LECTURE OUTLINES

VII semester, IV course

LECTURE 1 – 1 hour

Infection control in conservative dentistry

Significance of infection control. Modes and routes of transmission of infection. Protection of dental personnel, patients, and the environment. Methods of infection control. Specific aspects of infection control in Operative dentistry and endodontics.

LECTURE 2 – 1 hour

Ergonomics of the workplace

Organization of the workplace. Ergonomic requirements for the basic equipment and instrumentation. Occupational disorders and their prevention. Teamwork.

LECTURE 3 – 1 hour

Dental caries

Definition, etiopathogenesis, and pathomorphology. Prevalence in adults. Etiological factors: dental biofilm with cariogenic microorganisms, dietary carbohydrates, enamel resistance, saliva, the individual and the surrounding geographical, domestic, and occupational environment. Pathogenesis (theories, hypotheses, and concepts). Pathomorphological changes in the dental hard tissues and the dental pulp related to the development of dental caries.

LECTURE 4 – 1 hour

Main symptoms of dental caries

Classification. Methods of examination. Increased sensitivity, discoloration, loss of tooth structure, and impaired function. Classification of dental caries according to the stage of development, localization, and course of the disease. Methods for the examination of clinically developed dental caries.

LECTURE 5 – 1 hour

Dental caries – clinical presentation, diagnosis, and differential diagnosis

Clinical presentation of the different nosological entities. Specific aspects of diagnosis. Differential diagnosis of the different nosological entities.

LECTURE 6 – 1 hour

Methods for early diagnosis of dental caries

Classification of methods for early diagnosis – conventional, radiographic, optical, and others. Salivary analysis. Caries risk assessment. Motivation for proper oral hygiene, modification of the patient's dietary habits, and increasing enamel resistance.

LECTURE 7 – 1 hour

Non-operative treatment approaches to dental caries

Non-operative treatment of dental caries (motivation for proper oral hygiene, modification of the patient's dietary habits, increasing enamel resistance, salivary analysis). Ozone therapy, air abrasion, laser treatment, fissure sealing, chemomechanical caries removal. Minimally invasive preparation (enameloplasty). Resin infiltration.

LECTURE 8 – 1 hour

Pain control in operative dentistry

Pain perception and response – reflex arc, Melzack and Wall's gate control theory. Pain control by:

Central nervous system modulation (psychoprophylaxis, hypnosis, audioanalgesia, acupuncture, pharmacological management – premedication and general anesthesia). Local anesthesia (infiltration, nerve block, intraligamental, intraosseous). Blockade of pain impulses (atraumatic work, topical anesthesia, electroodontoanalgesia, TENS method).

LECTURE 9 – 1 hour

Dentin caries

Caries media, Caries profunda. Zones of caries progression in dentin. Biological principles of the treatment of the dentinal wound in deep caries – characteristics of the wound, types of dentin overlying the pulp, possibilities for clinical differentiation. Medicaments and materials for the treatment of deep caries – pharmacodynamics of the principal medicaments and materials, rationale for one-step and two-step treatment of deep caries.

LECTURE 10 – 1 hour

Root surface caries

Cementum – function. Risk factors for the development of root caries. Diagnosis, types, and stages of progression of root caries. Clinical presentation. Differential diagnosis. Treatment – specific features, problems and risks, materials and medicaments. Prophylaxis.

LECTURE 11 – 1 hour

Secondary caries

Definition, prevalence, localization, clinical features and diagnosis. Causes of development, specific aspects of treatment, prophylaxis.

LECTURE 12 – 1 hour

Clinical presentation, diagnosis and treatment of multiple caries

Medical approach to the treatment of dental caries. Clinical protocol for the treatment of multiple caries.

LECTURE 13 – 1 hour

Biomechanical considerations in restoration with dental amalgam and indirect metal restorations

Properties and disadvantages of amalgam restorations and indirect metal restorations – mechanical, physical, chemical, biological, and manipulative characteristics. Characteristics of cavity preparation according to the properties of the restorative material used**.**

LECTURE 14 – 1 hour

Biomechanical considerations in direct and indirect restorations with composite materials and glass ionomer cements

Properties and disadvantages of composite and glass ionomer cement restorations – mechanical, physical, chemical, biological, and manipulative characteristics. Characteristics

of cavity preparation according to the properties of the restorative material used. Polymerization shrinkage of composite materials and methods for its compensation. Sandwich technique for restorations with esthetic materials.

LECTURE 15 – 1 hour
Errors and complications in the diagnosis and treatment of dental caries
Undiagnosed and misdiagnosed dental caries. Errors during cavity preparation, medication, and restoration of dental caries. Complications associated with these errors.

PRACTICAL EXERCISE OUTLINES

PRACTICAL EXERCISE 1 – 4 hours
Introduction to the equipment in the clinical room. Safety instructions. Patient registration. Demonstration of the initial patient examination. Clinical practice.

PRACTICAL EXERCISE 2 – 4 hours
Infection control in Operative Dentistry. Demonstration of the basic personal protective equipment. Disinfection of the operative field. Instrument processing and sterilization protocol. Clinical practice.

PRACTICAL EXERCISE 3 – 4 hours
Ergonomics of the workplace.
Demonstration of the ergonomic working position for different groups of teeth. Role of the dental assistant during treatment. Clinical practice.

PRACTICAL EXERCISE 4 – 4 hours
Dental caries.
Discussion of the main etiological factors of dental caries. Demonstration of caries-promoting factors – poor oral hygiene (visualization), inadequate restoration of defects, systemic diseases, and social status. Clinical practice.

PRACTICAL EXERCISE 5 – 4 hours
Main symptoms of dental caries. Demonstration of the principal clinical signs of dental caries.
Clinical practice.

PRACTICAL EXERCISE 6 – 4 hours
Dental caries – clinical presentation, diagnosis, and differential diagnosis.
Demonstration of cases with different clinical manifestations of dental caries.
Clinical practice.

PRACTICAL EXERCISE 7 – 4 hours
Methods for early diagnosis of dental caries. Demonstration of the available methods for early diagnosis of dental caries.

PRACTICAL EXERCISE 8 – 4 hours
Pain control in Operative Dentistry.
Clinical demonstration of the main methods of pain control in the treatment of dental caries.
Clinical practice.

PRACTICAL EXERCISE 9 – 4 hours
Seminar: Dental caries – etiology, main symptoms, diagnosis, and clinical presentation (syllabus).
Clinical practice.

PRACTICAL EXERCISE 10 – 4 hours
Dentin caries – Caries media, Caries profunda. Demonstration of clinical cases.
Clinical practice.

PRACTICAL EXERCISE 11 – 4 hours
Root surface caries.
Demonstration of clinical cases.

PRACTICAL EXERCISE 12 – 4 hours
Secondary caries.
Demonstration of clinical cases.
Clinical practice.

PRACTICAL EXERCISE 13 – 4 hours
Clinical presentation, diagnosis, and treatment of multiple caries. Demonstration of clinical cases.
Clinical practice.

PRACTICAL EXERCISE 14 – 4 hours
Biomechanical considerations in restoration with different restorative materials.
Demonstration of clinical cases.
Clinical practice.

PRACTICAL EXERCISE 15 – 4 hours
Discussion of completed clinical cases.

LECTURE OUTLINES
VIII semester, IV course

LECTURE 16 – 1 hour
Anatomy and physiology of the dental pulp
Histology and function of the dental pulp. Basic physiological and pathological processes in the dental pulp.

LECTURE 17 – 1 hour
Etiology and pathogenesis of inflammatory diseases of the dental pulp

Mechanisms of inflammation, histopathology, characteristics of pulpal pain.

LECTURE 18 – 1 hour
Methods for the examination of diseases of the dental pulp
Interpretation of diagnostic tests. Classifications of diseases of the dental pulp.

LECTURE 19 – 1 hour
Non-inflammatory pathological processes of the dental pulp
Atrophy, dystrophy, calcific metaplasia, vascular disorders.

LECTURE 20 – 1 hour
Acute pulpitis
Classification and clinical presentation. Diagnosis, differential diagnosis, and treatment guidelines.

LECTURE 21 – 1 hour
Chronic pulpitis
Classification and clinical presentation. Diagnosis, differential diagnosis, treatment guidelines.

LECTURE 22 – 1 hour
Reversible and irreversible pulpitis
Critical analysis of the classifications, local and systemic factors associated with reversible pulp inflammation, and treatment guidelines. Methods for the treatment of the dental pulp. Classification of treatment methods. Indications and contraindications.

LECTURE 23 – 1 hour
Biological methods for the treatment of the inflamed dental pulp. Indirect pulp treatment
Indications, techniques, pharmacodynamics of the medicaments used, evaluation of treatment outcomes, and prognosis.

LECTURE 24 – 1 hour
Biological methods for the treatment of the inflamed dental pulp. Direct pulp capping. Vital amputation (pulpotomy under local anesthesia).
Definition, indications and contraindications, pulp capping biomaterials, treatment sequence, prognosis.

LECTURE 25 – 1 hour
Contemporary methods for regenerative treatment of diseases of the dental pulp. revitalization and revascularization
Definition, indications and contraindications, biomaterials, treatment sequence, prognosis.

LECTURE 26 – 1 hour
Vital extirpation (pulpectomy anesthesia)
Definition, indications and contraindications, anesthesia for individual teeth – primary and

supplementary techniques. Vital extirpation technique – classical and special treatment protocols, complications and approaches to their management.

LECTURE 27 – 1 hour
Mortal methods for the treatment of the dental pulp
Types, definition, and critical analysis.
Devitalization of the dental pulp – definition, goals, agents, indications and contraindications, treatment sequence, complications and approaches to their management.

LECTURE 28 – 1 hour
Anatomy and physiology of the periodontium. Classification of diseases of the periodontium
Main structural components, function, blood supply, and innervation. Pulp-periodontium relationship. Classification of apical periodontitis. Methods of examination.

LECTURE 29 – 1 hour
Acute serous periodontitis
Classification, clinical presentation, diagnosis, differential diagnosis, and treatment guidelines.

LECTURE 30 – 1 hour
Acute purulent periodontitis
Classification, clinical presentation, diagnosis, differential diagnosis, and treatment guidelines.

PRACTICAL EXERCISES OUTLINES
VIII semester, IV course

PRACTICAL EXERCISE 16 – 4 hours
Safety instructions and order in the clinical room.

PRACTICAL EXERCISE 17 – 4 hours
Anatomy and physiology of the dental pulp – demonstration of the anatomical features of the pulp cavity in different groups of teeth using models and images.
Clinical practice.
PRACTICAL EXERCISE 18 – 4 hours
Etiology and pathogenesis of inflammatory diseases of the dental pulp – demonstration of the principal etiological factors of pulpal inflammation using patients and clinical images.
Clinical practice.

PRACTICAL EXERCISE 19 – 4 hours
Methods for the examination of diseases of the dental pulp – demonstration of medical and dental history examination, application of clinical and paraclinical methods of examination. Analysis of the results.
Clinical practice.

PRACTICAL EXERCISE 20 – 4 hours
Non-inflammatory pathological processes of the dental pulp – atrophy, dystrophy, calcific metaplasia, and vascular disorders – demonstration of different non-inflammatory conditions of the dental pulp using clinical images. Treatment guidelines.
Clinical practice.

PRACTICAL EXERCISE 21 – 4 hours
Acute pulpitis.
Discussion of the clinical presentation and treatment planning.
Clinical practice.

PRACTICAL EXERCISE 22 – 4 hours
Chronic pulpitis.
Discussion of the clinical presentation and treatment planning.
Clinical practice.

PRACTICAL EXERCISE 23 – 4 hours
Reversible and irreversible pulpitis.
Discussion of the clinical presentation and treatment planning.
Clinical practice.

PRACTICAL EXERCISE 24 – 4 hours
Seminar: Etiological factors and clinical presentation of inflammatory diseases of the dental pulp (syllabus).
Clinical practice.

PRACTICAL EXERCISE 25 – 4 hours
Biological methods for the treatment of the inflamed dental pulp – demonstration of the indirect treatment method. Analysis of the medicaments used in the different treatment methods.
Clinical practice.

PRACTICAL EXERCISE 26 – 4 hours
Biological methods for the treatment of the inflamed dental pulp – demonstration of the direct treatment method. Analysis of the medicaments used in the different treatment methods.
Clinical practice.

PRACTICAL EXERCISE 27 – 4 hours
Vital extirpation (pulpectomy under local anesthesia) – definition, indications and contraindications, anesthesia for individual teeth – primary and supplementary techniques. Vital extirpation technique – conventional and special techniques, treatment sequence, complications and approaches to their management.
Clinical practice.

PRACTICAL EXERCISE 28 – 4 hours

Mortal methods for the treatment of the dental pulp.
Types, definition, and critical analysis. Devitalization of the dental pulp – definition, goals, agents, indications and contraindications, treatment sequence, complications, and approaches to their management.
Clinical practice.

PRACTICAL EXERCISE 29 – 4 hours
Anatomy and physiology of the periodontium – demonstration of the anatomy of different groups of teeth using clinical images.
Acute serous apical periodontitis – discussion of the etiological factors and their relationship to the treatment plan.
Clinical practice.

PRACTICAL EXERCISE 30 – 4 hours
Acute purulent periodontitis – discussion of the treatment plan according to the stage of the inflammatory process.
Semester completion.

LECTURE OUTLINES
IX semester, V course

LECTURE 31 – 1 hour

Necrobiosis, necrosis, gangrene of the dental pulp

Definition, etiology, pathogenesis, pathomorphology, clinical presentation and diagnosis, differential diagnosis, treatment guidelines.

LECTURE 32 – 1 hour

Chronic apical periodontitis – Periodontitis chronica fibrosa and Periodontitis chronica granulomatosa localisata

Etiology and pathogenesis, clinical presentation, differential diagnosis, treatment, prognosis.

LECTURE 33 – 1 hour

Periodontitis chronica granulomatosa progressiva (diffusa) sine (cum) fistula

Pathohistology, clinical presentation, differential diagnosis, treatment, prognosis.

LECTURE 34 – 1 hour

Treatment of chronic periodontitis

Apical level of root canal preparation and obturation, indications, contraindications, basic principles of treatment, single-stage/two-stage treatment, single-visit/multiple-visit treatment, oxidation-reduction concept, complications.

LECTURE 35 – 1 hour

Aspects of clinical endodontic microbiology

Endodontic triad. Interaction between macroorganisms and microorganisms, pathogenic and non-pathogenic microorganisms. Characteristics of the microflora in necrotic pulp. Isolation and identification of microorganisms from the root canal.
Use of antibiotics in endodontics.

LECTURE 36 – 1 hour

Combined endo-periodontal lesions (interradicular and lateral periodontitis)

Classification, clinical presentation, diagnosis. Treatment.

LECTURE 37 – 1 hour

Endodontic retreatment – part 1

Definition, goals, advantages and disadvantages, principal indications for retreatment.
Methods of endodontic retreatment – orthograde, retrograde, combined, endodontic-surgical.
Basic steps of endodontic retreatment.

LECTURE 38 – 1 hour

Endodontic retreatment – part 2

Classification of obstructions within the root canal system indicated for endodontic retreatment. Systems and techniques for the removal of root canal obstructions.
Complications.

LECTURE 39 – 1 hour

Planned endodontic surgery

Indications and contraindications. Contemporary methods of endodontic surgery. Intraoral incision. Indications and technique.

LECTURE 40 – 1 hour

Planned endodontic surgical procedures

Apical curettage, apicoectomy, root amputation, hemisection, bicuspidization, transcanal implants, stages of the procedure, postoperative care, possible complications, prognosis.

LECTURE 41 – 1 hour
Difficult differential diagnoses in endodontics with diseases of related fields
Differential diagnosis with sinusitis, rhinitis, neuritis, neuralgia, aerodontalgia, atypical facial pain, traumatic occlusion.

LECTURE 42 – 1 hour
Emergency endodontic treatment
Indications. Clinical management. Treatment of the different nosological entities.

LECTURE 43 – 1 hour
Pain control in endodontics
Pain as a general medical problem. Clinical management of endodontic cases with pain as the chief complaint.

LECTURE 44 – 1 hour
Diagnostic errors in pulpitis and apical periodontitis. Complications
Differential diagnosis with normal anatomical structures – foramen mentale, maxillary sinuses, follicular cysts.
Differential diagnosis with diseases of related fields – sinusitis, rhinitis, neuralgia, denticles.

LECTURE 45 – 1 hour
Errors and complications in the treatment of pulpitis and apical periodontitis
Errors during endodontic treatment that endanger the treated tooth.
Errors that may endanger the patient's life: aspiration and swallowing of an instrument, air emphysema.

PRACTICAL EXERCISE OUTLINES
IX semester, V course

PRACTICAL EXERCISE 31 – 6 hours
Necrobiosis, necrosis, and gangrene of the dental pulp – clinical presentation and diagnosis. Differential diagnosis.

PRACTICAL EXERCISE 32 – 6 hours
Chronic apical periodontitis – Periodontitis chronica fibrosa and Periodontitis chronica granulomatosa localisata.
Etiology and pathogenesis, clinical presentation, differential diagnosis, treatment, prognosis.

PRACTICAL EXERCISE 33 – 6 hours
Periodontitis chronica granulomatosa progressiva (diffusa) sine (cum) fistula – clinical presentation and diagnosis – anamnesis, clinical examination, vasoparesis sign, Crane's sign, Marmasse's sign, radiographic findings.
Differential diagnosis. Treatment guidelines. Prognosis.
Periodontitis exacerbata; Cysta radicularis – clinical presentation, differential diagnosis, treatment guidelines, prognosis.

PRACTICAL EXERCISE 34 – 6 hours
Chronic apical periodontitis.
Apical level of root canal preparation and obturation, indications, contraindications, basic principles of treatment, single-visit/multiple-visit treatment, and complications.

PRACTICAL EXERCISE 35 – 6 hours
Aspects of clinical endodontic microbiology – the endodontic triad.
Interaction between macroorganisms and microorganisms, pathogenic and non-pathogenic microorganisms, characteristics of the microflora in necrotic pulp.
Isolation and identification of microorganisms in the root canal. Use of antibiotics in endodontics.

PRACTICAL EXERCISE 36 – 6 hours
Combined endo-periodontal lesions.
Anatomical and functional relationships between the endodontium and the periodontium.
Classification of endo-periodontal lesions. Diagnosis. Symptoms associated with periodontal and pulpal involvement.
Clinical presentation. Treatment.

PRACTICAL EXERCISE 37 – 6 hours
Endodontic retreatment – systems and techniques for the removal of root canal obstructions. Materials, methods, and medicaments for the management of complications.
Clinical practice.

PRACTICAL EXERCISE 38 – 6 hours
Endodontic retreatment – indications for retreatment. Basic steps of endodontic retreatment.
Clinical practice.

PRACTICAL EXERCISE 39 – 6 hours
Planned endodontic surgery – indications and contraindications. Contemporary methods of endodontic surgery (laser, ultrasound). Materials, instruments, and techniques for retrograde root canal obturation.
Clinical practice.

Colloquium: Chronic apical periodontitis – clinical presentation and treatment. Endodontic microbiology. Endo-periodontal lesions. Endodontic retreatment.

PRACTICAL EXERCISE 40 – 6 hours
Planned endodontic surgical procedures – apical curettage, apicoectomy, root amputation, hemisection, bicuspidization, transcanal implants. Stages of the procedures. Postoperative care, possible complications, prognosis.

PRACTICAL EXERCISE 41 – 6 hours
Difficult differential diagnoses in endodontics with diseases of related fields – sinusitis, rhinitis, neuritis, neuralgia, aerodontalgia, atypical facial pain, traumatic occlusion.

PRACTICAL EXERCISE 42 – 6 hours
Emergency endodontic treatment – rationale and indications. Management of emergency patients.
Clinical practice.

PRACTICAL EXERCISE 43 – 6 hours
Pain control in endodontics – pain management as a general medical problem. Clinical management of endodontic cases with pain as the chief complaint – pulpitis, acute periodontitis, exacerbated l periodontitis, cracked tooth, crown fracture with pulp exposure.
Colloquium: Planned endodontic surgery. Difficult and rare differential diagnoses. Emergency endodontic treatment. Pain control.

PRACTICAL EXERCISE 44 – 6 hours
Diagnostic errors in pulpitis and apical periodontitis.
Mental foramen, maxillary sinuses, follicular cysts.
Sinusitis, rhinitis, neuralgia, denticles.

PRACTICAL EXERCISE 45 – 6 hours
Errors and complications in the treatment of pulpitis and periodontitis.
Errors during endodontic treatment that endanger the treated tooth – missed and untreated canal, unfilled canal, ledge formation, perforations, fractured instrument, overinstrumentation, overfilling, tooth discoloration. Prevention and management of procedural errors.
Errors that may endanger the patient's life – allergic shock, swallowing or aspiration of an endodontic instrument, subcutaneous emphysema. Prevention of complications.

LECTURE OUTLINES
X semester, V course

LECTURE 46 – 1 hour
Treatment planning in endodontics
Scope of endodontic treatment, factors influencing the number of treatment visits. Initial treatment. Definitive treatment. Selection of treatment procedures, procedures within the scope of general dental practice, factors complicating endodontic treatment.

LECTURE 47 – 1 hour
Restoration of teeth after endodontic treatment
Characteristics of endodontically treated teeth – substantial loss of dental hard tissues, reduced elasticity, reduced tooth stability, reduced mechanical strength. Selection of the restorative method according to the extent of coronal destruction. Radicular posts – types, placement technique, instrumentation, errors and complications.

LECTURE 48 – 1 hour
Restoration of vital teeth with extensive coronal destruction
Complex cavities with cusp protection. Dentinal (parapulpal) pins – indications, errors, and complications. Dentinal chambers, locks, and peripheral collars.
Bonded amalgam restorations. Onlay restorations – characteristics of cavity preparation, critical analysis, and prognosis. Veneers – indications, contraindications, preparation design, types, cementation technique.

LECTURE 49 – 1 hour
Vertical tooth fractures
Classification of vertical crown and root fractures. Fractures of endodontically treated teeth occurring during treatment and during function. Restorative procedures and materials. Complications.

LECTURE 50 – 1 hour
Non-carious lesions of the dental hard tissues
Chemical, thermal, and mechanical lesions – diagnosis, differential diagnosis, clinical presentation, treatment.

LECTURE 51 – 1 hour
Non-carious lesions of the dental hard tissues
Abrasion, attrition, erosion, wedge-shaped defects, abfraction. Epidemiology. Clinical presentation. Diagnosis. Differential diagnosis. Treatment approaches.

LECTURE 52 – 1 hour
Dentin hypersensitivity
Definition and etiology. Stages of development. Mechanism of action. Diagnosis. Treatment guidelines. Desensitizing agents. Prevention.

LECTURE 53 – 1 hour
Prophylaxis of dental caries
Main factors associated with the development of dental caries, levels of prevention. Caries risk assessment – rationale, patient groups, management guidelines for the different risk groups.

LECTURE 54 – 1 hour
Healing process after biological treatment of pulpitis

Indirect pulp treatment, direct pulp capping, and vital amputation (pulpotomy). Criteria for evaluation of treatment outcomes – clinical, electric pulp testing (EPT), and radiographic.

LECTURE 55 – 1 hour
Healing process after vital and mortal extirpation in pulpitis
Apical wound following vital and mortal extirpation – critical analysis, prognosis. Apical level of root canal treatment. Healing process after endodontic treatment performed short of, at, or beyond the apical foramen. Criteria for evaluation of treatment outcomes – early and late clinical outcomes, radiographic status of the treated teeth.

LECTURE 56 – 1 hour
Healing process after treatment of pulpal gangrene, acute and chronic periodontitis
Apical level of root canal treatment. Healing process after endodontic treatment performed short of, at, or beyond the apical foramen. Criteria for evaluation of treatment outcomes – early and late clinical outcomes, radiographic status of the treated teeth.

LECTURE 57 – 1 hour
Bleaching of discolored non-vital teeth
Causes of tooth discoloration. Bleaching methods – rationale, technique, complications.

LECTURE 58 – 1 hour
Bleaching of vital teeth
Causes of tooth discoloration, application techniques, contraindications, and complications. Criteria for evaluation and monitoring of treatment outcomes.

LECTURE 59 – 1 hour
Root resorption
Classification, clinical presentation, pathomorphological characteristics, treatment guidelines, prognosis.

LECTURE 60 – 1 hour
Clinical application of restorative materials in operative dentistry
Indications and contraindications. Relationship between the patient's caries risk and the selection of the restorative treatment plan.

PRACTICAL EXERCISE OUTLINES

X semester, V course

PRACTICAL EXERCISE 46 – 6 hours

Treatment planning in endodontics – scope of endodontic treatment, factors influencing the number of treatment visits, initial treatment, definitive treatment, selection of treatment procedures, procedures within the scope of general dental practice, factors complicating endodontic treatment.

PRACTICAL EXERCISE 47 – 6 hours

Restoration of teeth after endodontic treatment. Characteristics of endodontically treated teeth – substantial loss of dental hard tissues, reduced elasticity, reduced tooth stability,

decreased mechanical strength. Selection of the restorative method according to the extent of coronal destruction. Radicular posts – types, placement technique, instrumentation, errors and complications.

PRACTICAL EXERCISE 48 – 6 hours

Restoration of vital teeth with extensive coronal destruction. Complex cavities with cusp protection. Dentinal (parapulpal) pins – indications, errors, and complications. Dentinal chambers, locks, and peripheral collars. Bonded amalgam restorations. Onlay restorations – characteristics of cavity preparation, critical analysis, and prognosis. Veneers – indications, contraindications, preparation design, types, cementation techniques.

PRACTICAL EXERCISE 49 – 6 hours

Vertical tooth fractures. Fractures of endodontically treated teeth – causes. Restorative procedures and materials. Clinical examination. Treatment procedures. Complications – internal and external root resorption.

PRACTICAL EXERCISE 50 – 6 hours

Non-carious lesions of the dental hard tissues – chemical, thermal, and mechanical lesions – diagnosis, differential diagnosis, clinical presentation, and treatment.

PRACTICAL EXERCISE 51 – 6 hours

Non-carious lesions of the dental hard tissues – abrasion, attrition, erosion, wedge-shaped defects, and abfraction. Epidemiology. Clinical presentation. Diagnosis. Differential diagnosis. Treatment approaches.

PRACTICAL EXERCISE 52 – 6 hours

Colloquium: Non-carious lesions of the dental hard tissues. Vertical crown and root fractures. Restoration of vital teeth with extensive coronal destruction. Restoration of teeth after endodontic treatment.

Practical work.

PRACTICAL EXERCISE 53 – 6 hours

Dentin hypersensitivity – definition, etiology, stages of development, mechanism of action, diagnosis, treatment guidelines, desensitizing agents. Prevention.

PRACTICAL EXERCISE 54 – 6 hours

Prophylaxis of dental caries. Main factors associated with the development of dental caries, levels of prevention. Primary, secondary and tertiary prevention – objectives, main principles, methods, and means of achieving the objectives. Caries risk assessment – rationale, patient proups, and management guidelines for the different risk groups.

PRACTICAL EXERCISE 55 – 6 hours

Healing process after biological treatment of pulpitis – indirect pulp treatment, direct pulp capping, and vital pulpotomy. Criteria for evaluation of treatment outcomes – clinical, electric pulp testing (EPT), radiographic.

PRACTICAL EXERCISE 56 – 6 hours

Healing processes following vital and mortal extirpation in pulpitis. Apical wound after vital and mortal extirpation – critical analysis and prognosis.

PRACTICAL EXERCISE 57 – 6 hours

Healing process following treatment of pulpal gangrene, acute and chronic periodontitis. Criteria for evaluation of treatment outcomes – early and late clinical outcomes, radiographic status of the treated teeth.

PRACTICAL EXERCISE 58 – 6 hours

Seminar: Dentin hypersensitivity. Prophylaxis of dental caries. Healing process after biological treatment, extirpation in pulpitis and treatment of apical periodontitis.

PRACTICAL EXERCISE 59 – 6 hours

Bleaching of discolored non-vital teeth – causes of tooth discoloration. Bleaching methods – rationale, technique, and complications.

PRACTICAL EXERCISE 60 – 6 hours

Bleaching of vital teeth. Causes of tooth discoloration, application techniques, contraindications and complications. Criteria for evaluation and monitoring of treatment outcomes.

SEMINARS

Semester VII / Practical Exercise 9

Seminar: Dental caries – etiology, main symptoms, diagnosis, and clinical presentation (syllabus).

Clinical practice.

Semester VIII / Practical Exercise 24

Seminar: Etiological factors and clinical presentation of inflammatory diseases of the dental pulp (syllabus). Clinical practice.

Semester IX / Practical Exercise 42

Emergency endodontic treatment – rationale and indications. Management of emergency patients.

Clinical practice.

Semester X / Practical Exercise 51

Non-carious lesions of the dental hard tissues – abrasion, attrition, erosion, wedge-shaped defects, and abfraction. Epidemiology. Clinical presentation. Diagnosis. Differential diagnosis. Treatment approaches.

Semester X / Practical Exercise 56

Healing processes after vital and mortal extirpation in pulpitis. Apical wound after vital and mortal extirpation – critical analysis, prognosis.