

Preclinical periodontology

The second course year

Introduction to the classes

Classes (5 x 3 hours classes in simulated conditions and 2 x 3 hours clinical training)

- 1 Anatomy and histology of the periodontium. Construction of manual and powered toothbrushes, methods of toothbrushing, manual vs. powered toothbrushes, aids and interdental cleaning methods, toothpastes, antiseptics used in supragingival area, principles and importance of instruction and motivation in mechanical plaque control, TIPPS (talk, instruct, practise, plan and support).
- 2 Hand instruments in periodontal treatment- scalers, area-specific curettes, universal curettes, modifications in curettes, instruments for implants, ergonomics in supra- and subgingival instrumentations, position of the operator and patient, proper instrument grasp, instrument stabilization with finger, strokes production (insertion, adaptation, activation). PMPR (professional mechanical plaque removal) procedure. Sharpening instruments used in scaling.
- 3 Design and selection of original and modified Gracey and universal curettes, principles of clinical work with curettes for subgingival scaling and root planning procedure (SRP).
- 4 Concept of the root surface debridement- RSD. Power-driven instruments- types, principles of operation and technique of clinical work, types of working tips for RSD, procedural variables in RSD. Advantages and disadvantages of manual curettes vs. sonic and ultrasonic instruments. Supra- and subgingival air polishing, techniques, types of powders.
- 5 Basic of the periodontal examination. Periodonal probes. Oral hygiene evaluation, gingival inflammation examination, evaluation of the amount of tissue lost. Periodontal chart. Risks related to periodontal procedures- bioaerosol, post-exposure prophylaxis, cross contaminations.
- 6 Clinical periodontal examination- assessment of oral hygiene status and gingivitis, assessment of probing pocket depth, probing attachment level, gingival recessions and furcation involvement, assessment of tooth mobility and muco-gingival complex, periodontal chart in clinical practice.
- 7 Dental biofilms and dental calculus- formation and clinical implications. Test passing classes and seminars.

Seminars

1. Anatomy, histology and physiology of periodontal tissues. Anatomy of peri-implant tissues.
2. Dental biofilms- mechanism of formation and significance in periodontal and systemic diseases. Dental calculus- formation and significance in periodontal diseases.
3. Periodontal prevention. Mechanical and chemical dental biofilm control. Active agents for chemical biofilm control, delivery formats.
4. Principles of basic periodontal instrumentation in supra and subgingival area- PMPR, SRP, RSD, air polishing and periopolishing.
5. Clinical periodontal examination. Periodontal indices.

Practical classes

Classes in simulated conditions

1. Anatomy of periodontal and peri-implant tissues- drawings. Oral hygiene instruction in phantoms- methods of toothbrushing and interdental cleaning, plaque test. Cleansing and polishing of acrylic teeth in phantoms (2 quadrants).
2. Construction of periodontal hand instruments. Removal of artificial supragingival calculus with sickles in the anterior and lateral in the anterior and lateral part of the lower and upper jaw in phantoms (2 quadrants). Sharpening the curettes with stones. PMPR procedure.
3. Types and construction of area-specific and universal curettes. Principles of working with Gracey and Langer curettes. Manual SRP procedure in four quadrants of the lower and upper jaw in phantoms.
4. Supragingival ultrasonic scaling in one quadrant in the phantom, ultrasonic RSD in two quadrants in the phantom, air polishing- nozzle and powder selection, air-polishing supragingival deposits in one quadrant in phantoms.
5. Periodontal probs. Measurements on phantoms - PD, CAL, REC, F (practical credit). Periodontal chart- overview of periodontal chart using in manual and automated probing.

Clinical classes

6. Clinical periodontal examination - assessment of oral hygiene and gingival inflammation, PD, CAL, REC, F, examination of mobility of teeth and muco-gingival complex, practical filling of periodontal chart in student colleagues.
7. Removal of supragingival deposits - manual, power-driven and supragingival air-polishing in student colleagues.

Recommended literature

1. A. Drożdżik: Basic periodontal procedures. Czelej, Lublin, 2025.
2. Gehring JS., Sroda R., Saccuzzo D.: Fundamentals of periodontal instrumentation and advanced root instrumentation. 8th edition, Wolters Kluwert, Philadelphia, 2017.
3. George MD., Donley TG., Preshaw PM.: Ultrasonic periodontal debridement: theory and technique. First ed., John Wiley & Sons, New York, 2014.

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