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SYLLABUS
CONSERVATIVE DENTISTRY CLINICAL COURSE,
V COURSE, X SEMESTER

OPERATIVE DENTISTRY

1. Infection control in conservative dentistry – rationale, routes of infection transmission, essential elements of infection control. Environmental control.
2. Infection control in conservative dentistry – standard precautions for dental personnel and patients; protective measures and mechanisms of action. Personal protective equipment.
3. Infection control in conservative dentistry – methods, materials, and stages involved in the preparation, use, and storage of instruments.
4. Ergonomics in the dental workplace – workplace organization. Ergonomic requirements for dental equipment and instruments.
5. Occupational disorders in dental practice and measures for their prevention.
6. Dental caries – nature of the disease process. Main etiological factors: hard dental tissues, microorganisms, dietary habits, and their significance. Role of saliva and the dental biofilm.
7. Dental caries – nature of the disease process. Pathogenetic mechanisms. Evolution of concepts regarding the pathogenesis of dental caries and current concepts.
8. Dental caries – classifications. Histopathological changes in the hard dental tissues.
9. Diagnosis of dental caries – diagnostic methods. Conventional and contemporary diagnostic techniques. Clinical significance.
10. Clinical presentation of dental caries. Differential diagnosis among the different clinical entities.
11. Non-operative and minimally invasive management of dental caries. Indications, treatment strategies, and methods.
12. Pain control during the treatment of hard dental tissues. Definition and physiology of pain, pain pathways. Theoretical concepts of dental pain.
13. Pain control during the treatment of hard dental tissues. Levels, methods, and means of pain management.
14. Dentin caries – extent and zones of dentin involvement. Protective responses of dentin and the dental pulp. Treatment methods according to the degree of dentin involvement.
15. Smear layer – definition and clinical significance. Pharmacodynamics of smear layer removal agents. Pulp-protective materials.
16. Root surface caries. Structure of cementum. Risk factors for root caries. Diagnostic methods. Differential diagnosis.
17. Root surface caries. Clinical features. Non-operative treatment (preventive programmes).
18. Root surface caries. Clinical features. Operative treatment – restorative materials (indications), cavity designs, and placement techniques.
19. Secondary caries – definition, etiology, diagnosis. Treatment methods according to indications.
20. Multiple caries – definition, etiological factors. Management of multiple caries.
21. Biomechanical considerations in restorations with dental amalgam and cast metal inlays. Advantages and disadvantages of amalgam restorations and indirect metal restorations – mechanical, physical, chemical, biological, and manipulative properties. Features of cavity preparation according to material characteristics.
22. Biomechanical considerations in restorations with composite materials and glass-ionomer cements. Advantages and disadvantages of composite and glass-ionomer restorations – mechanical, physical, chemical, biological, and manipulative properties. Features of cavity preparation according to material characteristics. Polymerization shrinkage of composite materials and methods to minimize it. Sandwich technique using aesthetic restorative materials.
23. Errors and complications in the diagnosis and treatment of dental caries. Prevention.
24. Restoration of vital teeth with extensive coronal destruction.

25. Non-carious lesions of the dental crown – chemical, thermal, and mechanical lesions. Diagnosis, differential diagnosis, clinical presentation, and treatment.
26. Non-carious lesions of the hard dental tissues – abrasion, attrition, erosion, wedge-shaped defects (abfraction). Epidemiology, clinical presentation, diagnosis, differential diagnosis, and treatment approaches.
27. Dentin hypersensitivity – definition, etiology, stages of development, mechanism of action, diagnosis, treatment strategies, desensitizing agents, and prevention.
28. Prophylaxis of dental caries – major factors associated with caries development, levels of prevention. Primary, secondary, and tertiary prophylaxis: objectives, principles, methods, and means.
29. Prophylaxis of dental caries – caries risk assessment: rationale, patient risk grouping, and management strategies for different risk groups.
30. Bleaching of vital teeth. Causes of tooth discoloration, bleaching techniques, contraindications, complications. Criteria and control of treatment outcomes.
31. Clinical application of restorative materials in operative dentistry – basic requirements. Factors influencing the selection of restorative materials.

ENDODONTICS

32. Dental pulp – anatomy, structural organization, blood supply, innervation, age-related changes, and clinical significance.
33. Periodontium – anatomy, structural organization, blood supply, innervation, and clinical significance.
34. Diseases of the dental pulp – main etiological factors. Pathogenetic mechanisms involved in the development of pulpal diseases.
35. Histopathological changes in the dental pulp associated with inflammatory and non-inflammatory diseases.
36. Diagnostic methods for diseases of the dental pulp – interpretation of diagnostic tests.
37. Clinical classification of diseases of the dental pulp. Clinical presentation.
38. Non-inflammatory pathological conditions of the dental pulp – clinical presentation, diagnosis, differential diagnosis, treatment, and prognosis.
39. Acute pulpitis – types, histopathology, clinical presentation, diagnosis, differential diagnosis, and treatment principles.
40. Chronic pulpitis – types, histopathology, clinical presentation, diagnosis, differential diagnosis, and treatment principles.
41. Reversible and irreversible pulpitis – clinical and diagnostic differences. Treatment methods. Prognosis.
42. Treatment of inflammatory diseases of the dental pulp. Main clinical entities – characteristics and treatment principles.
43. Biological treatment of reversible inflammatory diseases of the dental pulp – indirect pulp treatment. Indications, rationale, methods, and clinical protocol.
44. Biological treatment of reversible inflammatory diseases of the dental pulp – direct pulp capping. Success criteria, indications, methods, clinical protocol, and pharmacodynamics of the materials used.
45. Treatment of inflammatory diseases of the dental pulp – pulpotomy. Definition, objectives, indications, contraindications, clinical protocol, and contemporary regenerative treatment approaches.
46. Treatment of inflammatory diseases of the dental pulp – pulpectomy. Definition, indications, contraindications. Vital pulpectomy (extirpation) – clinical protocol and evaluation of the method.
47. Treatment of inflammatory diseases of the dental pulp – pulpectomy. Definition, indications, contraindications. Non-vital (mortal) pulpectomy (extirpation) – clinical protocol and evaluation of the method.
48. Periodontitis – etiology, portals of infection, pathogenic microorganisms, host response of the periodontium, molecular inflammatory mediators, and classification.
49. Acute periodontitis – etiology, pathogenetic mechanisms. Possible outcomes of acute inflammation. Prognosis.
50. Periodontitis acuta serosa – subjective symptoms, objective findings, differential diagnosis. Treatment– primary objectives and methods for achieving them. Adjunctive therapeutic procedures – rationale. Prognosis.

51. Periodontitis acuta purulenta – subjective symptoms, objective findings, phases of disease progression – clinical presentation, differential diagnosis. Treatment – primary objectives and methods for achieving them. Medicaments – pharmacodynamics. Adjunctive therapeutic procedures – rationale. Prognosis.
52. Necrobiosis, necrosis, and gangrene of the dental pulp – definition, etiology, pathogenesis, pathomorphology. Clinical presentation and diagnosis. Differential diagnosis. Treatment principles.
53. Chronic apical periodontitis – etiology and pathogenesis. Periodontitis chronica fibrosa – etiology, clinical presentation, treatment, differential diagnosis, and prognosis. Osteosclerosis idiopathica. Osteitis. Hypercementosis - differential diagnosis
54. Periodontitis chronica granulomatosa localisata – etiology, pathogenesis, histopathology, clinical presentation, diagnosis, differential diagnosis, treatment principles, and prognosis.
55. Cysta radicularis – etiology, histopathology, clinical presentation, differential diagnosis, treatment principles, and prognosis. Periodontitis exacerbata.
56. Periodontitis chronica granulomatosa progressiva (diffusa) sine (cum) fistula – etiology, histopathology, clinical presentation, diagnosis. Differential diagnosis. Treatment principles. Prognosis.
57. Aspects of clinical endodontic microbiology. Clinical isolation and microbiological identification of endodontic pathogens. Principles of antibacterial endodontic therapy.
58. Combined endodontic-periodontal lesions. Marginal and interradicular periodontitis. Anatomical and functional factors contributing to endodontic-periodontal lesions. Classification. Diagnosis. Clinical presentation. Treatment.
59. Endodontic retreatment – definition, objectives, advantages, disadvantages. Main indications. Main stages of retreatment.
60. Endodontic retreatment – types. Systems and techniques for removing intracanal obstructions. Possible complications. Materials, methods, and medications for managing complications.
61. Planned endodontic surgery – indications, contraindications. Contemporary surgical techniques.
62. Planned endodontic surgical procedures – apical curettage, apicoectomy, root amputation, hemisection, bicuspidization, and transcanal implants.
63. Difficult differential diagnosis in endodontics with diseases of related anatomical regions.
64. Emergency endodontic treatment – rationale, indications. Scope of emergency treatment.
65. Pain management in endodontics.
66. Diagnostic errors in pulpitis and apical periodontitis. Complications.
67. Errors in the treatment of pulpitis and apical periodontitis. Prevention and management of complications.
68. Treatment planning in endodontics.
69. Restoration of endodontically treated teeth. Selection of restorative methods according to the extent of coronal tooth destruction.
70. Fractures of endodontically treated teeth – causes. Restorative procedures and materials.
71. Root resorption. Classification, clinical presentation, pathomorphological characteristics, treatment principles, prognosis.
72. Healing process after biological treatment of pulpitis – indirect pulp capping, direct pulp capping, and vital pulpotomy (amputation). Criteria for treatment success: clinical, electric pulp testing, and radiographic evaluation.
73. Healing process after vital and mortal pulpectomy (extirpation). Apical wound after vital and mortal extirpation – critical analysis and prognosis.
74. Healing process after treatment of pulp gangrene and acute and chronic periodontitis. Criteria for treatment success: early and late clinical outcomes and radiographic evaluation.
75. Bleaching of discoloured non-vital teeth – causes of tooth discoloration. Bleaching methods - rationale, clinical protocol, complications.

Prepared by:
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Approved by the Department Council No. 12/16.07.2020.