

Pulmonary Radiology Quiz

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Fig 1: X Ray chest PA view

1. What is the radiological finding & appearance?
2. What is the Differential Diagnosis for unilateral hyperlucency of the lung?
3. Clue: A procedure has been done

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Please refer page number 46 for the answer

Answers

1. Left side unilateral hyperlucency

2. Differential diagnosis¹

Technical impropriety

Pneumothorax

Radical Mastectomy

Poland Syndrome

Professional Cause

Airway Obstruction

3. Radical Mastectomy - Pectoralis major muscle removed

Short Discussion

Unilateral Hyperlucency of the lung is described as darker appearance at one side due to increased X ray transmission. It can be due to

a) Technical Impropriety

- Rotated Film – Increase in the transmission of X rays due to shorter distance.
- Miscentred - X ray beam is more intense and perpendicular.

b) Chest wall related causes

- Radical Mastectomy - Pectoralis muscle removed
- Scoliosis
- Professional - (butchers, carpenters) due to asymmetry of chest wall musculature
- Poland Syndrome – is a congenital abnormality with unilateral absence of pectoralis major and minor muscles. It is usually sporadic and is associated with syndactyly & simian crease on the same side.

c) Increased airway density or hyperinflation due to obstruction secondary to

- Tumors
- Foreign body aspiration
- Bronchial strictures
- Swyer James syndrome - Post infectious obliterative bronchiolitis that usually follows a

viral respiratory infection (adenovirus) in infancy or childhood.

d) Large pulmonary embolus

e) Pneumothorax

- Air in the pleural space, collapsed lung border and shift of mediastinum to opposite side are seen on chest X ray
- Absent or amphoric breath sounds clinically.

f) Giant Bullous Disease

- Compressed lung parenchyma can be visualized.

g) Compensatory emphysema

- Due to contralateral lung pathology like fibrosis and collapse.

Final Diagnosis

Mastectomy on the left side secondary to Breast Carcinoma

Clinico-Radiological Pearls

In this case, patient has unilateral hypertranslucency. Patient was operated for carcinoma of breast on left side in which pectoralis major is removed and subsequently chest X ray showed unilateral hypertranslucency.

Message

One must be aware of differential diagnosis of unilateral hypertranslucency.

History taking and clinical examination is very important for the diagnosis; as in this case history of mastectomy in breast cancer gives a clue for unilateral hypertranslucency. More over clinical examination revealed normal vesicular breath sounds which are helpful in ruling out other conditions like pneumothorax and giant bullous lesions where breath sounds are absent.

In giant bullous disease of the lung, the compressed lung parenchyma will be visible. This is called vanishing lung syndrome.

References

1. Chapman S, Nakielny R. Aids to radiological differential diagnosis. 4th ed. London: Saunders; 2003.