STATE EXAM SYLLABUS IN

DENTAL, ORAL AND MAXILLOFACIAL SURGERY

1. Asepsis and antisepsis in oral and maxillofacial surgery – definition and methods for sterilization; surgical infection; prophylaxis of wound infection and airborne infection; cleaning of the surgeon's hands (scrubbing up procedure) and operating field for surgical procedure.

2. Clinical anatomy of oral and maxillofacial area: innervation (V2, V3, VII nerves – path, branches, zones of innervation); bones of the facial skeleton; masticatory muscles (m.masseter, m.pterygoideus lateralis, m.pterygoideus medialis, m.temporalis – insertions, innervation, blood supply, function).

3. Clinical anatomy of oral and maxillofacial area: blood supply (branches of external carotid artery and regions supplied by following vessels: maxillary artery, facial artery, lingual artery and facial vein); lymphatic system (lymphatic nodes groups, anatomy, drainage).

4. Basic surgical procedures: incision, wound suturing, suturing materials, types of stitches, curettage, drainage, tamponade, puncture (principles and techniques).

5. Patient's examination: aim of the clinical examination; anamnesis (parts of the anamnesis); clinical methods of examination; diagnosis (types of diagnosis); prognosis; investigation of the general status of the patient. Para-clinical tests (benchmarks/normal range of: hemoglobin, hematocrit, erythrocytes, platelets, leukocytes, differential counting of leukocytes, ESR, CRP, bleeding time, coagulation time, prothrombin time, thrombin time, INR, blood sugar level, potassium, sodium, pH, creatinine, urea).

6. Local anesthesia – indications, anatomical considerations, needle puncture site, path of the needle, target area for infiltration, depth of needle penetration, zone anesthetized via: terminal infiltration, intraligamentary anesthesia, tuberosity anesthesia, greater palatine nerve block, nasopalatine anesthesia, infraorbital anesthesia, inferior alveolar nerve block.

7. Types of local anesthetics, metabolism of local anesthetics (representatives of amides and esters groups). Mechanism of action and maximum dosages of local anesthetics. Vasoconstrictors – application and maximum dosage. Local anesthesia in healthy patients and patients with systemic diseases – diabetes, hypertension, myocardial infarction, stroke.

8. Complications of local anesthesia – local and systemic complications. Prophylaxis and management.

9. Local anesthesia in pediatric patients – techniques, maximum dosages of local

anesthetics with and without vasoconstrictor.

10. Preoperative management of patients with systemic diseases (cardiovascular disease, anti-coagulation and anti-platelet drugs, diabetes, etc.) for anesthesia, tooth extraction and other surgical procedures in the oral cavity.

11. Emergency in dental practice: syncope, collapse, anaphylaxis, hypoglycemia, asphyxia, hemorrhage. Cardio-pulmonary resuscitation, coniotomy (cricothyrotomy). Management.

12. Tooth eruption disturbances and teeth impaction. Classification, etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis and management, complications. Preconditions for impaired tooth eruption and indications for removal of impacted wisdom teeth. Complications.

13. Acute periapical periodontitis. Classification, etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis and management, complications and prophylaxis.

14. Chronic periapical periodontitis. Classification, etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis and management, complications and prophylaxis.

15. Periostitis of jaws and facial bones. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis and management.

16. Odontogenic cysts of the jaws. Classification. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis of: radicular cyst, residual cyst, odontogenic keratocyst, dentigerous cyst, lateral periodontal cyst, paradental cyst. Surgical management. Complications.

17. Non-odontogenic cysts of the jaws. Classification. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis of: globulo-maxillary cyst, nasopalatine duct cyst, median maxillary and median mandibular cyst. Surgical management. Complications.

18. Soft tissue cysts in oral and maxillofacial area. Classification. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis of: mucocele, ranula, gingival cyst, epidermoid cyst, ateroma, thyroglossal duct cyst, lateral and median cervical cyst. Surgical management. Complications.

19. Abscess and phlegmon of the infraorbital space and canine fossa – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

20. Abscess and phlegmon of the buccal space – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical

presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

21. Phlegmon of the temporal and infratemporal spaces – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

22. Phlegmon of the orbital space – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

23. Abscess of the sublingual space – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

24. Abscess and phlegmon of the submandibular and submental spaces – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

25. Phlegmon of the mouth floor. Ludwig`s angina – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

26. Perimandibular space abscess – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

27. Abscess and phlegmon of the submasseteric space – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

28. Abscess and phlegmon of the retromandibular space – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

29. Abscess and phlegmon of pterygomandibular and parapharyngeal spaces – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

30. Abscess of the hard palate. Abscess and phlegmon of the tongue – topographic and surgical anatomy, boundaries of the anatomical space, anatomical structures in the space, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

31. Necrotizing fasciitis – etiology, clinical presentation, diagnosis, differential diagnosis, management. Complications.

32. Diseases of the lymphatic nodes and vessels. Acute and chronic lymphadenitis. Classification, topographic and surgical anatomy, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

33. Osteomyelitis of the jaws. Classification. Acute odontogenic osteomyelitis – etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

34. Osteomyelitis of the jaws. Classification. Chronic odontogenic osteomyelitis – etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

35. Osteomyelitis of the jaws. Classification. Traumatic osteomyelitis and chronic sclerosing osteomyelitis – etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

36. Odontogenic maxillary sinuitis: acute and chronic. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications. Perforation of the maxillary sinus, oro-antral communication, luxation of a root or tooth into the maxillary sinus.

37. Specific chronic granulomatous diseases of the oral and maxillofacial area: actinomycosis, syphilis and tuberculosis. Etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

38. Complications of odontogenic infections: sepsis, mediastinitis, thrombophlebitis of the cavernous sinus. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management. Complications.

39. Medication management of infections: basic principles, indications, complications. Dosages for adults and children of: orally taken antibiotics (Amoxicillin, Ampicillin, Augmentin, Azythromycin, Clarithromycin, Midecamycin, Lincomycin, Clindamycin, Ciprofloxacin, Levofloxacin, Moxifloxacin, Cefadroxil, Cefalexin, Cefuroxim, Cefixime); NSAIDs (ibuprofen, nimesulide, paracetamol, metamizole sodium); corticosteroids (methylprednisolone, dexamethazone); antihistamines (chloropyramine, loratadine, desloratadine, levocetirizine).

40. Surgical management of periodontal diseases. Gingivectomy, curettage, periodontal

flaps (Widman, undisplaced flap, apically displaced flap): indications, techniques.

41. Acute sialoadenitis and sialodochitis. Classification, etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management, complications.

42. Chronic sialoadenitis. Classification, etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management, complications.

43. Obstructive diseases of the salivary glands: sialolithiasis, cysts and fistulas of the salivary glands. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, surgical and medication management, complications.

44. Systemic diseases affecting the salivary glands (sialosis). Sialosis in sarcoidosis. Heerford`s syndrome. Benign lymphoepithelilal lesions. Necrotizing sialometaplasia.

45. Mikulicz`s syndrome and disease. Sjogren`s syndrome. Etiology, pathogenesis, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management, complications.

46. TMJ disorders: arthritis of TMJ (acute and chronic), rheumatoid arthritis – etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

47. TMJ disorders: arthrosis – etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

48. TMJ disorders: luxations and subluxations – classification, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

49. TMJ disorders: ankylosis – classification, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

50. Diseases of masticatory muscles, fasciae and ligaments of the oral and maxillofacial area: restricted lower jaw motions/trismus, myofascial pain syndrome, Costen`s syndrome – classification, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

51. Neuralgia of the trigeminal and glossopharyngeal nerves. Etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

52. Facial nerve palsy – types, etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

53. Traumatic injuries in oral and maxillofacial area. General information. Classification.

54. Soft tissue injuries: wounds – types, surgical management and healing.

55. Dentoalveolar injuries. Etiology, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, management.

56. Mandibular fractures. Etiology, classification (dislocation types of fractured fragments, effects of the masticatory muscles), clinical presentation (pathognomonic/primary and secondary signs; clinical presentation of fractures of the alveolar ridge, of the symphisis, body of the mandible, angle of the mandible, the ramus of the mandible, condylar and coronoid processes), paraclinical tests, differential diagnosis. Complications. Examination of patient with mandibular fracture.

57. Management of mandibular fractures – open reduction and closed reduction. Basic principles and indications.

58. Maxillary fractures. Etiology, classification (partial and total fractures), clinical presentation, paraclinical tests, diagnosis, differential diagnosis, indications and principles of management.

59. Zygomatic bone fractures. Etiology, classification, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, indications and principles of management.

60. Nasal bones fractures. Topographic anatomy, clinical presentation, paraclinical tests, diagnosis, differential diagnosis, indications and principles of management.

61. Fractures in pediatric patients – clinical features, diagnosis and management.

62. Precancer of the skin and lips. Classification. Senile keratosis, actinic keratosis, actinic cheilitis, nodular precancer of the vermillion, Manganotti`s abrasive cheilitis – etiology, clinical features, diagnosis, differential diagnosis and management.

63. Precancer of the oral mucosa. Classification. Leukoplakia, erythroplakia, lichen planus – definition, etiology, clinical features, diagnosis, differential diagnosis and management.

64. Benign tumors of the oral mucosa and soft tissues. Papilloma, verruca, fibroma, hemangioma, lymphangioma, lipoma – definition, etiology, clinical features, diagnosis, differential diagnosis and management.

65. Benign tumors of the jaws and fascial bones. Classification. Osteoma, osteoblastoclastoma, ossifying fibroma, giant cell granuloma – clinical features, diagnosis, differential diagnosis and management.

66. Tumor-like lesions. Aneurysmal bone cyst, solitary bone cyst, brown tumor in hyperparathyroidism, fibrous dysplasia – etiology, clinical features, diagnosis, differential diagnosis and management.

67. Epulids. Classification, etiology, clinical features, management.

68. Malignant tumors of the **skin**: basal cell carcinoma and squamous cell carcinoma. Classification, biological behavior, clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

69. Malignant melanoma of the skin and oral mucosa. Etiology, clinical types, biological behavior, clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

70. Malignant mesenchymal tumors of the soft tissues. Types, clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

71. Malignant tumors of the jaws and fascial bones: osteosarcoma, carcinoma of the upper and lower jaws – clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

72. Squamous cell carcinoma of the oral cavity. Locations: carcinoma of the lips, tongue, mouth floor, buccal mucosa, gingiva, hard palate. Etiology, clinical features, biological behavior, diagnosis, differential diagnosis and management.

73. Benign tumors of the major salivary glands. Classification. Pleomorphic adenoma, Warthin`s tumor – clinical features, diagnosis, differential diagnosis and management.

74. Malignant tumors of the major salivary glands. Classification. Mucoepidermoid carcinoma, adenoid cystic carcinoma, malignant pleomorphic adenoma – clinical features, diagnosis, differential diagnosis and management.

75. Odontogenic tumors. Classification based on the tissue-of-origin. Ameloblastoma, odontoma, cementoma – clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

76. Lymphoma – basic characteristics. Hodgkin`s lymphoma, nonHodgkin`s lymphoma, multiple myeloma – clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

77. Complications following radiotherapy. Radiodermatitis, mucositis, radiation caries, osteoradionecrosis – etiology, pathogenesis, clinical features, paraclinical tests, diagnosis, differential diagnosis and management.

78. Pre-prosthetic surgery. Indications and methods.

79. Bone grafts – classification. Types of grafts.

80. Dental implantology. Indications and contraindications. Complications.

81. Acquired defects between the oral cavity, nasal cavity and maxillary sinus. Etiology, pathogenesis, clinical features, paraclinical tests, diagnosis, differential diagnosis and management. Complications.

82. Mandibular anomalies and deformities. Clinical presentation, diagnosis, management.

83. Maxillary anomalies and deformities. Clinical presentation, diagnosis, management.

84. Supporting surgical interventions for dental-maxillofacial anomalies and deformities.

85. Cleft lip. Classification, etiology, basic principles and management.

86. Cleft palate. Classification, etiology, basic principles and management. Steps of the surgical treatment.

References:

1. „Basic principles in oral and maxillofacial surgery" – E. Deliverska, L. Stefanov et al., **1st, 2nd, 3rd editions**.

2. „Contemporary oral and maxillofacial surgery" – J. R. Hupp et al., Elsevier, 6th, 7th edition

3. „Peterson`s principles of oral and maxillofacial surgery" – M. Miloro et al., PMPH-USA, 2nd, 3rd edition

4. „Handbook of local anesthesia" – S. Malamed, Elsevier, 6th, 7th edition

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