

BACHELOR OF DENTAL SURGERY- II YEAR**GENERAL PATHOLOGY****TEACHING HOURS: 110 Hrs.****THEORY:55****PRACTICAL:55****I OBJECTIVES**

Enabling the student:

1. To demonstrate and apply basic facts, concepts and theories in the field of Pathology.
2. To recognize and analyze pathological changes at macroscopically and microscopical levels and explain their observations in terms of disease processes.
3. To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology.
4. To demonstrate understanding of the capabilities and limitations of morphological Pathology in its contribution to medicine, dentistry and biological research.
5. To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes.

II. COURSE CONTENT**A. General Pathology –**

1. Introduction to Pathology

Terminologies

- The cell in health
- The normal cell structure
- The cellular functions

2. Etiology and Pathogenesis of Disease

Cell Injury

- Types – congenital
- Acquired

Mainly Acquired causes of disease

(Hypoxic injury, chemical injury, physical injury, immunological injury)

3. Degenerations

- Amyloidosis
- Fatty change
- Cloudy swelling
- Hyaline change, mucoid degeneration

4. Cell death & Necrosis

Apoptosis

Def, causes, features and types of necrosis

Gangrene - Dry, wet, gas

Pathological Calcifications

(Dystrophic and metastatic)

5. Inflammation

- Definition, causes types, and features
- Acute inflammation

a. The vascular response .

b. The cellular response .

c. Chemical mediators.

d. The inflammatory cells.

e. Fate.

- Chronic inflammation

Granulomatous inflammation

6. Healing

- Regeneration
- Repair

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- a. Mechanisms
- b. Healing by primary intention
- c. Healing by secondary intention
- d. Fracture healing
- e. Factors influencing healing process
- f. Complications
7. Tuberculosis
 - Epidemiology
 - Pathogenesis (Formation of tubercle)
 - Pathological features of Primary and secondary TB
 - Complications and Fate
8. Syphilis
 - Epidemiology
 - Types and stages of syphilis
 - Pathological features
 - Diagnostic criterias
 - Oral lesions
9. Typhoid
 - Epidemiology
 - Pathogenesis
 - Pathological features
 - Diagnostic criterias
 - Thrombosis
 - Definition, Pathophysiology
 - Formation, complications & Fate of a thrombus
11. Embolism
 - Definition
 - Types
 - Effects
12. Ischaemia and Infraction
 - Definition, etiology, types
 - Infraction of various organs
13. Derangements of body fluids
 - Oedema – pathogenesis
 - Different types
14. Disorders of circulation
 - Hyperaemia
 - Shock
15. Nutritional Disorders
 - Common Vitamin Deficiencies
16. Immunological mechanisms in disease
 - Humoral & cellular immunity
 - Hypersensitivity & autommunity
17. AIDS and Hepatitis.
18. Hypertension
 - Definition, classification
 - Pathophysiology
 - Effects in various organs
19. Diabetes Mellitus
 - Def, Classification, Pathogenesis, Pathology in different organs
20. Adaptive disorders of growth
 - Atrophy & Hypertrophy, Hyperplasia, Metaplasia and Dysplasia
21. General Aspects of neoplasia
 - a. Definition, terminology, classification
 - b. Differences between benign and malignant neoplasms
 - c. The neoplastic cell
 - d. Metastasis
 - e. Etiology and pathogenesis of neoplasia, Carcinogenesis
 - f. Tumour biology

- g. Oncogenes and anti-oncogenes
- h. Diagnosis
- i. Precancerous lesions.
- j. Common specific tumours, Sq papilloma & Ca, Basal cell Ca, Adenoma & Adenoca, Fibroma & Fibrosarcoma, Lipoma and liposarcoma.

B. Systemic Pathology –

1 Anaemias

- Iron Deficiency anaemia, Megaloblastic anaemia

2 .Leukaemias

- Acute and chronic leukaemias, Diagnosis and clinical features

3. Diseases of Lymph nodes

- Hodgkin's disease, Non Hodgkins lymphoma, Metastatic carcinoma

4. Diseases of oral cavity

- Lichen planus, Stomatitis, Leukoplakia, Sq cell Ca, Dental caries, Dentigerous cyst, Ameloblastoma

5. Diseases of salivary glands

- Normal structure, Sialadenitis, Tumours

6. Common diseases of Bones

- Osteomyelitis, Metabolic bone diseases, Bone Tumours, Osteosarcoma, Osteocalstoma, Giant cell Tumour, Ewing's sarcoma, Fibrous dysplasia, Aneurysmal bone cyst

7 .Diseases of Cardiovascular system

- Cardiac failure
- Congenital heart disease – ASD, VSD, PDA Fallot's Tetralogy
- Infective Endocarditis
- Atherosclerosis
- Ischaemic heart Disease

8. Haemorrhagic Disorders

Coagulation cascade

Coagulation disorders

- Platelet function
- Platelet disorders

Practicals

1 .Urine – Abnormal constituents

- Sugar, albumin, ketone bodies

2. Urine – Abnormal constituents

- Blood, bile salts, bile pigments

3. Hemoglobin (Hb) estimation

4. Total WBC count

5. Differential WBC Count

6. Packed cell volume(PCV,) erythrocyte sedimentation Rate (ESR)

7. Bleeding Time & clotting Time

8. Histopathology Tissue Processing Staining

9. Histopathology slides

- Acute appendicitis, Granulation tissue, fatty liver

10. Histopathology slides

CVC lung, CVC liver, Kidney amyloidosis

11. Histopathology slides

Tuberculosis, Actinomycosis, Rhinosporidiosis

12. Histopathology slides

Papilloma, Basal cell Ca, Sq cell Ca

13. Histopathology slides

Osteosarcoma, osteoclastoma, fibrosarcoma

14. Histopathology slides

Malignant melanoma, Ameloblastoma, Adenoma

15. Histopathology slides

Mixed parotid tumour, metastatic carcinoma in lymph node

Recommended Text Books

1. Robbins- Pathologic Basis of Disease
2. Anderson's Pathology - James Linder , Ivan Damjanov