

COURSE - PATH 211 (1)

KING SAUD UNIVERSITY
College of Medicine
Department of Pathology

GENERAL PATHOLOGY
Males/Females
1ST Semester 1428-1429

TOPICS AND LECTURE TITLES

- Lecture One** : **Introduction to pathology**
- * Definition of pathology.
 - * Subdivisions of pathology.
 - * Characteristics of disease: incidence, aetiology, pathogenesis, morphological and clinical features.
 - * Methods used in making diagnoses: biopsies-cytology.
 - * Definition and role of autopsy.

Inflammation, repair and regeneration

- Lecture One** : Definition, aetiology and manifestations of inflammation.
- Lecture Two** : Cells involved in inflammation and their role (neutrophils, basophils, eosinophils, mast cells, macrophages and lymphocytes).
- Lecture Three and Four** : Chemical mediators of inflammation and the inflammatory response.
- Lecture Five** : Vascular and cellular phases of inflammation - chemotaxis.
- Lecture Six** : Types of inflammation: Acute-chronic. Wound healing and repair.
- Lecture Seven** : Factors inhibiting repair - healing of bone fracture.

Cell injury

- Lectures One and Two** : Cellular patterns of response to stress-reversible and irreversible cell injury.
- Morphological reactions to persistent stress injury and ultrastructural changes caused by cell injury.

Lectures Three and Four : Disorders of intracellular storage: fat, glycogen, iron, lipofuscin, melanin.

Abnormal calcification, necrosis, apoptosis, and ischaemic cell injury. Cell injury caused by oxygen radicals.

Lectures Five and Six : Disturbances of uric acid metabolism.

Lecture Seven : Amyloidosis.

Granulomatous diseases

Lecture One : Definition and mechanism of granuloma formation.

Causes of granulomatous diseases.

Lectures Two and Three : Tuberculosis (general and systemic).

Lecture Four : Leprosy.

Lecture Five : Sarcoidosis.

Lecture Six : Schistosomiasis: life cycle of parasite and incidence. Pathology of urinary, hepatic and intestinal schistosomiasis.

Haemodynamic (circulatory) disorders

Lectures One and Two : Haemorrhage: definition - causes and manifestations: haemothorax - haemopericardium, haemarthrosis, haematoma, purpura, ecchymosis and petechia.

Hyperemia (lung, liver, spleen) and oedema.

Lectures Three and Four : Thrombosis, embolism and infarction.

Lecture Five and Six : Shock: definition, pathogenesis and causes - pathological changes in various organs: heart, lung, liver and kidney.

Environmental and Nutritional pathology

Lecture One : Alcoholism: pathological effects on liver, heart, pancreas, skeletal muscles, endocrine system, G.I. tract, blood, nervous system.

- Lecture Two** : Drug abuse (heroin and stimulants) -Iatrogenic drug injury (contraceptive pills). Environmental chemicals and metals.
- Lecture Three** : Thermal and physical injuries.
- Lecture Four** : Radiation injury.
- Lecture Five** : Nutritional disorders: obesity, marasmus, Kwashiorkor, vitamin deficiencies : vitamin A, thiamine, niacin, ascorbic acid and vitamin K.

Disorders of growth and neoplasia

- Lecture One** : Atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia and carcinoma in situ.
- Lectures Two and three** : Definition of neoplasia - characteristics of benign and malignant tumours. Epithelial and connective tissue tumours. Teratomas, embryonal tumours and hamartomas.
- Lecture Four** : Histological diagnosis of malignancy - invasion and metastasis. The grading and staging of cancers.
- Lectures Five, Six & Seven** : Aetiology of cancer: chemical and viral carcinogenesis - human tumor oncogenes - tumour suppressor genes (The Retinoblastoma (RB) gene and the P53 gene).
- Lectures Eight and Nine** : The systemic effects of cancer on the host - Diagnosis of cancer and tumour markers.

Immunopathology

- Lecture One** : Immune complete diseases (with special reference To glomerulonephritis).
- Lecture Two and Three** : Auto-immune diseases.
- Lecture Four and Five** : Immunodeficiency diseases.

TUTORIALS

Tutorials on relevant topics will be given.

HISTOPATHOLOGY PRACTICAL AND SLIDE NUMBERS

Inflammation, repair and regeneration

1. Fibrinous pericarditis.
2. Acute suppurative appendicitis.
3. Foreign body reaction (pilonidal sinus).
4. Granulation tissue.

Cell injury

5. Fatty change of the liver.
6. Amyloidosis of the liver.
7. Amyloidosis of the kidney.
Electron micrograph of amyloid fibrils.
8. Dystrophic calcification.

Haemodynamic (circulatory) disorders

9. Chronic venous congestion of the liver.
10. Chronic venous congestion of the lung.
11. Organizing thrombus.
12. Recent myocardial infarction.
13. Infarction of the kidney.

Granulomatous diseases

14. Tuberculous lymphadenitis.
15. Miliary tuberculosis of the lung.
16. Leprosy of the skin.
Lepra bacilli (ZN stain).
17. Bilharziasis of the rectum.
18. Bilharziasis of the liver.

Disorders of growth

19. Cystic hyperplasia of the endometrium.
20. Fibrocystic changes and epithelial hyperplasia of the breast

Neoplasia - benign tumors

21. Intradermal naevus.
22. Leiomyoma.
23. Chondroma.
24. Hemangioma.
25. Fibroadenoma of the breast.

Neoplasia - malignant tumors

26. Basal cell carcinoma of the skin.
27. Squamous cell carcinoma of the skin.
28. Adenocarcinoma of the large intestine.
29. Mucoid carcinoma of the large intestine.
30. Fibrosarcoma.

NOTE: *Other slides representing similar conditions may be added for examination purposes.*

PATHOLOGY MUSEUM***Inflammation, repair and regeneration***

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| CVS | Fibrinous pericarditis. |
| RS | Bronchiectasis. |
| RS | Empyema between lobes of the lung. |
| GB | Chronic cholecystitis with stone. |
| GB | Acute cholecystitis with stone. |
| US | Pyonephrosis. |
| US | Pyemic abscesses of the kidney. |
| CNS | Brain abscess. |
| GUT | Acute suppurative appendicitis. |
| | Skin pilonidal sinus. |

Cell injury

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| H | Amyloidosis of the liver. |
| SP | Amyloidosis of the spleen. |

Haemodynamic - circulatory disorders

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| H | Chronic venous congestion of the liver. |
| H | Infarction of the liver. |
| CVS | Myocardial infarction with mural thrombus. |
| GUT | Infarction of the small intestine. |
| US | Infarction of the kidney. |
| SP | Congestive splenomegaly. |
| SP | Infarction of the spleen. |
| RS | Pulmonary embolus with infarction. |

Granulomatous diseases

RS	Tuberculosis of the lung.
LN	Tuberculous lymphadenitis.
US	Tuberculosis of the kidney.

Growth disorders and neoplasia

US	Renal carcinoma.
US	Prostatic hyperplasia.
GUT	Carcinoma of the esophagus.
GUT	Carcinoma of the stomach.
GUT	Lipoma of the small intestine.
GUT	Papillary tumor of rectum and colon.
FGS	Teratoma, dermoid cyst.
FGS	Multiple leiomyomata.
BR	Carcinoma of the breast.
BR	Fibroadenoma of the breast.

NOTE: Students are asked to study the gross pathology of all specimens related to lecture topics.

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