

LECTURE PROGRAM IN PRECLINICAL PERIODONTOLOGY

IV YEAR – 7 (WINTER) SEMESTER

DATA	TOPIC
1	<p>Introduction in Periodontology Normal clinical and microscopic structure and functions of periodontal tissues: Gingiva - epithelium and connective tissue. Periodontal ligament. Root cement. Alveolar bone. Supracrestal attached tissues. Blood supply, nerve supply and lymphatic system of periodontal tissues.</p>
2	<p>Instruments and instrumentation in Periodontology. Classification of periodontal instruments: Diagnostic instruments in periodontology: Periodontal probes - manual and automatic. Probing - principles and techniques. Parameters measured during probing. Probing in furcation areas - instruments and principles. Morphology of hard dental tissues.</p>
3	<p>Instruments for treatment of periodontal diseases: Scaling (supragingival and subgingival calculus removal) - instruments and principles, technique. Root planing - instruments and principles, technique. Machine instrumentation in periodontology: Ultrasonic instrumentation - devices and principles. Rotary instruments in periodontology and principles. Reciprocal instruments in periodontal treatment. Lasers in periodontal instrumentation. Polishing - instruments, appliances, polishing pastes.</p>
4	<p>Instruments, instrumentation and materials for periodontal surgery: Instruments for incisions and excisions. Flap types in periodontal surgery and dissection instruments. Instruments (manual and machine) for preparation of root surfaces in periodontal surgery. Instruments for periodontal bone surgery (manual and machine). Materials for regenerative periodontal therapy (for filling of bone defects, membranes, growth factors). Sutures in periodontal surgery - materials, principles, basic techniques.</p>

5	<p>Classification of periodontal diseases and conditions - 2018 y. Concept. Definition of disease categories. Terminology. Basic concepts.</p>
6	<p>Etiology of periodontal diseases. Modern concept of the etiology of periodontal diseases. Dental biofilm - definition. Dental biofilm formation. Structure of the supra- and subgingival bacterial biofilm. Maturation of the dental biofilm - characteristic of the changes in the bacterial composition, microbial sequence. Interbacterial relationships in structured dental biofilm. Clinical characteristics of bacterial plaque. Calculus - genesis, mineralization, localisation, structure and composition, mechanisms of attachment, etiological significance.</p>
7	<p>Microbiology of periodontal diseases: Suspected periodontal pathogens, evidence of pathogenicity. Mechanisms of pathogenicity of periodontopathogenic microorganisms - adhesion, multiplication, coaggregation, metabolic cooperation, avoidance of the body's defense mechanisms, virulence, competitiveness, invasion, transmissibility, stimulation of destructive reactions of the body, bacterial complexes.</p>
8	<p>Pathogenesis of periodontal diseases: Modern paradigm. Protective processes - vascular and cellular aspects of the inflammatory response. Factors of periodontal tissue destruction - proinflammatory cytokines, matrix metalloproteinases, prostaglandins. Specific defense mechanisms - cellular and antibody response. Interaction between bacteria, body factors and environmental factors. Factors of periodontal disease progression</p>

PRACTICAL EXERCISES IN PERIODONTOLOGY

4 YEAR - 7 semester

(One exercise of 2 training hours every two weeks = 15 hours)

1st exercise

Topic:

Introduction of the Periodontology discipline. Local plaque retentive factors. Instrumentation in periodontology. Design of periodontal instruments. Fulcrums. Finger rests during periodontal instrumentation. Clock positions of the periodontist during periodontal instrumentation.

PRACTICAL TRAINING:

1. Practicing with instruments for diagnosis and treatment in periodontology. Practicing on the finger rests during periodontal instrumentation in the frontal and posterior area.

2nd exercise

Topic:

Instruments and devices for diagnosis in periodontology - dental and magnifying mirror for the patient, types of dental and periodontal probes. Explorers. Instrumentation technique.

PRACTICAL TRAINING:

1. Practicing with instruments and indications for working with them.
2. Probing: measuring the depth of the gingival and periodontal pocket, loss of clinical attachment, width of attached gingiva and gingival recession.

3rd exercise

Topic:

Principles of supragingival instrumentation in periodontology. Manual and machine supragingival instrumentation. Working position and instrumentation technique.

PRACTICAL TRAINING:

1. Practicing with instruments and indications for working with them (hand instruments, tips for ultrasonic devices).
2. Demonstration of an ultrasonic device for the removal of dental plaque and calculus.

4th exercise

Topic:

Working positions and technique for supragingival instrumentation. Polishing instruments and polishing pastes, polishing with air abrasive systems.

PRACTICAL TRAINING:

1. Practicing the positioning of instruments on models with artificial calculus on all teeth of the upper and lower jaw. Practice on extracted teeth.

5th exercise**Topic:**

Principles of subgingival instrumentation. Universal curettes - design, instrumentation and preparation of the root surface (root planing). Subgingival ultrasonic instrumentation.

PRACTICAL TRAINING:

1. Subgingival practice on a model with artificial calculus and on extracted teeth with universal curettes.
2. Demonstration of working with an ultrasonic device subgingivally.

6th exercise**Topic:**

Principles of subgingival instrumentation. Area-specific curettes - design, instrumentation.

PRACTICAL TRAINING:

1. Subgingival instrumentation on a model and on extracted teeth with site-specific curettes.

7th exercise**Topic:**

Instruments and devices for periodontal surgery. Materials for regenerative periodontal therapy.

PRACTICAL TRAINING:

1. Practice with instruments. Positioning of surgical instruments on a typodont.

8th exercise**Topic:**

Main types of incisions and flaps in periodontal surgery. Types of sutures and suturing materials in periodontal flaps and in mucogingival surgery.

PRACTICAL TRAINING:

1. Types of flaps and incisions on a typodont.
2. Interrupted and continuous sutures on a typodont.