

Periodontal Diseases

The fourth course year

Introduction to clinical trainings

1. Anatomy of marginal periodontal tissues. The mucosa at implants The role and function of the periodontal tissues in stomatognathic system. Regulation of tissue turnover in the periodontium. Periodontal prevention (mechanical and chemical supragingival plaque control) with particular emphasis on individualisation methods of dental biofilm control (replay of the II and III year).
2. Clinical periodontal examination. Clinical and epidemiological indicators. Evaluation of the oral hygiene status, the intensity and extent of gingival inflammation, probing pocket depth and probing attachment level, furcation involvement, examinations of mucogingival complex, assessment of tooth mobility. Protocol of the periodontal examination. Assessment of multifactorial periodontal risk (PRA). Periodontal chart. (replay of the III year).
3. Hands, ultrasonic and sonic instruments used for non-surgical periodontal treatment, principles of ergonomic work with scalers and curettes. Types of ultrasonic scalers, working tips for subgingival scaling/root planning, advantages and disadvantages of ultrasonic scalers vs. hand curettes. Supragingival and subgingival air polishing, types of powders (replay of the III year).
4. Etiologic determinants of periodontal disease. Dental biofilms and dental calculus. The role of host factors in periodontal disease. Mechanisms of destruction of periodontal tissues. Microbiological hypotheses of periodontitis. Genetic susceptibility to periodontal diseases. Risk factors for periodontitis. Etiology and risk factors peri-implant pathology.
5. Contemporary classification of periodontal and peri-implant diseases. Definitions of periodontal health, gingival diseases and periodontitis. Clinical differentiation of gingivitis. Staging and grading of periodontitis. Acute periodontal lesions. The influence of general diseases on the periodontal attachment apparatus. Clinical features and diagnosis of peri-implant pathology.
6. Radiological diagnosis of periodontitis and peri-implantitis with CBCT images. Microbiological, immunological and genetic tests in diagnosis of periodontitis.

Examination of gingival fluid, saliva, gingival tissues and blood serum- what we are looking for in the diagnosis of periodontitis?

7. Methodology for assessing the relationship between the risk factor and disease. Types of studies in periodontal medicine. The relationship between periodontal inflammation and cardiovascular disease, diabetes mellitus, adverse pregnancy outcomes and other general diseases. Periodontology based on evidence.
8. The use of antiseptics in the control of dental biofilm. Active agents for chemical biofilm control. Clinical indications for chemical plaque control Treatment of gingivitis.
9. Supragingival treatment of periodontitis- hygienic phase. The methodology of classical non-surgical treatment of periodontitis- definitions and goals of subgingival scaling, root-planning (SRP). Clinical, histopathologic and microbiologic outcomes following SRP. Possibilities and limitations of non-surgical periodontal treatment.
10. Alternative protocols of non-surgical periodontal treatment: full mouth disinfection, local administration of antimicrobial agents, modulation of host response, subgingival air polishing, Vector system. Systemic antibiotics in therapy of periodontitis- indications and contraindications, principles of antibiotics use in periodontitis, specific characteristics of the periodontal infections, timing of systemic antibiotic corrective phase of periodontitis treatment.
11. Photodynamic therapy in the treatment of periodontitis. Er:YAG, diode and Nd:YAG lasers in non-surgical therapy of periodontitis. Laser assisted new attachment procedure- LANAP. Ability to critically evaluate novelties in periodontal treatment. Contemporary recommendations in treatment of stage I and II periodontitis.
12. Conservative treatment of periimplantitis- contemporary recommendations.
13. Management of acute periodontal lesions: treatment of necrotizing periodontal disease, herpetic gingivostomatitis, abscesses in the periodontium and endo-perio lesions. Maintenance phase in the complex treatment of periodontitis.
14. Final test.

Online lectures (27.04, 11.05, 25.05)

1. Etiology of periodontal diseases. Dental biofilms and periodontal infections. Immunoregulation in periodontitis. Genetic susceptibility to periodontitis.
2. Assessment of the association between periodontitis and incidence and severity of selected systemic diseases.

3. Peri-implant pathology- epidemiology, risk factors, efficacy of non-surgical therapy.

Seminars (4.05, 18.05, 1.06, 8.06, 15.06)

1. Periodontal examination in epidemiologic studies. Prevalence of periodontal diseases in adults and adolescents. Risk factors for periodontitis.
2. Contemporary classification of periodontal and peri-implant diseases.
3. Diagnostic tests. Progress in additional periodontal examinations.
4. Treatment planning protocols of generally healthy patients with periodontal diseases. Indications and protocols of non-surgical periodontal therapy. Comparison of the effectiveness of scaling and root planning and other non-surgical treatment protocols.
5. Treatment planning protocols of periodontal patients with selected systemic diseases. Limitations of non-surgical pocket/root instrumentations.

Practical exercises

1. Periodontal clinical examination with oral hygiene instruction-10.
2. Estimation of the individual periodontal risk in multivariate model-2
3. Removal of supragingival dental calculus and dental polishing -10
4. Supragingival air-polishing- 1
5. Local anesthesia-6
6. Subgingival scaling with root planning -4
7. Alternative protocols of non-surgical periodontal treatment (full mouth disinfection, Vector device, subgingival air polishing, local drug delivery, photodynamic therapy, diode laser)- 2
8. Correction of incorrect dental fillings- 2
9. Elimination of excessive sensitivity of dentin-3

Basic literature

H-P Mueller: Periodontology. The Essentials. 2 edition. Georg Thieme Verlag 2016.

AAP and EFP materials regarding new classification for periodontal and peri-implant diseases and treatment of stage I,II periodontitis from 2017 and 2020 years.

Additional literature

J. Lindhe, NP. Lang: Clinical Periodontology and Implant Dentistry.6 ed. Wiley Blackwell 2015

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