



**SYLLABUS ON OPERATIVE DENTISTRY AND ENDODONTICS
PRECLINICAL COURSE
III COURSE**

OPERATIVE DENTISTRY

1. Dental caries – definition. The subject of cariology and operative dentistry.
2. Basic principles of operative dentistry. Cavity – definition, elements.
3. Classification of cavities. Stages of cavity preparation.
4. Masticatory forces – direction and neutralization.
5. Anatomy and histology of the hard dental tissues in respect of treatment in operative dentistry – the enamel, the dentin, the cement.
6. Anatomy of teeth – vestibular and lingual contours, proximal contacts, embrasures, occlusal surfaces.
7. Instruments for cavity preparation. Tooth numbering systems.
8. Class I cavity preparation for amalgam – instruments, stages of preparation. Conservative preparation of small carious lesions. Preparation of extensive carious lesions.
9. Class II cavity preparation for amalgam – stages of preparation. Different types of cavities and retentions in small and large carious lesions, secondary retentive features – pins and slots (locks, caves).
10. Class II cavity preparation for indirect restorations – indications, stages, retentions.
11. Class I and Class II cavity preparation for composite materials – indications, critical analysis stages of preparation, retentions.
12. Class III cavity preparation for composite materials – indications, specifics of cavity preparation.
13. Class IV cavity preparation for composite materials – indications, stages of cavity preparation.
14. Class V cavity preparation for amalgam and indirect restorations – indications, stages of preparation, retentions.
15. Class V cavity preparation for composite materials – indications, stages of preparation, comparative evaluation of class V cavities for composite materials, amalgam and indirect restorations.
16. Characteristics of the cavity as a dentin wound; status of the dental pulp, smear layer, medicatio cavi dentis – medicaments and properties (pharmacodynamics).
17. Restorative materials – types, indications for application; medico-biological and mechanical requirements.
18. Bases – classification, types, purpose and functions, properties, biological and mechanical requirements, instruments, working technique.
19. Liners – classification, types, purpose and functions, properties, instruments, working technique.

20. Dental amalgam – definition, types of amalgam, physico-mechanical and medico-biological properties of amalgam restorations.
21. Techniques for the fabrication of amalgam restorations, instruments and matrix systems.
22. Glass ionomer cements – classification, types, composition, properties, indications, working techniques.
23. Composite materials – classifications, types, composition, properties, indications.
24. Adhesive systems – definition, classification, types, properties and indications. Characteristics of the micromechanical bond to enamel and dentin.
25. Fabrication of class I and class II composite restorations – stages, instruments, matrix systems. Occlusal contacts.
26. Fabrication of class III composite restorations – stages, instruments, matrix systems.
27. Fabrication of class IV composite restorations – stages, instruments, matrix systems.
28. Fabrication of class V composite restorations – stages, instruments, specifics, matrix systems.
29. Fabrication of cast-metal indirect restorations – types, indications, stages.
30. Fabrication of aesthetic indirect restorations – types, indications, stages.

ENDODONTICS

31. Anatomy of the pulp cavity – the pulp chamber in different tooth groups.
32. Anatomy of the pulp cavity – root canals and their number, configuration, shape in different tooth groups.
33. The apical terminus of the root canal – characteristics and specifics.
34. Isolation of the operative field in endodontics – goals and purpose. Basic instruments and materials for isolation – types, characteristics, working techniques. Isolation of teeth with destroyed crowns – methods for approaching the problem.
35. Endodontic access – goals. The endodontic cavity shape in different tooth groups.
36. Endodontic access – opening the pulp cavity in the different teeth groups; stages, instruments.
37. Contents of the pulp chamber and root canals. Removal of the contents, instruments, techniques. Opening of root canal orifices in different tooth groups.
38. Types of endodontic instruments for scouting, cleaning and shaping of the root canals – classification, standardization of the instruments.
39. Hand endodontic instruments – types, classification, characteristics, indications, working techniques.
40. Machine-driven endodontic instruments – types, classification, characteristics, indications, working techniques. Properties and limitations of Ni-Ti instruments. Basic rules of working technique by machine-driven Ni-Ti instruments.
41. Establishing of the endodontic working length – definition, reference points, methods, critical analysis.
42. Corono-apical techniques for shaping of root canals by manual endodontic instruments – types, description, sequence of working steps.
43. Apico-coronal techniques for shaping of root canals by manual endodontic instruments – types, description, sequence of working steps.

44. Machine-driven root canal preparation by rotary endodontic files - PROTAPER UNIVERSAL, PROTAPER NEXT, PROTAPER GOLD, description, sequence of working steps.
45. Machine-driven root canal preparation by reciprocating endodontic files - WAVE ONE, WAVE ONE GOLD, description, sequence of working steps.
46. Medicatio canalis radialis dentis – goals, classification, types, pharmacodynamics (properties), working techniques. Methods for activation of irrigants.
47. Characteristics of the prepared root canal – mechanical and biological objectives.
48. Obturation of the root canal system – prerequisites for filling of root canals, goals. Root canal filling materials – requirements, types, classification.
49. Root canal filling materials – soft non-setting and setting pastes – properties and indications.
50. Hard root canal filling materials – types, indications. Techniques for root canal obturation with pastes. Cold techniques for root canals obturation by gutta-percha – single-cone technique, lateral condensation.
51. Warm condensation techniques for root canals obturation by gutta-percha. Techniques for filling by obturators – THERMAFILL system.
52. Restoration of endodontically treated teeth – specifics, indications and selection of restorative treatment method, post systems, critical analysis.
53. Errors and complications in the preparation, medication and obturation of the root canal system.

Изготвил:

Хабилитираните лица от Катедрата ОЗЕ

Съгласувал:

(проф. д-р Н. Манчорова, дмн,
Ръководител Катедра ОЗЕ)

Утвърдена на Катедрен съвет № 6/12.05.2022