

# Diagnostic Medical Imaging (Radiology)

- 1) CXR of a newborn showing a hypodensity in the left side. The child is in respiratory distress. What is your initial management?
  - a) Needle aspiration of the left lung
  - b) Intubation and ventilation
  - c) expectant therapy
  - d) IV N/S bolus
  - e) Thoracotomy
- 2) CXR of a neonate few hours after birth. The x-ray showing a full abdominal and chest view. The abnormality in the chest is of a large dense central shadow, which may represent an infiltration in the lungs or a large heart. The child is 32-wk gestation and soon after birth he developed RDS. What is your diagnosis?
  - a) Hyaline membrane disease
  - b) Congenital heart disease
  - c) Pneumonia
  - d) Persistent fetal circulation
- 3) Knee x-ray of a 2-yr old child who has not walked yet. It shows the tibia, which has wide cupping at its proximal end and obscure metaphyseal plate. There is no significant family history of any disease. What is wrong with the child?
  - a) Rickets
  - b) Achondroplasia
  - c) Hyperparathyroidism
  - d) Hypercalcemia
- 4) 35yo pt with recurrent hemoptysis and CXR with middle lobe infiltration. The most likely diagnosis is:
  - a) Bronchiectasis
  - b) Lung abscess
  - c) Chronic bronchitis
  - d) Emphysema
- 5) CXR showing tension pneumothorax. Separation of visceral and parietal pleura (density), hyperlucent small dilated lung, with lack of peripheral lung markings. What is the management?
  - 1 – needle aspiration
  - 2 – chest tube drainage
  - 3 – intubation
  - 4 – air tight dressing
  - 5 – surgery
  - a) 1 and 4
  - b) 3 and 5
  - c) 1 and 2
  - d) All of the above
  - e) None of the above
- 6) CXR showing hyperlucent left lung with mediastinal shift. The child is coughing and wheezing. What is the diagnosis?
  - a) TB infection
  - b) Pneumonia
  - c) Left hyperlucent lung syndrome (Swyer-James syndrome)
  - d) Influenza
- 7) 5 yo child with stridor and respiratory distress. X-ray shows thumb sign. What is the diagnosis?
  - a) Acute epiglottitis
  - b) Acute asthma attack
  - c) Retropharyngeal abscess
  - d) Tracheo-laryngo-bronchitis
- 8) Which of the following radiation has the deepest penetration in human tissue:
  - a) Alpha
  - b) Gamma
  - c) X-ray
  - d) Delta
  - e) UV

- 9) Patient fell on his hand, emergency x-ray was normal, but the patient complained of pain during wrist abduction. What is the proper management?
- Explain to him that the pain will disappear after 2 weeks, its normal.
  - Bandage
  - Short cast plus x-ray in 15 days
  - NSAID's
- 10) Patient after big operation develops sudden dyspnea, chest pain, the most likely finding on chest x-ray is:
- Air under diaphragm
  - Kerly B lines
  - Perihilar hyperdensity
  - Normal
  - Cardiomegaly
- 11) Patient with lower back pain, x-ray: anterior osteophytes at L4-L5 and subchondral sclerosis, diagnosis:
- Degenerative spondylitis
  - Ankylosing spondylitis
  - Osteoarthritis
  - Rheumatoid arthritis
- 12) A 23 year old patient has a single thyroid nodule. Which of the following will help make a diagnosis of a malignancy?
- Thyroid ultrasound
  - Cold nodule on thyroid scan
  - Hot nodule on thyroid scan
  - CT cervical spine
- 13) Child has stridor, fever, and a swollen, painful neck. What investigation will you order?
- CT scan of the neck
  - Lateral neck x-ray
  - C-spine x-ray
  - MRI
- 14) Which investigation is confirmatory for IBD?
- Barium enema
  - Colonoscopy
  - CT
  - MRI
- 15) A 70-year-old man is seen in your office for assessment one week after experiencing a brief episode of left arm and left facial weakness. Blood pressure in your office is 140/80 mmHg. A CT scan showed no evidence of hemorrhage or space-occupying lesion. An EKG shows normal sinus rhythm. Which one of the following is the most important investigation to order at this time?
- An magnetic resonance imaging (MRI) of the brain
  - An echocardiogram
  - Cerebral angiography
  - A chest x-ray
  - A carotid artery ultrasound
- 16) A 75 year old man fell down and injured his head. He is awake and not complaining of neck pain. What investigation are you going to do first?
- CT of the head
  - MRI of the head
  - X-ray Skull
  - C-spine x-ray
- 17) Which of the following are NOT radiological features of Rheumatoid Arthritis?
- Soft tissue swelling
  - Periarticular Osteopenia
  - Bony erosions
  - Osteophytes
  - Joint subluxation

18) Which of the following can result in a ring-enhancing lesion on CT?

- 1 – Brain metastases
- 2 – Brain abscesses
- 3 – High grade astrocytomas
- 4 – Demyelination

- a) 1, 2 and 3 only
- b) 1 and 2 only
- c) 1, 2 and 4 only
- d) 1 and 4 only
- e) All of the above

19) A 75 year old man fell down and injured his head. He is unconscious. What investigation are you going to do first?

- a) CT of the head
- b) MRI of the head
- c) X-ray Skull
- d) C-spine x-ray

## **ANSWERS**

1. B  
2. D  
3. D  
4. A

5. C  
6. C  
7. A  
8. C

9. C  
10. D  
11. A  
12. B

13. B  
14. B  
15. E  
16. A

17. D  
18. E  
19. D