

### SAQ 7

A 75 yr old male presents to your Emergency Department complaining of progressive shortness of breath over 2 weeks.

#### a. Describe and interpret the patient's x-ray (4 Marks)

- *Right pleural effusion - mod / large*
- *Absent right breast shadow*
- *Enlarged left atrial appendage / Cardiomegaly*
- *No mediastinal shift*
- *PA CXR*
- *Lt hemithorax hyper-expanded nil lesion seen*

#### b. List 4 criteria for categorising a pleural effusion as an exudate (4 Marks)

1 mark for each of up to 4 marks:

- *Classic definition pleural fluid protein >30g/L*
  - *Not accurate when serum protein abnormal or pleural fluid protein close to 30g/L*
- *Light's Criteria*
  - *Pleural fluid protein / serum protein is > 0.5*
  - *Pleural fluid LDH / serum PDH is >0.6*
  - *Pleural fluid LDH >2/3 upper limit of lab normal for serum LDH*
- *Other's*
  - *Pleural-fluid cholesterol level >1.5 mmol/L*
  - *Pleural-fluid cholesterol level >1.1 mmol/L*
  - *Pleural-fluid/serum cholesterol ratio >0.3*
  - *Serum/pleural-fluid albumin level  $\leq$ 1.2 g/dL*

**c. List 4 causes of pleural transudates (4 Marks)**

- *Very common*
  - *Left ventricular failure*
  - *Liver cirrhosis*
- *Less common*
  - *Hypoalbuminaemia*
  - *Peritoneal dialysis*
  - *Hypothyroidism*
  - *Nephrotic syndrome*
  - *Mitral stenosis*
- *Rare*
  - *Constrictive pericarditis*
  - *Urinothorax*
  - *Meig's Syndrome*

**d. List 4 causes of pleural exudates ( 4 Marks)**

- *Common*
  - *Malignancy*
  - *Parapneumonic effusion*
  - *Tuberculosis*
- *Less common*
  - *Pulmonary embolism*
  - *Rheumatoid / Autoimmune*
  - *Benign asbestos effusion*
  - *Pancreatitis*
  - *Post-MI*
  - *Post-CABG*
- *Rare*
  - *Yellow nail syndrome / lymphatic disorders*
  - *Drugs*
  - *Fungal*

Answers taken from British Thoracic Society Pleural Disease Guideline 2010 (<https://www.brit-thoracic.org.uk/document-library/clinical-information/pleural-disease/pleural-disease-guidelines-2010/pleural-disease-guideline/>) & Dunn, Emergency Medicine Manual, 5th Edition, Chp 35, Pleural Effusion

CXR and description taken from Radiopedia case of Unilateral Pleural Effusion by Dr Frank Gaillard <http://radiopaedia.org/cases/pleural-effusion-unilateral-malignant>