FACULTY OF DENTAL MEDICINE
MEDICAL UNIVERSITY – SOFIA
DEPARTMENT OF IMAGING AND ORAL DIAGNOSTIC
1 G. Sofiiski Str.,1431, Sofia, Bulgaria,tel.: +359 2 954 12 47

CONSPECT

Diagnostic Imaging

2021/2022

1. Atom theory. Radiation.
2. X-rays. Characteristics.
3. Interaction of X rays and matter.
4. X ray equipment. Exposure factors and image quality.
5. X ray equipment in dental practice - conventional and digital.
6. Organization of X ray departement.
7. X ray images – characteristics. Conventional, digital images. Films, sensors, intensifying screens, cassettes.
8. X ray methods – radiography, fluoroscopy. Advantages and disadvantages.
9. Computed tomography, cone beam computed tomography, MRI, ultrasonography. Advantages and disadvantages.
10. Contrast methods – angiography, urography, sialography. Advantages and disadvantages.
11. Radiographic interpretation - sequence.
12. Normal X ray anatomy of the respiratory system. Methods.
13. Diagnostic imaging of the respiratory system – diseases.
14. Diagnostic imaging of the mediastinum - diseases.
15. Diagnostic imaging of the cardiovascular system – normal anatomy. Methods.
16. Diagnostic imaging of the cardiovascular system – diseases.
17. Diagnostic imaging of the digestive system – normal anatomy. Methods.
18. Diagnostic imaging the digestive system – diseases.
19. Foreign bodies in nose, trachea and bronchs.
20. Diagnostic imaging of pancreas, liver, spleen. Methods. Diseases.
21. Diagnostic imaging of genitourinary system. Methods. Diseases.
22. Diagnostic imaging of bones and joints. Methods. Normal anatomy of flat, long and short bones (without teeth and jaws). Normal anatomy of joints.
23. Basic bone changes: osteoporosis, osteosclerosis, osteolysis.
24. Basic bone changes: osteonecrosis, periosteal reaction, pathological bone destruction (osteodistrophy).
25. Diseases of bones and joints - inflammatory and degenerative. Rickets.
26. X ray methods used in dentistry - intraoral methods (conventiona, digital). Indications. Advantages and disadvantages.
27. X ray methods used in dentistry - extraoral methods (conventiona, digital). Indications. Advantages and disadvantages.

28. X ray methods in dental practice – panoramic radiography (conventional, digital). Indications.
29. Normal X ray anatomy of the maxilla, zygomatic bone, nasal bones. Imaging methods.
30. Normal X ray anatomy of the mandible. Imaging methods.
31. Normal X ray anatomy of teeth. Varieties. Imaging methods.
32. Imaging of traumatically injured bones; pathological fracture. Bone healing. Imaging of traumatically injured joints.
33. Inflammatory and degenerative diseases of TMJ. Luxations and subluxation.
34. Fractures of the skull (without jaw fractures).
35. Maxillary fractures.
36. Mandibular fractures.
37. Osteomyelitis of jaws.
38. Diseases of hard tooth tissues and the pulp. Trauma of the teeth.
39. Periapical inflammation. Differential diagnosis.
40. Periodontal disease.
41. Odontogenic cysts of jaws: radicular, residual cysts. Differential diagnosis. Complications.
42. Odontogenic cysts of jaws: follicular cysts. Differential diagnosis. Complications.
43. Odontogenic cysts of jaws: keratocysts. Differential diagnosis. Complications.
44. Differential diagnosis of different cysts. Pseudocysts.
45. Differential diagnosis of different ameloblastoma.
46. Non-odontogenic cysts of jaws. Fissural and non-fissural cysts. Differential diagnosis. Complications.
47. Benign odotogenic tumors of the jaws. Differential diagnosis.
48. Benign non-odontogenic tumors of the jaws. Differential diagnosis.
49. Malignant tumors of the jaws – osteosarcoma, chondrosarcoma, fibrosarcoma.
50. Malignant tumors of the jaws – Ewing sarcoma, reticulosarcoma, myeloma, metastases.
51. Inflammatory diseases of maxillary antra from odontogenic and non-odontogenic origin. Foreign bodies in maxillary antra.
52. Tumors of maxillary antra: benign and malignant.
53. Salivary glands. Methods. Diseases.
54. Biological effect of X-rays upon different structures and tumours in maxillo-facial region.
55. Early and late radiation changes in oral cavity.
56. Radiotherapy of tumors in maxillo-facial region. Indications. Methods.
57. Nuclear medicine used in maxillo-facial region. Indications. Methods.
58. Preparation of patients for radiotherapy in maxillo-facial region (general and dental).
59. Dental care of patients exposed to radiation.

МЕДИЦИНСКИ УНИВЕРСИТЕТ - СОФИЯ
КАТЕДРА ОБРАЗНА И ОРАЛНА ДИАГНОСТИКА

Prof. dr. Hr. Mihaylova, PhD
Head of Department of Imaging and Oral Diagnostics