to complicated caries. The rest of the teeth are intact, show no pathologic mobility. Orthognathic bite. Give the classification of defects according to Kennedy and Gavrilov.
2. Patient K., 32 years old, complained of pain and mobility of the teeth 21, 26 which are bridge abutments. Anamnesis found that the patient is practically healthy. Teeth 23, 24 were lost as a result of injury. Seven years ago, he was treated with dental bridge sitting on the teeth 22, 25 that became loose (mobile) in 4 years and were extracted, the new bridge was manufactured on teeth 21, 26. After 2 years, he felt some mobility of the front abutment tooth, which constantly increased. Orthognathic bite, deep overlap. Mucosa around the teeth 21, 26 is hyperemic and edematous. The bridge is mobile together with the abutments. In the X-ray in the area of the tooth 21 is marked resorption of the alveolar bone for 3/4 of root length and the widening of periodontal ligament on the rest of the alveola. The bone resorption around the tooth 26 for 1/2 of the root length and the widening of periodontal ligament. The cause of pathologic tooth mobility? Suggest a treatment plan.
3. The patient E., 34 years, contacted the dental clinic with complaints of difficulty in chewing food due to the lack of posterior teeth in the upper and lower jaws.

Anamnesis revealed that teeth 16, 25, 26, 36, 35, 45, 46 were removed as a result of complicated caries within 3 years, no prosthodontic treatment was previously performed. Objectively: mucosa pale pink, orthognathic bite, teeth 17, 15, 24, 27, 37, 34, 44, 47 intact, percussion painless, no pathologic mobility. Set your diagnose. Methods of possible treatment and methods of fixing jaws in the position of central occlusion.

4. Patient B., 24 years, complains about the lack of aesthetic and problems of biting food. Anamnesis reveals that the patient is practically healthy. 11,21,22 teeth removed due to injury 30 days ago. The rest of the teeth are intact, show no pathologic mobility. Orthognathic bite, mucous pale pink. In the X-ray of tooth 12 the root canal is filled with filling material for all the length to the root apex. No pathological changes in the periapical tissues. Give your diagnose according to classification by Kennedy and Gavrilov.

5. Patient N., aged 65, complained of difficulty in chewing food due to the breakage of the maxillary prosthesis. He underwent prosthetic treatment many times before, previous one about 7 years ago. Objectively: in the upper jaw tooth 23 is present, on the lower jaw teeth 33,34, all the other teeth are missing. Give a classification according to Kennedy and Gavrilov.

LITERATURE

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Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 5

Subject of the class: Prosthetic treatment of partial defects of dental arch with fixed dentures. Indications, clinical and laboratory stages of bridge manufacture.

Objective: analysis of theoretical knowledge and practical skills of students for prosthetic treatment of partial absence of teeth with fixed dentures, improvement of the skills of clinical stages of prosthetic treatment with bridges of different designs and consolidation of the knowledge of laboratory stages of their manufacture.

Entry knowledge control:

1. Main and auxiliary materials, equipment and tools used for making bridges.
2. Clinical and laboratory stages of manufacturing stamped-solder bridges
3. Methods of determining the central occlusion, its main landmarks.
4. Errors in the determination of the central occlusion, their elimination.

Control questions:

1. Indications and contraindications for the manufacture of cast metal, metal-acrylic and porcelain-fused to metal bridges.
2. The principles and conditions for the preparation of teeth for cast metal, metal-acrylic and porcelain-fused to metal bridges.
3. Preparation (methods of gingival retraction) and taking impressions, requirements to the impressions in the manufacture of cast metal, metal-acrylic and porcelain-fused to metal bridges.
4. Clinical and laboratory stages of manufacturing cast metal, metal-acrylic and porcelain-fused to metal bridges.
5. The criteria for assessing the quality of the manufacture of various constructions of bridges.
6. The rules of fixing bridges of different designs.

Case study

1. Patient B., 37 years old. Complaints about the absence of posterior teeth 16, 17 in the upper jaw, difficulty in chewing food. Objectively: tooth 15 shows no pathologic mobility, there is a filling on the distal surface, percussion painful (positive). Tooth 18 is intact, percussion painless (negative), crown of the tooth is normal in anatomy, the tooth shows no pathologic mobility. Set your diagnosis. Suggest a treatment plan.
2. Patient C, 45 years, contacted the dental clinic with complaints of lack of posterior teeth in the upper and lower jaws, difficulty of chewing food. In the upper jaw teeth 16, 26, 27 are missing, in the lower jaw - teeth 35, 36, 45, 46 are missing. The teeth 17, 15, 25, 27, 34, 37, 44, 47 are intact, percussion painless. The patient is asking about bridge prosthetic treatment on the teeth 17, 15, 25, 27, 34, 37, 44, 47 as abutments. Tell the sequence of the clinical procedure for the patient. How to evaluate the quality of this work?

3. Patient A., 22 years, contacted the dental clinic with complaints of an esthetic defect. From history: tooth 12 was previously treated for periapical abscess. A year ago, the patient was treated by the dental surgeon, resection of the apex of the root of the tooth 12 was made. A month ago, tooth 12 was extracted because of inflammation. Objectively: the mucosa of the alveolar ridge in the area of the extracted tooth shows no pathological changes. Tooth 11 is intact, shows no color alteration, no pathologic mobility, painless percussion. Tooth 13 - there is a filling on the distal surface of the tooth, the tooth shows no pathologic mobility, painless percussion. Your diagnose. Suggest a treatment plan and additional methods of examination required.

4. Patient K., 27 years old, came for the dental treatment 3 days ago. His teeth 17,15,13,23,26,28 were prepared for PFM crowns – abutments of fixed dentures, provisional prosthesis were made, and impressions from the upper and lower jaws taken. Tell the further sequence of clinical and laboratory stages of manufacturing PFM bridges. What work should make the dental technician to the next visit of the patient to the dental clinic?

5. Patient D., 20 years, complaints about a cosmetic defect as a result of injury. Objectively: the teeth 11,21 are missing, the teeth 12,22 show color change, percussion painless. Suggest a treatment plan. How to assess the quality of preparation of the teeth for the selected type of fixed prosthesis.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 6

Subject of the class: Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of defects of hard tooth tissues, partial defects of dental arches with fixed (bridge) dentures – seminar.

Objective: to analyze and summarize the theoretical knowledge and clinical skills on the following topics: prosthetic treatment of the defects of hard tissues of teeth with different types of fixed dentures; treatment of partial absence of teeth with bridges.

Entry knowledge control:

1. Types of fixed denture constructions.
2. Methods of examination of the patient with defects of tooth hard tissues.
3. The anatomical shape of the teeth, occlusion and articulation.
4. Odontoparodontogramma, its filling in. The diagnosis and justification for the choice of bridge design.
5. The method of taking impressions and the criteria for assessing their quality.
6. Characteristics of the materials used for cementing crowns.
7. Methods of determining centric occlusion, its main features. The errors in the determination of central occlusion, their correction.
8. The metal alloys (precious, base) used for the manufacture of bridges of different constructions.

Control questions:

1. Topographical features of the defects of the tooth crown. Methods and sequence of inlay making.
2. Errors and complications of prosthetic treatment of the tooth defects with inlays.
3. Requirements of the root and surrounding tissue in the manufacture of a post structure. Indications for posts of various designs, depending on the condition of supragingival tooth tissues, the wall thickness and the type of bite/occlusion.
4. Indications and contraindications for manufacturing metal crowns. Clinical and laboratory stages of manufacturing stamped metal crowns.
5. Indications and contraindications for the manufacture of combined crowns. Clinical and laboratory stages of manufacturing combined crowns (according to Belkin, Borodyuk, Velichko).
6. Indications and contraindications for the manufacture of cast metal, metal-acrylic and porcelain fused to metal crowns.
7. The principles and conditions of the preparation of teeth for cast metal, metal-acrylic and porcelain fused to metal crown.
8. Clinical and laboratory stages of manufacturing cast metal, metal-acrylic and porcelain fused to metal crowns.
9. Classification of defects of dentition (Kennedy, Gavrilov). Secondary deformation of dentition, pathogenesis, clinical features.
10. Clinical and laboratory stages of manufacturing stamped-solder bridges.

11. Clinical and laboratory stages of manufacturing cast metal, metal-acrylic and porcelain fused to metal bridges.
12. The criteria for assessing the quality of the manufacture of bridges of various kinds.

Case study

1. The patient A. complained of trapping food between the teeth with fillings in the lower jaw on the right side. Objectively: all teeth are present, carious defect on the distal wall of the tooth 46 is restored with cement filling, coming to occlusal surface (OD defect), cusps remain. There is no contact point between the filling and the approximal surface of the tooth 47, covered with artificial crown made from gold. On radiographs of tooth 46 no decay under the filling, deep cavity. How to restore the contact point in this case?
2. The patient L. complains of food trapping between the teeth of the upper jaw on the left side, which make him use a toothpick constantly after taking meals. This leads to loss of tooth fillings and the frequent visits to the dentist-therapist. Objectively: the lack of a contact point between the teeth 27 and 28. At the distal surface of the tooth 27 a carious cavity with a softened tooth tissues is observed. Medial-approximal surface of the tooth 27 is restored with cement filling. On the radiograph of the tooth 27: deep cavity on the distal surface, pathological periodontal pocket between the teeth 27 and 28. How to perform the restoration of the defect of dental hard tissues of the tooth 27?
3. Patient R. contacted the dentist with complaints about the lack of tight occlusal contact between the freshly made denture and the antagonist teeth of the tooth 27. Objectively: bridge from steel with abutments 25 and 27. Between the bridge pontic and occlusal surface of tooth-antagonist in the position of central occlusion there is a gap of 1.5-2 mm. The occlusal surface of the tooth 36 is restored with cement filling, the side walls of the tooth are intact, the contact points with the neighboring teeth are not broken. On the radiograph of the tooth 36 the bottom of the cavity is close to the pulp, the walls are thin. How to restore the dense occlusal contact of the antagonists tooth in this case?
4. Patient S., on the advice of the dentist- therapist turned to the prosthodontist for the manufacture of a crown. Objectively: the defect of dental hard tissues 46, that stretches for occlusal and the interproximal surfaces, is restored with cement filling; tooth cusps are not saved. The radiographs show no signs of root canal treatment, the cavity bottom is close to the pulp, the margin on approximal surface is below the gum level. Do you agree with the opinion of the dentist-therapist, who referred the patient? What decision should be made? Describe the clinical procedures for the restoration of the defect in this case.
5. B. The patient contacted the dental clinic complaining of discomfort in the mouth, which appeared after the manufacture of the gold bridge for him. Objectively: dentition defect is restored with a bridge on abutment teeth 14 and 17. Mandibular dentition is intact. The tooth 46, which is antagonist of the bridge, has an amalgam filling restoring defect of occlusal and approximal surface, from

the history this filling is replaced by the dentist quite often. Tooth with vital pulp, the bottom of the cavity is deep, the lingual wall is thin. Set the preliminary diagnosis. Justify the choice of treatment, describe the clinical procedures for the suggested treatment design.

6. B. The patient contacted the dentist with complaints on the defect of the gold crown abutment in the bridge and tooth pain when eating. Objectively: the defect of mandibular dentition is restored with a bridge, on abutment teeth 34 and 37, the wear defect of the occlusal surface of the crown on 34 with a cavity of medium depth in the hard tissues of the tooth. The bridges are cemented permanently, the fit of the crowns meets the clinical requirements. Specify the diagnosis and tactics of the dentist.

7. Patient M. addressed to the dentist with complaints of difficulty in chewing and cosmetic defect associated with the lack of teeth in the lower jaw on the left. In examination: missing teeth 34 and 35. Exam of the teeth, neighboring to the dental arch defect tooth 33 is intact, the crown of the tooth 36 is ruined to the level of the gum. On radiographs: tooth 33 with preserved pulp, tooth root canals 36 are sealed to the apex, no periapical changes. Your tactics to restore the dentition defect?

8. Patient N. contacted the dental clinic with complaints of pain when biting on the bridge, which is on the left side of the mandible. Objectively: dentition of the upper jaw is intact, defect of mandibular left dentition is restored with a bridge, with abutments 33 and 37. Abutment crown 33 – is a combined crown by Belkin, the crown of the tooth 37 - metal stamped. The gum in the area of the tooth 33 is swollen, bleeding, the abutment crown shows vertical mobility, characteristic to de-fixation. After removal of the bridge: complete necrosis of hard tissues of the tooth 33 crown is revealed. Tooth 37 has a hard tissue defect. On the radiograph of the tooth root 33 no alveolar recession is observed, there are signs of pathology in periapical area. Set the diagnosis and suggest tactics of the treatment.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

Class 7

Subject of the Class: Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Characteristics of partial removable dentures, indications, positive and negative features. Clinical and laboratory stages of denture manufacture.

Objective of the Class: analyze the theoretical knowledge and practical skills of students of prosthetic treatment of partially edentulous patients with removable acrylic base dentures. Improving the skills of patient examination, diagnosis formulation, determination of indications for removable dentures, the definition of the design features of partial acrylic base dentures; consolidation of the knowledge of clinical and laboratory stages.

Entry knowledge control

1. The structure of the oral mucosa.
2. Classification of impression materials.
3. Evaluation of occlusal and articulatory relations of dentition.
4. Physical and chemical properties of the acrylic resins used in dentistry.
5. Polymerization modes, plastic porosity. Changes that occur in the acrylic resins in case of violation of polymerization mode.

Control Questions

1. Etiology, pathogenesis, clinic of partial tooth loss. Classification. Methods of patients examination with secondary partial edentulism. Indications for additional examination methods.
2. Indications and contraindications for the use of removable partial acrylic base dentures in partial tooth loss. Characteristics of partial dentures and their components.
3. Methods of fixation and stabilization of partial acrylic base dentures. Clasp line, the meaning of it for retention of the denture. The borders of the denture base and the conditions on which they depend.
4. Determination of central occlusion (three variants) depending on the number and location of remaining teeth. Methods for determining the lower face height (vertical dimension of occlusion). Clinical guidelines for the selection and arrangement of artificial teeth.
5. Wax try-in of removable partial acrylic base denture. The technique of injection molding and its features. Preparation and polymerization mode of denture base resins.
6. Fitting and insertion of the dentures. The mechanism of adaptation of the patient to the denture. Instructions to the patient on the rules of use and hygienic care of the partial removable dentures. Rules for the correction of the denture

Case studies

1. Patient K. dental formula (0 – tooth is intact, 4 – tooth is missing):

4	4	4	4	4	0	0	0	0	0	0	4	4	4	4	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	0	0	0	0	0	0	0	0	4	4	4	4

Set your diagnose. How is the occlusal load distributed, and what complications can occur in the temporomandibular joint in this case?

2. Patient C. dental formula:

4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	4	0	0	0	0	4	4	4	4	4	4

In the position of central occlusion there is an extrusion of the upper teeth in place of dentition defect of the mandible. Diagnose. What are the causes of deformation?

3. Patient N. dental formula:

0	0	4	4	4	4	4	6	0	0	4	4	4	5	4	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	4	4	0	0	0	3	4	4	4	0	4

Removable partial acrylic base dentures are indicated to this patient. Set your diagnosis. Which teeth should serve as abutment teeth (where clasps should be placed) to ensure a good retention of the denture on the jaw?

4. During the patient examination it is revealed that there are no opposing teeth in both jaws. In trying the wax-up of the dentures the dentist found that the vertical dimension of occlusion is less than vertical dimension of mandible rest position for 8 mm. What is the error?

5. Patient C. dental formula:

4	4	4	4	4	4	0	0	0	0	0	4	0	0	0	0
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	0	0	0	0	0	0	4	4	4	4	4

When checking the occlusion of fabricated dentures the spatula could freely move between artificial teeth. What is the cause of the error? What is the tactics of the dentist in this case?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 8

Subject of the Class: Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Indications for removable framework dentures, their components and the purpose of them. Ney clasp system, surveying. Methods of making clasp dentures. Clinical and laboratory stages.

Objective of the Class: to analyze the theoretical knowledge and practical skills of students of prosthetic treatment of partially edentulous patients with removable cast framework clasp dentures. Improving the skills of patient examination, diagnosis formulation, determination of indications for partial removable dentures, determination of the design features of clasp dentures; consolidation of the knowledge about clinical and laboratory stages.

Entry knowledge control

1. Anatomical and morphological structure of the upper and lower jaws.
2. Methods of examination of the patient. The concept of basal seat area.
3. Types of impression trays and impression materials.
4. Principles of transmission of occlusal pressure on the supporting tissues with partial fixed and removable dentures.
5. Functional tooth stamina.

Control Questions

1. Medical and biological grounds of patient treatment with framework clasp dentures, their characteristics. Structural elements of clasp dentures.
2. Clinical indications and contraindications for removable cast framework dentures.
3. Surveyor. Methods of surveying.
4. Ney system of clasps, selection of clasps depending on the topography of the location of the survey line.
5. Clinical and laboratory stages of manufacture of cast clasp dentures on refractory models. Equipment and materials necessary for their manufacture.
6. Making of cast clasp dentures using an attachment system. Types of attachments, clinical conditions of their application

Case studies

1. Patient K., 50 years, dental formula (0 – tooth is intact, 4 – tooth is missing):

4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28		
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38		
4	4	4	4	3	0	0	0	0	0	0	3	0	4	4	4		

The remaining teeth show no pathologic mobility. Teeth 34, 44 have extensive fillings and changes in color, percussion is painless. According to the patient teeth

34, 44 received root canal treatment about four years ago. Complications after the treatment are not reported. Residual alveolar ridges are well expressed (tall). The lingual surface of the alveolar ridge behind the frontal teeth has a slope backwards. Lingual frenum has a low attaching. Set your diagnose using Kennedy classification, suggest a treatment plan, explain the choice of the denture design.

2. Patient B., 47 years, dental formula:

4	4	4	4	0	0	0	0	0	0	0	0	4	4	0	0
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Teeth adjacent to the edentulous area show no pathologic mobility, have the correct anatomical shape and tall clinical crowns. Atrophy of the residual alveolar ridge is insignificant, maxillary tuberosity has an average size, vault of hard palate has a moderate height. In the middle third of the hard palate there is a torus of a small size. Set your diagnose using Kennedy classification, suggest a treatment plan, explain the choice of the denture design.

3. Patient A., 43 years, dental formula:

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
0	4	4	4	0	0	0	0	0	0	0	4	4	4	4	4

The remaining teeth have tall clinical crowns, anatomically correct shape. Residual alveolar ridge is slightly atrophied. The lingual surface of the alveolar ridge behind the frontal teeth goes upright. There is a high attachment of lingual frenum, torus mandibularis is prominent (expressed). Set your diagnose using Kennedy classification, suggest a treatment plan, explain the choice of the denture design.

4. When studying casts in surveyor the diagonal location of survey line (high in the nearby area and low in the distal) on the abutment teeth is revealed. Suggest the clasp type of Ney system.

5. When studying casts in surveyor the high location of survey line on the lingual surface and low on the vestibular surface of premolars, bounding bilateral distal end defects and having a lingual inclination, is revealed. Select the design of Ney clasp system for good retention and stability of removable partial denture.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 9

Subject of the Class: Prosthetic treatment of partial edentia with removable acrylic-based and framework dentures. Seminar.

Objective of the Class: generalization and systematization of knowledge in prosthodontics treatment of partially edentulous patients with removable partial acrylic base and cast clasp dentures.

Entry knowledge control

1. Anatomical and morphological structure of the upper and lower jaws.
2. The structure of the oral mucosa, the anatomical structure of the TMJ.
3. Types of impression trays and impression materials.
4. Etiology, pathogenesis, clinics of partial tooth loss. Classification.
5. Changes in dental arches, the masticatory muscles, TMJ, gastro-intestinal tract after partial tooth loss and their clinical manifestations.

Control Questions

1. Indications and contraindications for the use of removable partial acrylic base dentures in partial tooth loss. Characteristics of partial dentures and their components.
2. Clinical and laboratory stages of manufacturing removable partial acrylic base dentures.
3. Medical and biological grounds of prosthetic treatment with framework dentures, characteristics of these dentures. Components of framework dentures.
4. Clinical indications and contraindications for the production of framework clasp dentures.
5. Clinical and laboratory stages of cast framework clasp dentures manufacture.
6. Clinical errors that occur in the stages of production of the partial removable acrylic-based and framework dentures, their elimination.
7. Laboratory errors at the stages of production of the partial removable acrylic-based and framework dentures, their correction.
8. The fitting and insertion of removable partial dentures.
9. The mechanism of adaptation of the patient to the denture. Rules for the correction of the denture.
10. Methods of relining the acrylic base of partial dentures.
11. Immediate and long-term results of prosthodontics treatment with removable partial acrylic-based and cast framework dentures. What is the principle of completeness of prosthetic treatment?

Case studies

1. Patient K., 62 years old, contacted the dental clinic with complaints of lack of teeth, aesthetic deficit, difficulty of food chewing, speech disorder (lisp).

From disease history: teeth were extracted because of complicated caries, dentures have not been made previously.

Dental formula (0 – tooth is intact, 3 – filling, 4 – tooth is missing):

3	0	4	4	0	0	0	0	0	0	0	0	3	4	4	3
<u>18</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	4	4	4	4	0	0	4	4	4	4	4

All fillings are in good condition. Oral mucosa has no visible pathological changes. Orthognathic bite. Set your diagnosis using Kennedy classification, suggest a treatment plan. Which factors determine the choice of design of the maxillary denture?

2. Patient D. has dental formula

0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0
<u>18</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
0	0	4	4	4	4	0	0	0	0	0	4	4	4	4	4

What types of denture constructions can be applied in this situation?

3. Patient L. has dental formula

0	4	4	4	4	0	4	4	0	4	4	4	4	4	0	0
<u>18</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	0	4	4	0	0	4	4	4	4	0	4

Set your diagnosis. A removable partial acrylic-based denture is indicated. Which teeth should serve as abutment teeth (where clasps should be placed) to ensure a good retention of the denture on the jaw?

4. The patient M., teeth 33, 34 show pathologic mobility of II degree. Removable partial acrylic base denture are indicated. Dental formula:

4	4	4	4	4	0	4	4	4	4	4	4	4	4	0	4
<u>18</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	4	4	4	4	4	4	4	4	4	0	0	4	4	4	4

Set your diagnose. What complications can be during taking an impression on the lower jaw, how to prevent them?

5. Patient B. is using freshly made partial dentures for 3-4 days. Complaints of pain under the base plate of the denture. Examination: pressure ulcers on the upper lip frenulum and frenulum of tongue, in the retromolar area. Set the diagnosis. Tactics of the dentist.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 10

Subject of the class: Prosthodontic treatment of complete edentia. Special preparation of oral cavity for prosthetics. Methods of fixation and stabilization of complete removable dentures.

Objective: To improve knowledge of students about special preparation of oral cavity for treatment with complete dentures, about fixation and stabilization of dentures. Students need to know methods of fixation and stabilization of complete dentures, methods of preparing the oral cavity for prosthodontic treatment.

Entry knowledge control:

1. Anatomy of upper and lower jaw.
2. Morphological structure of soft and hard tissues of prosthetic field.
3. Diseases of oral mucosa.

Control questions:

1. Psychological preparation of patient for prosthodontic treatment with complete dentures.
2. Surgical preparation for prosthodontic treatment with complete dentures.
3. Prosthodontic treatment with complete dentures in case of diseases of oral mucosa.
4. Methods of fixation and stabilization of complete dentures (mechanical, physical, bio-mechanical, bio-physical).
5. Factors of stabilization of complete dentures on upper and lower jaw.
6. Stabilization of the denture on the prosthetic field in dependence of the surface of the prosthetic field, effects of chewing and mimic muscles, thickness of submucosal layer, shape of alveolar ridge

Special preparation of mouth cavity for prosthodontic treatment with complete dentures consists of *psychological preparation, therapeutic preparation, surgical preparation*.

Psychological preparation. It is very important for a dentist to get a psychological contact with patient. If patient does not trust the doctor, he shouldn't start treatment. We have to listen to the patient, discuss with him features of complete dentures, to explain the role of such dentures and ensure in quality of future dentures.

The doctor have to be quiet and sure in himself. But character of patient can differ from quiet to angry, and doctor must understand that and know how to talk to each patient.

Mostly there are slow patients (phlegmatic person). It takes much time to prepare such patients. You must always tell them, that their treatment depends mostly on themselves.

Next type of patients is choleric. They are very energetic patients, can't wait, they want to do everything very fast and it seems, that they know how to treat themselves better than doctor. The doctor have to be very careful with such patient,

don't talk much and think about every word he says. It is very important to explain the patient the difficulties and problems caused by complete dentures before starting his treatment.

It is also difficult to treat melancholiac patients. Such persons are not interested in themselves and in their treatment. It is difficult to understand for doctor what such patients want.

Surgical preparation of mouth cavity for dental treatment includes resection of alveolar bone, extraction of tooth roots, resection of movable oral mucosa, installing dental implants.

Prostodontic treatment with complete dentures when **diseases of oral mucosa** can be done only in the period of remission and treatment planning of complete dentures has some features. It is necessary to think about traumatic factors, to fix correctly the height of the lower third of face, dentures must be polished very carefully and dentist must control such patients more often, then in a usual situation.

Methods of fixation of complete dentures (by Bajanov)

Mechanical. Special mechanical elements, that help to fix dentures (dental springs).

Bio-mechanical. Means anatomical retention, fixation of dentures using bone implants.

Physical. Using of magnets, special suckers, increasing the weight of lower dentures.

Bio-physical. The most common methods. They include application of bone magnets, adhesion and making border flap.

Case studies

1. Patient M. complains on bad fixation of complete denture on upper jaw. The denture was inserted a month ago. After examination of the patient the following clinical situation is observed: full atrophy of upper alveolar process, flat hard palate. Set your diagnosis and make a plan of treatment.

2. Patient B. complains on bad fixation of complete denture on upper jaw. In examination: the maxillary alveolar process is tall, mucosa of the alveolar ridge is compact, deep palate, no torus.

Make a plan to improve fixation of the denture.

3. Patient K., 73 years old, complains on the pain in the front part of mandibular alveolar process. A week ago complete dentures on upper and lower jaw were inserted. In examination the movable fold ("loose ridge") on the alveolar ridge process in the front region is observed, the mucosa of the ridge is hyperemic, edematous.

Your tactic?

4. Patient N., 66 years old, one day ago complete dentures on upper and lower jaws were inserted. Patient complains on excessive salivation and a few hematomas under dentures. There are no complaints on pain.

Your tactic?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.

Class 11

Subject of the class: Prosthodontic treatment of complete edentia. Fitting of the individual tray, border moulding (according to Herbst). Taking functional impressions, their assessment. Substantiation of impression material selection for taking functional impressions. Borders of denture bases in complete edentia.

Objective: Student has to know the rules of fitting of individual tray in oral cavity using method by Herbst for determining the proper borders of future complete denture, to improve the skills of fitting individual trays in the mouth with the help of functional tests and the border moulding in order to detect the borders of the prosthesis, to consolidate the knowledge and skills of different methods of taking functional impressions.

Entry knowledge control:

1. Anatomy of upper and lower jaws.
2. Morphology of soft tissues of upper and lower jaws.
3. Chewing muscles, characteristics, attachment to the mandible.
4. Methods of making of individual tray.
5. The borders of individual trays on upper and lower jaws.

Control questions:

1. Functional impressions, classification.
2. Fitting of individual tray on upper jaw using the method by Herbst.
3. Fitting of individual tray on lower jaw using the method by Herbst.
4. Concepts and techniques of taking functional impressions. Choice of impression material depended on oral mucosa condition.
5. Margins of the bases of complete dentures in maxilla and mandible.

Functional impressions reproduce the condition of moving tissues under future complete denture in moment of action (eating, talking). Functional impressions can be compression, decompression and differential. It depends on condition of soft tissues (oral mucosa) under future denture. **Supplee devided 4 types of oral mucosa:** normal, atrophied, hypertrophied and moving (“loose ridge”) mucosa.

Compression impression is made in case of normal and hypertrophied mucosa under constant pressure. In that case all capillaries of mucosa for short time loose blood, and the best picture of tissues under future denture is received. To take compression impression we need rigid tray without perforations and thermoplastic material or 2 type viscosity silicone impression material. The pressure must be permanent through all the time of hardening of impression material. It is true that best pressure we can receive is the occlusal pressure. For that hard wax rims are fixed on individual trays for upper and lower jaws and they are adapted to each other, so that the patient can bite together.

Decompression impression is taken in case of atrophic mucosa without pressure on the tray. For that purpose we use individual tray with perforations, zinc-oxid eugenol or low viscosity (3rd) type silicone impression material. Fixation of

dentures made by such method is not very high, so we use it only when oral mucosa is thin and atrophic.

Differential impression is taken when there are various type of oral mucosa on jaw. At first we get compression impression using individual tray. After that in projection of thin or moving mucosa some of impression material is removed from the impression. We put low viscosity silicone material in the tray and take the impression without pressure.

Case studies

1. Patient M., 73 years old. Diagnosis: Complete tooth loss of upper jaw, 3 type by Shroeder. Alveolar mucosa in the front part of the ridge of is moving (“loose”). What impression method is indicated and how to perform it?
2. Patient O., 62 years old. When dentist was fitting the individual tray for the mandible, he asked the patient to do such movements as: to move his tongue towards the cheeks and to make swallowing movements. What are the mistakes of dentist in fitting the tray according to the method by Herbst.
3. After the fitting the maxillary individual tray is displaced (moves) from the prosthetic field when patient opens his mouth wide. What is the problem? Where the tray must be corrected?
4. During fitting the mandibular individual tray it moves when patient opens his mouth wide. What is the problem? Where the tray must be corrected?
5. After fitting the mandibular individual tray is displaced when patient raises up his tongue. What error was made? Where the tray must be corrected?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.

Class 12

Subject of the class: Prosthodontic treatment of complete edentia. Methods of centric relation registration in complete edentia. Constructing the artificial dentition in complete edentia. Analysis and correction of errors of dentist and technician during the centric relation registration procedure.

Objective: student has to know how to determine the central relationship of jaws in case of complete tooth loss, and how to replace the artificial teeth for the best using of complete dentures.

Entry knowledge control:

1. Anatomy of upper and lower jaws.
2. Histology of soft tissues of upper and lower jaws.
3. Muscles, which move the lower jaw.
4. Articulation and occlusion.
5. Types of artificial teeth.

Control questions:

1. Methods of determining the height of the lower third of face (vertical dimension of occlusion).
2. Methods of determining the central relation of jaws in case of complete tooth loss.
3. Algorithm of determining the central relationship of jaws on wax bases with occlusion rims.
4. Arrangement of the artificial teeth by Vasilev (with the help of glass plate).
5. Requirements for arrangement of the artificial teeth in complete dentures.
6. Mistakes on the steps of determining the occlusion and arrangement of the artificial teeth.

Methods of determining the height of the lower third of face (vertical dimension of occlusion, VDO)

Static: -anatomical

-physiological

Dynamic: -anatomic-functional

-using device (physiologic - functional)

-

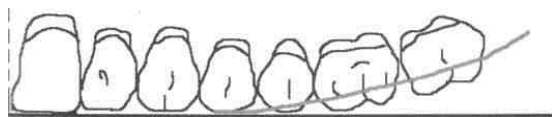
Artificial teeth:

	Acrylic	Ceramic
Connection to bases	Chemical (Very good)	Mechanical (Not so good)
Polishing	Very good	Very good
Artificial tooth wear	Yes	No
Easiness of correction	Yes	No

Arrangement of artificial teeth by Vasilev (with the help of glass plate)

Arrangement of artificial dentition starts with upper central incisors, followed

by lateral incisors, canines, premolars and molars. After that we arrange mandibular teeth starting from the premolars. Artificial teeth are placed on the midline of alveolar process. Maxillary arch is made semiellipse, mandibular – parabola.



1/1 – to the left and to the right of midline, cutting edge touches the glass plate.

2/2 – shorter than central incisors on 0.5 mm from the glass.

3/3 – touch the glass with the cusp.

4/4 – vestibular cusp on the glass, palatal cusp not in contact with the glass.

5/5 – both cusps in contact with the glass.

6/6 – touch the glass with just mesio-palatal cusp, the other cusps - not on the glass (mesio-vestibular 0,5 mm, distal-vestibular 1,5 mm, distal-palatal 1 mm away from the plate).

7/7 – all cusps are not on the glass, continue the plane set by 6/6.

After the arrangement of the upper teeth we place lower teeth starting with premolars and molars. After making occlusion on back teeth we place lower front teeth.

Case studies

1. During the trial fit of wax reproduction of complete dentures in the oral cavity a gap between molars and premolars on the right side about 1 mm is observed. Contacts between the dental arches in articulator are fine. What is the cause of the problem? How to correct it?
2. Patient with complete dentures complains on knocking of teeth while talking and quick tiredness of masticatory muscles. What was the mistake of dentist? How to correct it?
3. The patient with complete dentures which were made about 3-4 month ago complains about the soreness and redness in the corners of the mouth. In oral inspection the omission of the mouth corners, maceration of epithelium in this region and expressed nasolabial folds are observed. What is the possible cause of the problem? How to correct it?
4. At the stage of determining of the centric occlusion in complete tooth loss patient the dentist draw the central line on occlusion rim in projection of the frenulum of the upper lip. Is this a mistake? What are the possible consequences?

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.

Class 13

Subject of the Class: Prosthodontic treatment of complete edentia . Seminar.

Objective: generalization and systematization of knowledge of prosthetic treatment in complete tooth loss.

Entry knowledge control:

1. Morphological characteristics of hard and soft tissues of the prosthetic bed.
2. Anatomical preconditions for the determination of borders of complete dentures (topography of upper and lower jaw).
3. The concept of articulation and occlusion.
4. Types of occlusion. The signs of central occlusion.
5. Articulators.
6. The anatomical structure of the upper and lower jaws.
7. Anthropometric landmarks for the determination of the central relation.

Control questions:

1. Complete loss of teeth (secondary edentia). Causes, prevalence.
2. The features of patient examination and filling the medical documentation in the absence of teeth.
3. Assessment of the mucous membrane of edentulous prosthetic bed.
4. Classifications of upper and lower edentulous jaws.
5. Clinical and laboratory stages of making complete removable dentures.
6. Methods of determining the height of the lower third of face and their characteristics. The algorithm of determination of the central relation.
7. Fitting and sitting complete dentures. Recommendations for use and hygienic care of dentures.
8. Methods of relining of the baseplates of removable dentures.
9. Immediate and remote results of prosthetic treatment with complete dentures.
10. Prosthetic treatment of patients with complete loss of teeth on one jaw. Features of re-prosthetics in case of complete tooth loss.

Case studies:

1. Patient I., 58 years old, complaints of poor fixation of complete removable maxillary denture. Objectively: alveolar bone atrophy of the maxilla has moderate degree, the alveolar ridge is in the region of maxilla tuberosities on both sides is prominent with undercuts. During the inspection of the oral cavity with imposed denture base the blind holes are visible. The distal margins of the baseplate reach the most protruding part of side margins of alveolar ridge. Explain the reason for appearance of complaints of the patient after prosthetic treatment. Suggest the tactics of the dentist.
2. Patient N., 60 years old, complaints of frequent fracture of the complete maxillary denture. The examination of the oral cavity reveals: moderate atrophy of the alveolar process, alveolar tuberosities are not expressed, the palate of medium depth with a significant torus. Previously made denture has traces of repeated

repairs. The dentures balance on the jaw. Specify the tactics of the doctor. What is the cause of the fracture. Specify the type of atrophy of the maxillary alveolar process according to classification by Kurlandsky.

3. Patient R., 74 years old, three days ago received complete maxillary denture. When biting and chewing food, the denture is mobile. What are the possible causes of this problem and methods of correction.

4. Patient K., 68 years old, contacted the clinic of prosthetic dentistry with complaints on poor fixation and pain that occurs when chewing food with previously made complete mandibular denture. The examination of the patient revealed hyperemia of the mucosa in the area of frenulum of tongue and neutral zone. Set a diagnosis and specify the tactics of the dentist.

5. Patient U., 67 years old, complaints of poor fixation of the new maxillary complete denture. She is using the denture one day. The inspection of the oral cavity reveals that the denture is balancing. There are areas of hyperemia with violation of the integrity of the epithelial layer in the place of previous location of the teeth 16,15,14. Specify the cause of this pathology. Your tactics of patient management.

6. Patient S., 58 years old, complaints of poor fixation of mandibular complete removable denture. Prosthetic treatment was carried out a year ago. Objectively: type IV alveolar ridge atrophy by Kourlandsky, high tonus of the muscles in the floor of the mouth. The mucosa covering the alveolar ridge is atrophied, thinned. In the place of teeth 15,25 there are dense mucosa folds, 3-4 mm width, coming almost all the way from the neutral zone to the top of alveolar ridge. Determine the type of mucosa (Supplee). Specify the tactics of the dentist.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.

Class 14

Subject of the class: Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Classification of periodontal diseases. Differential diagnostics of periodontal diseases.

Objective: to analyze and increase the knowledge of dental students in etiology, pathogenesis and clinical picture of periodontal diseases. To consolidate the knowledge and skills of: classifications of periodontal diseases, methods of diagnostics and differential diagnostics of periodontal diseases, deontology rules of treating patients.

Entry knowledge control:

1. Clinical methods of examination of patient in prosthetic dentistry.
2. Additional methods of examination of patient in prosthetic dentistry.
3. Deontology in the clinic of prosthodontics.
4. Odontoparodontogram. Periodontal stamina to occlusal loads.

Control questions:

1. Etiology, pathogenesis of periodontal diseases.
2. Pathological changes in periodontal tissues in local and generalized pathology.
3. Classification of periodontal disease (WHO and USDS).
4. Clinical, radiological and laboratory methods of examination of patients with diseases of the periodontium.
5. Clinical manifestations of periodontal disease, differential diagnosis.
6. The rules of deontology in the treatment of patients with periodontal diseases.

Case studies:

1. Patient A., 23 years old, contacted the clinic with complaints of bleeding and swelling of the gums, pain when eating, this didn't bother him before. External examination without features, the movements in the TMJ in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 4 & 3 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 3 & 0 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 0 & 0 & 3 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 0 \end{array}$$

During the oral inspection: marked redness, swelling of mucous membrane around the front mandibular teeth, the crowding and malposition of these teeth. On panoramic X-ray bone resorption of the alveolar process of the maxilla and mandible could be observed. Set the diagnosis.

2. Patient K., 27 years old, contacted the clinic with complaints of bleeding gums while brushing teeth, pain when eating.

External examination is without features. Movements in TMJ are in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 0 & 4 & 4 & 0 & 3 & 3 & 0 & 0 & 3 & 0 & 3 & 3 & 4 & 0 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 3 & 4 & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 4 & 4 & 3 \end{array}$$

During the oral inspection: marked redness, swelling of the mucous membrane of alveolar ridge in the upper and lower jaws. Abnormal mobility of the teeth is not observed. On panoramic X-ray signs of bone tissue resorption of the alveolar bone are missing. Set the diagnosis.

3. Patient L., 38 years old, contacted the clinic with complaints of recurrently appearing swelling of the gums, bleeding, tooth mobility in the anterior mandible. External examination is without features. Movements in the temporomandibular joint are in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 0 & 0 & 4 & 0 & 0 & 0 & 3 & 3 & 3 & 3 & 0 & 0 & 0 & 0 & 4 & 3 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 0 & 4 & 0 & 3 & 3 & 0 & 0 & 0 & 0 & 0 & 3 & 0 & 3 & 3 & 4 \end{array}$$

The examination of the mouth shows marked hyperemia, swelling of the mucous membrane around the teeth 31, 32, 33, 41, 42, 43, pathological periodontal pockets with depth up to 3 mm in probing, pathologic tooth mobility of 1-2 degrees. In the panoramic X-ray the resorption of the alveolar bone in region of teeth 31, 32, 33, 41, 42, 43 1/4 to 1/2 is observed. Set the diagnosis.

4. Patient B., 49 years old, contacted the clinic with complaints of loss of teeth, problems of chewing food, mobility of remaining teeth. She underwent periodontal treatment previously. External examination reveals a decrease in the height of the lower third of the face. Movements in the temporomandibular joint in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 4 & 4 & 4 & 3 & 3 & 0 & 0 & 0 & 0 & 0 & 4 & 4 & 3 & 4 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 4 & 4 & 4 & 4 & 0 & 3 & 0 & 0 & 0 & 4 & 3 & 4 & 4 & 4 & 4 \end{array}$$

During the oral inspection marked redness, swelling of mucous membrane in the area of remaining teeth is observed, the presence of pathological pockets of 3 to 5 mm. in probing, pathological tooth mobility of 2-3 degrees. Fan-shaped arrangement of the mandibular and maxillary front teeth, in the anterior presence of diastema and interdental gaps. There are subgingival and supragingival increments. Panoramic X-ray reveals uneven atrophy of the alveolar process from 1/2 to 3/4. Set the diagnosis.

5. Patient R., 45 years old, contacted the clinic with complaints of partial absence of teeth in the upper jaw, impaired chewing function. Previously never sought prosthodontics help. External examination without features. Motions in the temporomandibular joint in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccccccc} 4 & 0 & 4 & 4 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 4 & 3 & 4 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 0 & 3 & 3 & 3 & 0 & 3 & 0 & 0 & 0 & 0 & 4 & 3 & 4 & 0 & 4 \end{array}$$

In the oral inspection: mucous membrane of alveolar ridge atrophic, pale in color, the roots of teeth are exposed, pathologic tooth wear of 1st degree, periodontal pockets of 3 to 5 mm, abnormal mobility of 2-3 degrees. Panoramic X-ray reveals even atrophy of the alveolar bone to $\frac{1}{2}$ of root length. Set the diagnosis.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

3. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 15

Subject of the Class: Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Biological grounds of tooth splinting. Reserve forces of periodontium and their changes with the atrophy of alveolar bone. Interrelation between the severity of inflammation in the periodontal tissues and the pathologic tooth mobility. The role of occlusal relations in periodontal pathology. Occlusal adjustment (selective tooth grinding) as the first stage of prosthetic treatment of periodontal diseases.

Objective: to analyse and increase the students' knowledge on methods for determination of the reserve forces and assessment of the functional condition of the periodontium, the methodology of filling and analysis of odontoparodontogram in patients with periodontal diseases, in causes of functional overload of the teeth, in the methods of identification of overloaded teeth. To consolidate the knowledge and skills in clinical methods of examination of periodontium, radiographic examination of periodontium, filling in odontoparodontogram, methods of selective tooth grinding for occlusal adjustment.

Entry knowledge control:

1. Structure and function of the periodontium.
2. Clinical methods for the assessment of periodontium condition.
3. Stamina of periodontium to loads.
4. Radiographic methods of examination of periodontium.
5. The anatomical design of occlusal surfaces of maxillary and mandibular teeth. Occlusion, articulation, bite.

Control questions:

1. What is the stamina and the reserve forces of the periodontium? Their importance in the prosthetic treatment of periodontal diseases.
2. Clinical and radiological signs of destruction of periodontal tissue, the relationship between them.
3. Odontoparodontogram, the principle of its construction and structure. The analysis of the functional condition of periodontium on the basis of odontoparodontogram.
4. The cause of the overload of the periodontium of certain teeth or groups of teeth. The clinical picture and methods of detecting teeth with overloaded periodontium.
5. Occlusal adjustment (selective tooth grinding) as the first stage of periodontal treatment. The methods of selective grinding of the teeth, complications.

Case studies:

1. Patient T., 42 years old, contacted the clinic with complaints of partial loss of teeth in the lower jaw, mobility of remaining teeth, impaired chewing function. Never sought prosthodontics assistance before. External examination is without features, the movements in the TMJ are painless, in full range.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 3 & 3 & 0 & 3 & 0 & 0 & 3 & 3 & 0 & 0 & 3 & 3 & 3 & 0 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 4 & 4 & 0 & 3 & 0 & 0 & 4 & 4 & 0 & 0 & 3 & 3 & 4 & 4 & 4 \end{array}$$

In the examination: the hyperemia of the mucous membrane of the alveolar ridge of the lower jaw, pathologic tooth mobility of I–II degree. Partial defect of dentition class I by Kennedy. Radiographs reveal bone resorption of the teeth 42, 32, 34 1/2, 43, 44, 45, 33, 34 about 1/4, signs of resorption in the upper jaw are absent. Diagnose, analyze functional condition of the teeth and make a treatment plan.

2. Patient P., 45 years old, contacted the clinic with complaints of bleeding gums when brushing teeth, mobility of front teeth of the lower jaw, aesthetic deficit because of the lack of tooth 11. Never sought prosthodontics assistance before. External examination is without features, the movements in the temporomandibular joint are in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 0 & 3 & 0 & 0 & 3 & 0 & 4 & 0 & 3 & 3 & 3 & 3 & 0 & 3 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 3 & 0 & 0 & 0 & 3 & 3 & 0 & 3 & 3 & 0 & 0 & 3 & 3 & 0 & 4 \end{array}$$

In the examination: hyperemia of the mucous membrane of alveolar ridge around the front teeth of the upper jaw. Mobility of teeth 11, 21, 22, 31, 32, 41, 42 is I–II degree. Partial defect of dentition is class 3 by Kennedy. The radiographs show the resorption of the alveolar process of the mandible in region of teeth 11, 21, 22, 31, 41 for 1/2, in the region of the teeth 13, 23, 32, 33, 42, 43 - for 1/4. Set the diagnosis. Assess the functional condition of the teeth and make a treatment plan.

3. Patient Z., 71 y.o., was referred to a prosthodontist by periodontologist. Complaints of loss of teeth, pain when chewing, mobility of the remaining teeth. The patient never sought prosthodontic treatment before. External exam reveals the decrease of the height of the lower third of the face, ceasing of the cheeks and lips, expressed nasolabial folds. Movements in the temporomandibular joint are in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} 4 & 4 & 3 & 4 & 4 & 4 & 4 & 4 & 0 & 0 & 4 & 4 & 4 & 4 & 4 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ 4 & 0 & 4 & 4 & 4 & 0 & 4 & 4 & 4 & 4 & 0 & 4 & 3 & 4 & 4 & 4 \end{array}$$

Oral inspection shows: the alveolar mucosa is hyperemic, edematous, there are pathological periodontal pockets of 3 to 5 mm, tooth mobility of III–IV degree, defects of the upper and lower dentition 4th class by Gavrilov. On radiographs - the resorption of bone tissue in the area of teeth 16, 22, 23, 35, 43 more than 3/4 root length, in the area of 33, 34 – 3/4. Make a diagnosis, assess functional condition of the teeth and suggest the treatment plan.

4. Patient K., 45 years old, contacted the clinic of prosthetic dentistry with complaints of partial absence of upper and lower teeth, problems of chewing, mobility of remaining teeth. The patient never sought prosthodontic treatment before. External examination without features, the movements in the TMJ is painless, in full range.

The dental formula:
$$\begin{array}{cccccccccccccccc} & 0 & 3 & 4 & 4 & 3 & 0 & 3 & 4 & 4 & 4 & 0 & 4 & 4 & 3 & 3 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ & 4 & 3 & 0 & 4 & 4 & 0 & 0 & 4 & 4 & 4 & 3 & 4 & 0 & 3 & 3 & 4 \end{array}$$

In the examination: hyperemia of the alveolar mucosa, pathologic tooth mobility of I–II degree. Defects of upper and lower dentition 3rd class by Kennedy. Radiographs reveal the resorption of alveolar bone around the teeth 12, 14, 18, 22, 26, 27, 42, 47 to ½ root length, around the teeth 13, 17, 23, 33, 33, 34, 36, 37, 43, 46 - to ¼ root length. Set the diagnosis. Assess the functional condition of the teeth and make a treatment plan.

5. Patient F., 40 years old, contacted the clinic with complaints of partial absence of teeth in the upper jaw, impaired chewing function. The patient never sought prosthodontic treatment before. External examination is without features, movements in the temporomandibular joint are in full range, painless.

The dental formula:
$$\begin{array}{cccccccccccccccc} & 4 & 4 & 3 & 4 & 0 & 0 & 3 & 3 & 3 & 3 & 0 & 3 & 4 & 4 & 0 & 0 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ & 0 & 0 & 0 & 3 & 3 & 0 & 3 & 3 & 0 & 0 & 3 & 3 & 0 & 0 & 0 & 0 \end{array}$$

Results of the inspection: the mucous membrane is in satisfactory condition, mobility of the teeth 25, 27, 41 of I–II degree. Defect of the upper dentition class by Kennedy. On the radiographs: the resorption of bone tissue in the area of teeth 16, to 27 for ½ of root length, in the area of teeth 24, 28 for 1/4. In the area of the other teeth alveoli no resorption is observed. Set the diagnosis. Assess the functional condition of the teeth and make a treatment plan.

6. Patient B., 37 years old, contacted the clinic with complaints of mobility of the back teeth of the upper and lower jaws on the right side, pain when eating. The patient never sought prosthodontic treatment before.

External examination is without features, the movements in the TMJ are painless, in full range.

The dental formula:
$$\begin{array}{cccccccccccccccc} & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 3 & 3 & 4 \\ \hline 18 & 17 & 16 & 15 & 14 & 13 & 12 & 11 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 \\ 48 & 47 & 46 & 45 & 44 & 43 & 42 & 41 & 31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 \\ & 3 & 0 & 0 & 3 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 0 & 4 & 4 \end{array}$$

In oral examination: alveolar mucosa of the teeth 15, 16, 17, 45, 46, 47, 48 slightly hyperemic, edematous, there are pathological periodontal pockets of 3 to 4 mm, tooth mobility of Ist degree. Significant delay of physiologic age wear of the cusps of molars and premolars on the right side, the presence of premature contacts in lateral occlusions are detected. The radiographs show the resorption of bone tissue in the teeth area 15, 16, 17, 45, 46, 47 for ½ of root length, in the area of the

remaining teeth no signs of resorption. Set a diagnosis, indicate the potential cause of overload of the periodontium, make the treatment plan.

7. Patient L., 34 years, complaints of hypersensitivity of the teeth 14, 15, 24, 25. According to patient selective grinding of teeth was performed a week ago. What is the possible cause of the complaints of the patient, and what are the ways of treating them.

LITERATURE

Basic:

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Additional:

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3. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 16

Subject of the class: Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Temporary and permanent splinting, indications, types and constructions of temporary and permanent splints. Orthodontic treatment in periodontal diseases.

Objective: to analyze the students' knowledge about the features of temporary and permanent splinting, indications, types and characteristics of temporary and permanent splints, used in treatment of periodontal diseases. A student must know the indications for temporary splints use, know the details of temporary splinting and possible errors and complications. A student must find out indications and contraindications for orthodontic treatment of periodontal diseases. A student must know the features of orthodontic treatment, possible errors and complications. A student must define aims, objectives and indications for permanent splinting, know the types of permanent splints and details of their manufacture.

Entry knowledge control.

1. Periodontium: structure and functions.
2. Anatomic shape of teeth of lower and upper jaws.
3. Odontoparodontogram, its structure and rules of filling.
4. Clinical manifestations of periodontal diseases.
5. Peculiarities of the examination of the patients with periodontal diseases.
6. X-ray methods of the examination in prosthetic dentistry.
7. Occlusion, articulation, bite.
8. Types and operating principles of orthodontic devices.

Control questions.

1. Causes and clinical manifestation of the functional overload of periodontal tissues.
2. Indications for temporary splinting.
3. Temporary splints requirements.
4. Temporary splints types and their characteristics.
5. Errors and complications in temporary splinting.
6. Indications and contraindications for orthodontic treatment in periodontal diseases.
7. Peculiarities of orthodontic treatment of the patients with periodontal diseases.
8. Aims and objectives of permanent splinting.
9. Indications for permanent splinting.
10. Requirements to permanent splints.
11. Comparative characteristics of removable and fixed splints.

Case studies

1. The patient C., 47 years old, contacted the dental clinic with complaints of gum bleeding and swelling, bad breath, tooth mobility on the lower and upper jaws. While examining his oral cavity, the next clinical picture is observed: the height of the lower one third of his face is reduced, the mucosa around teeth 34, 31, 32, 33, 34, 41, 42, 43, 44 is hyperemic, edematous, painful during palpation; when pressing on the gum, some pus is released from periodontal pockets. Tooth mobility of I-II grade. The plastic splint is broken between teeth 41 and 31. On the X-ray it's revealed the bone tissue atrophy on one half length of the roots of teeth 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 31, 32, 33, 34, 41, 42, 43. The temporary plastic splint was made about half year ago. Set your diagnosis? The dentist's tactics? Name the possible dentist's errors?

2. The patient N., 45 years old, referred to the dentist with complaints of having gaps between the teeth on the upper jaw and the tooth mobility on the lower jaw. While examining, the next clinical picture is observed:

Dental formula:

4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	4
18	17	16	15	14	13	12	11	10	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	40	31	32	33	34	35	36	37	38
4	4	4	0	0	0	0	0	0	0	0	0	0	0	4	4	4

Tooth mobility of II grade, on the lower jaw fan-shaped tooth separation with the formation of gaps between the teeth is revealed. The X-ray shows the bone tissue atrophy on one quarter length of the roots of teeth 11, 12, 13, 21, 22, 23, 24, 41, 42, 31, 32. Set the diagnosis, suggest a treatment plan.

3. The patient I., 41 years old, referred to the clinic with complaints of gum bleeding and swelling, pains while having meals, bad breath. The next clinical picture is observed:

Dental formula:

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	17	16	15	14	13	12	11	10	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	40	31	32	33	34	35	36	37	38
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The mucosa in the area of the front teeth on the upper jaw is hyperemic, edematic, painful while palpating. There are fixed Engle's appliances on the upper and lower jaws teeth. On the X-ray the alveolar atrophy on one half length of the roots of teeth 41, 42, 43, 31, 32, 33 is observed. What errors have been done during the previous stages of the treatment? What are you actions to correct the errors?

4. The patient K., 40 years old, contacted dental clinic with complaints of biting the mucosa of the hard palate with mandibular teeth, the formation of the diastem and the gaps between the maxillary teeth, the formation of fissures in the corners of the mouth. Some years ago the patient underwent clinical and X-ray diagnostics by orthodontist and the treatment with multibonding-system after this

was performed. One year after the start of the orthodontic treatment a positive result has been achieved: the diastem and the gaps were closed, the fissures in the corners of the mouth disappeared and the treatment was finished. 6 months later the patient referred to the clinic with complains of newly arisen gaps between teeth and injuring of the mucosa of the hard palate with mandibular teeth. Why did the relapse occurred? What hasn't been done in order to prevent it?

5. The patient S., 50 years old, contacted the dental clinic with complaints of gum bleeding and swelling, pains while taking meals, bad breath, tooth mobility on the upper and lower jaws. The next clinical picture is observed:

Dental formula:

4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

The mucosa in the area of teeth 11, 12, 13, 21, 22, 23, 24, 31, 32, 33, 34, 35, 41, 42, 43, 44 is hyperemic, edematic, painful while palpating. When pressing on the gum some pus is revealed from the periodontal pockets. The interdental papillae are ulcerous around teeth 11, 12, 13, 21, 22, 23. The X-ray shows the atrophy of the alveolar socket wall more than one half of the root length. Teeth 11, 12, 13, 21, 22, 31, 32, 33, 34, 41, 42 have the mobility of the II-III grade. Set your diagnosis, suggest a treatment plan?

6. The patient M., 47 years old, contacted the dental clinic 2 years ago with complaints of sharp pain, bleeding and swelling of the gums, impossibility of having meals, tooth mobility. The next clinical picture is observed:

Dental formula:

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

The X-ray reveals the atrophy of the alveolar wall more than one half of the root length. Teeth 11, 12, 13, 16, 21, 22, 23, 26, 27 have the mobility of the I-II grade. The previous periodontal treatment included the removing of the calculus, the physiological injections of Aloe, after this the frontal and sagittal stabilization of the mandibular teeth with fixed splints was performed. During two years there were observed exacerbations, which were controlled with therapeutic techniques. In present time in oral exam, hyperemia, the mucosa swelling and mobility of teeth 11, 12, 16, 21, 22, 23, 26, 27 of the II-III grade is revealed.

What error has been made during the prosthetic treatment of the patient? What are the methods of its correction?

7. The patient S., 55 years old, contacted the dentist one year ago with complaints of gum bleeding and pain when having meals, the tooth mobility on the upper and lower jaws. The next clinical picture was found out:

Dental formula:

4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
18	17	16	15	14	13	12	11	2	1	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	3	1	32	33	34	35	36	37	38
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The mobility of teeth 13, 14, 15, 23, 24, 26, 27, 31, 32, 33, 34, 41, 42, 43 is I-II grade. Panoramic X-ray revealed the atrophy of alveola more than one half of the root length. A therapeutic treatment was performed, after that fixed splints on teeth 23, 24, 26, 27 and 31, 32, 33, 41, 42, 43, 44 were made. At the present moment in exam the mucosa in the area of teeth 13, 23, 24, 26, 27, 31, 32, 33, 41, 42, 43 is hyperemic, edematic, there is tooth mobility of the II-III grade. What is the error of the prosthetic treatment in this case?

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3. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 17

Subject of the class: Etiology, pathogenesis, clinics, diagnostics and prosthetic treatment of periodontal diseases. Seminar.

Objective: generalization and systematization of the knowledge of prosthetic treatment of periodontal tissue diseases.

Entry knowledge control.

1. Periodontium: structure and functions.
2. Etiology, pathogenesis of periodontal diseases.
3. Classifications of periodontal diseases according to WHO and UNDS.
4. Clinical manifestation of periodontal diseases in the oral cavity.
5. Clinical, radiological and laboratory methods of the examination of the patient with periodontal diseases.
6. Differential diagnosis of periodontal diseases.
7. Odontoparodontogram, structure, filling rules.
8. Indications for the temporary splinting, requirements to the temporary splints. Types of the temporary splints and their characteristics.
9. Aims and objectives of the permanent splinting. Indications for the permanent splinting. Requirements to the permanent splints.
10. Comparative characteristics of removable and fixed splints.
11. The sequence of clinical and laboratory stages of the manufacturing of dentures

Control questions.

1. What is stabilization? Types of stabilization.
2. Indications for using fixed splints, removable splints and splints in combination with removable dentures.
3. Types of prosthetic constructions used for splinting in case of preserved dentition and their characteristics.
4. Clinical and laboratory stages of manufacturing of ring and cap splints; splints from semi crowns; splints from stamped and equator crowns; splints from combined crowns by Belkin, Borodyuk, Velichko.
5. Clinical and laboratory stages of manufacturing of splints from cast crowns, splints from metal acrylic and metal ceramic crowns.
6. Clinical and laboratory stages of manufacturing of a bar splint by Kurlyandski, intrapulparsplint, splint by Velichko.
7. Clinical and laboratory stages of manufacturing of a universal splint-denture (by Parkhamovich S.N., Naumovich S.A.).
8. The method of combined fixed tooth splinting using modern adhesive technologies
9. Types of permanent splints and splints-denture used to restore included edentulous space, free-end edentulous space, in single standing teeth or dental group and their characteristics.
10. The treatment results, the criteria of cure for periodontal diseases.

Case studies

1. The patient D., 55 years old, contacted the dental clinic with complaints of the frontal teeth mobility and gum bleeding. In examination of her oral cavity the mobility of teeth 41, 42, 43, 31, 32, 33 of the I-II grade is revealed. On the X-ray there is a resorption of the alveolar socket wall for one half. The occlusion is orthognatic, the dentitions are intact.

Set a diagnosis. Make a prosthetic treatment plan. What type of the dentition stabilization will provide the unloading of the frontal mandibular teeth?

2. The patient L., 65 years old, contacted the dental clinic with complaints of teeth loss and their mobility.

Dental formula:

4	0	3	3	3	0	4	3	4	0	0	3	4	3	0	4	
18	17	16	15	14	13	12	11	2	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	3	31	32	33	34	35	36	37	38
4	4	4	4	0	0	0	4	4	0	0	3	3	4	4	4	

Teeth 17, 16, 15, 14, 24, 26, 27, 34, 35, 44 have the mobility of I grade, teeth 32, 42 have the mobility of II grade. On the X-ray a uniform horizontal resorption of the alveolar socket wall on one half of the root height in the area of all teeth is revealed.

Set a diagnosis. Make a prosthetic treatment plan. What types of the dentition stabilization of the upper and lower jaws and with what type of splints (fixed or removable) or splints-dentures could be made?

3. The Patient A., 40 years old, contacted the dental clinic with complaints of gum bleeding, difficulty of taking meals and mobility of back maxillary teeth.

Dental formula:

4	0	3	0	0	0	3	3	3	0	0	3	0	3	0	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	0	0	0	0	0	0	0	0	0	0	3	3	0	0	4

There is mobility of I grade of teeth 17, 16, 15, 14, 24, 25, 26, 27. The X-ray reveals a uniform horizontal resorption of the alveolar wall for one half of the root length in the area of teeth 17, 16, 15, 14, 24, 25, 26, 27, in the area of teeth 32, 31, 41, 42 – for one quarter of the root height.

Set the diagnosis. What types of the dentition stabilization is necessary to do in the upper and lower jaws and with what types of splints (fixed or removable) or splints-dentures could be used?

4. The Patient V., 59 years old.

Dental formula:

3	3	4	4	4	0	0	0	0	0	0	4	4	4	4	3
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
3	3	4	4	4	3	4	4	4	4	3	4	4	4	3	3

Teeth have mobility of I degree, the alveolar atrophy about one half. Set the diagnosis, make a treatment plan. Choose the denture construction.

5. The Patient K., 49 years old. Complaints of the mobility of teeth 42, 41, 32 and the lack of tooth 31. The occlusion is orthognatic, the mobility of teeth 42, 41 and 32 of I degree. The periodontal atrophy degree for one half of root length. Set a diagnosis. Make a treatment plan. Choose a splint.

6. The Patient N., 35 years old, has been suffering of periodontal disease against the background of general disease (diabetes) for ten years. On the X-ray the bone tissue atrophy of interdental septum for one third - one half and of the root length is revealed. The teeth are intact. Choose the type of stabilization and the construction of splinting denture.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

3. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 18

Subject of the class: Errors of tactics, diagnostics and technology in prosthodontics.

Objective: Analyze the theoretical knowledge and practical skills in clinic and laboratory stages of manufacturing of various denture constructions. A student must know how to carry out clinical and laboratory stages of manufacturing of all denture constructions independently, find out the errors during the prosthetic treatment, know the methods of their elimination.

Entry knowledge control.

1. TMJ anatomy.
2. Innervation of the maxillofacial area.
3. Anatomical-morphological structure of the upper and lower jaws.
4. Methods of examination of a prosthetic patient.
5. What is the oral cavity sanitation?
6. Impression materials and their characteristics.
7. Oral mucosa structure.
8. Anatomic-functional changes associated with tooth loss.
9. Occlusion, its types, central occlusion signs.
10. Basic materials for denture manufacturing.
11. Physico-chemical properties of the materials, used in the prosthetic dentistry.
12. Metals and their alloys, used in dentistry.
13. Plastic polymerization modes.
14. Rules directions of denture using.

Control questions.

1. Errors in the treatment of tooth crown defects with microprosthetics.
2. Errors in the treatment of tooth crown defects by post constructions.
3. Errors in treatment with artificial crowns and methods of their correction.
4. Clinical and laboratory errors in manufacturing of dental bridges.
5. Errors in manufacturing of partial removable acrylic-base dentures.
6. Errors in planning and manufacturing of clasp framework dentures and methods of their correction.
7. Clinical and laboratory errors in the stages of manufacturing of complete removable dentures and their correction.
8. Errors in planning and treating of the patients with periodontal diseases and methods of their correction.
9. Iatrogenic factors leading to TMJ diseases, intolerance to dental materials, galvanosis? Prevention methods, methods of treating.
10. Clinical and laboratory errors in manufacturing of maxillofacial dentures.

Case studies

1. When forming the flat bottom of the cavity of the class 5 Black in tooth 21, carried out with infiltration anesthesia, the pulp chamber opening was made.

Indicate the cause of the dentist's error. Name the prevention methods of the complication.

2. The Patient M., 25 years old, contacted the dental clinic with complaints of the pain of tooth 16 when biting. A metal inlay was made for this tooth three months ago. While the examination it was found out: the defect of the crown of tooth 16 (the IInd class Black) is restored with the inlay. One can notice a cement strip between the cavity bottom and inlay. The tooth percussion is painful. Analyze the situation. Your tactics.

3. While examining the tooth after crown preparation for a metal stamped crown, it was found out: the evident equator from the oral side of the tooth, the occlusal surface is flat. What errors were made in tooth preparation? Your tactic?

4. After tooth preparation for a metal crown the tooth is taken out of the occlusion; the tooth is prepared on the chewing surface so that the tooth is shortened on one third of crown height; medial surface was prepared at the angle of 70°. What errors and complications were made when tooth preparing? Your tactics?

5. When fitting the dental bridge, it could not be sit on the abutment teeth. Possible causes and methods of their corrections.

6. When fitting the finished dental bridge, it was found out, that the distal crown didn't cover the tooth neck. Possible causes, the dentist's tactics.

7. The partial removable denture for the upper jaw was inserted a day ago. Complaints to the pain of the mucosa at the mucogingival junctions in the frontal area of the maxilla alveolar process. Set the diagnosis. At what stage was the error made? How to eliminate it?

8. Complete removable dentures for the upper and lower jaws were inserted seven days ago. Complaints to the pain in the area of the line "A" and poor denture fixation on the upper jaw. Objectively: sores in the back of the palate, pain in the hypoglossal area on the lower jaw. Set the diagnosis. What is the cause of the poor fixation? The dentist's tactics.

9. After imposing of the partial removable acrylic dentures on the upper and lower jaws, the artificial teeth on the right don't come in contact.

Dental formula:

4	4	4	7	0	0	0	0	0	0	0	0	7	4	4	4	4
18	17	16	15	14	13	12	11	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	41	31	32	33	34	35	36	37	38
4	4	4	4	4	7	0	0	0	0	0	0	7	4	4	4	4

Give the cause of this problem. The dentist's tactics in this case.

10. The Patient's M. dental formula:

4	4	4	7	4	4	4	7	7	4	4	4	4	7	7	7	4
18	17	16	15	14	13	12	11	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	41	31	32	33	34	35	36	37	38
4	0	7	7	4	4	4	4	4	4	4	4	4	7	7	7	4

When checking the denture construction in the oral cavity, there is gap between the front teeth as in the open bite, there are a cusp – to cusp contacts in the molars. What is the cause of the error? The dentist's tactics.

11. The patient contacted the dental clinic with complaints of burning sensation in the area of contact with the denture base on both jaws. There are no other complaints. From the patient's anamnesis: the patient had the same complaints when using old dentures, which have been replaced with new ones made from colorless plastic, but at the moment he isn't satisfied with them because of lack of aesthetics. What was the dentist's error? How to correct it?

12. When examining the clasp framework denture on the lower jaw, it was found out a large flexibility of major connector even with little attempt to bring closer the end saddles. What is the cause of this undesirable flexibility? Is it possible to impose a clasp denture to the patient?

13. When checking the patient's clasp denture frame a poor fixation of the clasps on the abutment teeth was found out. Possible causes of this problem? The dentist's tactics?

14. When checking the teeth arrangement in clinic (trial fit of the wax-up denture), the dentist revealed an increase in the interalveolar height on the artificial teeth of the clasp mandibular denture. Give possible causes of the revealed error and methods of its correction.

15. When checking the teeth arrangement in clinic (trial fit of the wax-up denture), the dentist revealed a cusp-to-cusp contact between the artificial teeth and the antagonists of the clasp denture for the lower jaw (the 1st class by Kennedy). There is a gap between the teeth in the frontal area. Give the possible causes of the revealed error and methods of its correction?

16. During the trial fit of the wax-up the clasp maxillary denture, made for class 1 Kennedy defect, the dentist revealed multiple contacts between all teeth in the position of the central occlusion during inspection. Insertion of lab technician's spatula between the artificial teeth and the antagonists on the right and on the left reveals a 2 mm gap between them. Give the possible causes of the revealed error and the methods of their correction?

17. When checking the tooth arrangement in the clasp denture on the upper jaw, (there is a dental formula):

4	4	4	4	7	7	0	0	0	0	7	4	4	7	7	4
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
4	7	7	0	0	0	0	0	0	0	0	0	0	0	0	4

One can notice that despite the close contact of the wax basis with the mucosa of the alveolar process, the occlusal rests don't sit in their prosthetic beds, stand above them, creating interference for teeth closing. The major connector has a gap of 3 mm from the mucosa. What caused such error? The dentist's tactics?

18. When sitting the clasp framework denture, the dental formula:

4	4	7	4	4	7	0	0		0	0	0	7	7	4	4	4
18	17	16	15	14	13	12	11		21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41		31	32	33	34	35	36	37	38
4	7	7	7	0	0	0	0		0	0	0	0	7	7	7	4

Balancing of the denture is revealed on the upper jaw with a combined defect of the dentition. What is the reason of poor fixation of the denture and methods of its correction?

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Additional:

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4. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 19

Subject of the class: Organizational bases of prosthodontics. The structure of dental polyclinic. Analysis of the work of clinics and laboratory. The duties of the head of prosthodontics department, prosthodontist professional. Providing quality of patient treatment. Preventive value of prosthetic treatment. The definition of dispensary groups for dental, prosthodontics diseases. Dental prosthetic prevention and organization of prosthodontics service in the city and district. Medical labor expertise. Medical errors and professional responsibility. Questions of ethics, aseptic, antiseptic in the clinic of prosthetic dentistry. (Seminar).

Objective: Study the organization basis of prosthodontic service, the structure of a dental clinic, staff standards and duties of a prosthetic dentist.

Entry knowledge control

1. Organizational bases of a dental clinic. The analysis of the work of a clinic and a laboratory.
2. The preventive value of the prosthetic treatment, of the organization of prosthodontic service in rural areas and city.
3. Medical labor expertise, medical errors and professional liability.

Control questions

1. The prosthetic denture service in Belarus. The structure of a dental clinic. Staff standards.
2. Duties of the head of prosthodontic department, of a prosthodontist, reporting forms.
3. The preventive value of the prosthetic treatment. The dispensary grouping of the population according to the dental and prosthetic diseases.
4. The organization of prosthetic service in rural areas and city.
5. Modern condition and development perspectives of the prosthodontic service in Belarus. Medical labor expertise.

LITERATURE

Basic:

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2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.
3. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.

4. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.

Class 20

Subject of the class: Organizational bases of prosthodontics and medical errors. Final session.

Objective: To study the organizational basis for the prosthodontic care, issues of professional ethics, asepsis, antisepsis in prosthodontic clinic, medical errors and professional liability of the dentist.

Entry knowledge control:

1. The asepsis and antisepsis in medical practice.
2. Medical Ethics.
3. The concept of deontology.

Control questions

1. Organizational bases of prosthodontic care. Analysis of the clinic and the laboratory work.
2. Preventive prosthetic treatment and organization of prosthetic service in rural areas and city.
3. Modern condition and development perspectives of the prosthodontic service in The Republic of Belarus. Medical labor expertise.
4. Medical errors and professional responsibility of prosthodontist.
5. Issues of medical ethics and deontology, asepsis, antisepsis in the prosthodontics clinic.

LITERATURE

Basic:

1. Prosthetic Dentistry / V.P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Complete dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления полных съемных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 32 с.
3. Fixed dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления несъемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 30 с.
4. Removable partial dentures. Algorithm of producing. («Клинико-лабораторные этапы изготовления съемных зубных протезов») / С. А. Наумович [и др.]. – 3-е изд. – Мн. : БГМУ, 2018. – 16 с.