

Radiographic Pathology RAD423

4 th year Semester 2				
Course	Lecture	Tutorial	Practical	Credit hours
Radiographic Pathology	2	-	-	2

Course Description:-

The course discusses pathologic manifestations on diagnostic images and the subsequent technical variations required to produce an optimal diagnostic examination.

Prerequisite

None

Reading List:

- 1- Thomson, Thomas (primer clinical pathology)-2nd Ed, Little, Brown & Company.
- 2- Drummond, (Radiographic Techniques Related to Pathology).
- 3- Davies, (Medical Terminology)-3rd Ed, Heinmann.
- 4- Radiographic Pathology for technologists, Forth & Fifth edition, James D. Mace Nina Kowalczyk, Mosby, 1989, 2008

Course Objective:-

To orient students to pathological terms connect with conventional radiography, CT, MRI, and Ultrasound, radiographs together with their role in the production of optimally diagnostic results.

The course is designed to interface radiologic technologists view of the diagnostic image results. (imaging interpretation)

Topics covered:

Lecture 1

Radiologic Pathology:

- a. Radiographic Appearance
- b. Procedural
- c. Technique Considerations

- d. Appropriate Imaging Modality.

Lecture 2,3,4,

Skeletal and articular

Congenital and hereditary diseases

1. Osteogenesis imperfecta
2. Achondroplasia
3. Osteopetrosis
4. Hand and foot malformations
5. Congenital dislocation of the hip
6. Vertebral anomalies
7. Cranial anomalies

Inflammatory diseases

1. Osteomyelitis
2. Tuberculosis
3. Arthritis
4. Ankylosing Spondylitis
5. Osteoarthritis
6. Gouty Arthritis

Metabolic Diseases

1. Osteoporosis
2. Osteomalacia
3. Paget's disease (Osteitis Deformans)
4. Hyperparathyroidism
5. Acromegaly

Vertebral Column

Neoplastic diseases

1. Osteochondroma
2. Osteoma
3. Endochondroma
4. Simple bone cyst
5. Osteoid osteoma and osteoblastoma
6. Giant cell tumors (Osteoclastoma)
7. Osteosarcoma (Osteogenic Sarcoma)
8. Ewing's Sarcoma
9. Chondrosarcoma
10. Metastases from other sites

Lectures 5,6,7,8

A. The respiratory System

Congenital and hereditary diseases:

Cystic fibrosis

Inflammatory diseases

1. Pneumonias
2. Bronchiectasis
3. Pulmonary Tuberculosis
4. Chronic obstructive pulmonary diseases
5. Pneumoconiosis (Occupational Lung Diseases)
6. Lung abscess ,collapse, consolidation.
7. Pleurisy
8. Pleural effusion
9. Sinusitis

Neoplastic diseases

1. Bronchial carcinoid
2. Bronchogenic carcinoma
3. Metastases from other sites

B. General Introduction: Cardiovascular system

Congenital and hereditary diseases

Congestive Heart failure

Degenerative diseases

Aneurysms

Lectures9,10

The abdomen and Gastrointestinal system

Congenital and hereditary anomalies

1. Esophageal Atresia
2. Imperforate anus
3. Hirschprung's disease

Inflammatory disease

1. Esophageal strictures
2. Gastroesophageal reflux disease
3. Peptic ulcer
4. Regional enteritis (Crohn's disease)
5. Esophageal varices

Degenerative diseases:

1. Hiatal hernia

Bowel obstruction

1. Mechanical bowel obstruction

Neurogenic diseases

1. Achalasia

Diverticular disease

1. Esophageal diverticula
2. Colonic diverticula

Neoplastic disease

1. Tumors of the esophagus
2. Tumors of the stomach
3. Colonic polyps
4. Colon cancer

The hepatobiliary system(This Topic Is Covered as Assignment)

Inflammatory Diseases

1. Cirrhosis
2. Viral hepatitis
3. Cholelithiasis
4. Cholecystitis
5. Pancreatitis

Metabolic diseases

1. Jaundice

Neoplastic diseases

1. Hepatocellular Adenoma
2. Hemangioma
3. Hepatoma
4. Metastatic liver disease
5. Carcinoma of the gallbladder
6. Carcinoma of the pancreas

Lecture 11,12

E. The urinary system

Congenital and hereditary diseases

1. Number and size anomalies
2. Fusion anomalies of the kidney
3. Position anomalies of the kidney
4. Renal pelvis and ureter anomalies
5. Polycystic kidney disease
6. Medullary sponge kidney

Inflammatory diseases

1. Urinary tract infection
2. Pyelonephritis
3. Acute glomerulonephritis
4. Cystitis

Degenerative and metabolic diseases

1. Calcifications
2. hydronephrosis

Neoplastic diseases

1. Renal cyst
2. Renal carcinoma
3. Bladder carcinoma

General introduction on Reproductive Male and Female System

Female:

Congenital anomalies

Neoplastic diseases

Ovarian cystic masses

Uterine masses

Uterine fibroids

Breast masses

Fibroadenoma ,Fibrocystic breasts ,Carcinoma of the breast

Male

Congenital anomalies

Neoplastic disease

Carcinoma of the prostate

Lecture 13,14

I. Central Nervous system

Congenital and hereditary diseases

1. Hydrocephalus

Inflammatory diseases

1. Brain abscess

Degenerative Diseases

Degenerative disk diseases and herniated

1. Nucleus pulposus
2. Cervical spondylosis
3. Multiple sclerosis

Vascular diseases

1. Cerebrovascular accidents
2. Ischemic strokes
3. Hemorrhagic strokes

Neoplastic diseases

1. Gliomas
2. Pituitary adenoma
3. Craniopharyngioma
4. Tumors of central nerve sheath cells
5. Metastases form other sites

6. Spinal tumors

Traumatic:

1.Subdural Hematoma .

2.Epidural Hematoma

Lecture15

General Revision &Test.

Contribution of Course to Meeting Professional Component

Radiologic Technology 2 credit hours

Relationship of course to program outcome

This course will enhance students the ability to understand and identify the pathology in different radiographic techniques and images (Radiographic pathology).

Prepared by

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