DOI: http://doi.org/10.4038/jccp.v53i2.7981

Picture quiz – Answers

1.

1.1 The flow volume loop shows significant truncating of the inspiratory flow volume indicating extra thoracic airway obstruction.

1.2 Bilateral vocal cord palsy due to prolonged intubation. Other possibility is tracheal stenosis. However, in tracheal stenosis both expiratory and inspiratory loop flattening is expected.

2.

2.1 There is apnoea lasting more than 10 seconds noted in the nasal pressure and thermistor tracings. There are flutters on the abdominal and chest wall tracing suggestive of obstructive sleep apnoea. In contrast, in central sleep apnoea, the chest and abdominal belts will have a flat tracing due to inhibited respiratory drive.

2.2 Respiratory polygraphy is a level III sleep study. In-laboratory video polysomnography with attendant sleep technician is a level I sleep study

2.3 The STOP BANG questionnaire is a screening tool to detect high risk patients for obstructive sleep apnoea

2.4 First line management of moderate to severe obstructive sleep apnoea is continuous positive air way pressure (CPAP) therapy. Weight reduction through diet modification and exercise is also very important.

3.

3.1 Peripheral non-segmental dense band like consolidations and crazy paving appearance in right middle lobe. Low attenuation areas of <30 HU within areas of consolidation (suggestive of areas of a fat/lipids). Tree in bud opacities.

3.2 HRCT is highly suggestive of hydrocarbon pneumonitis following aspiration of diesel

3.3 Causes include pulmonary, pleural and cardiac diseases

- pulmonary – pneumonia (infectious/ aspiration), cardiogenic pulmonary oedema, non-cardiogenic pulmonary oedema, pulmonary haemorrhage, pan acinar emphysema (related to talc inhalation).
- pleural – pneumothorax, pneumomediastinum.
- cardiac – cardiomyopathy, myocardial infarction, aortic dissection, injection related pseudo aneurysm.

4.

4.1 A veil like homogenous opacity over the left lung field extending out from the hilum and fading inferiorly. A hyperlucent air crescent is seen surrounding the aortic knuckle.

4.2 “Luftsichel sign”: This refers to the CXR appearance in left upper lobe collapse. The hyperinflation of the superior segment of the left lower lobe, interposing between the mediastinum and the collapsed left upper lobe.

4.3 Contrast enhanced CT scan and bronchoscopy.

5.

5.1 There are multiple tiny soft tissue density nodules present throughout both lungs with an upper and middle zone predominance. This pattern is called miliary mottling (1-4 mm size innumerable opacities). Inhalational conditions such as miliary tuberculosis, upper zone changes predominate due to the effect of gravity (more blood on bases and more gas in upper zones) leading to a ventilation perfusion mismatch.

5.2 Differential diagnosis include miliary tuberculosis, miliary sarcoidosis, miliary metastasis, pneumoconiosis and histoplasmosis