What are Pleural Relationships and Reflections?

Worksheet

Pleural relationships describe how the visceral and parietal layers interact and where they reflect (fold) around the root of the lung and mediastinum. The pleural cavity contains a thin film of fluid allowing smooth lung movement during breathing.

Questions

1. Which pleura is sensitive to pain?

A) Visceral pleura (somatic innervation)
B) Parietal pleura (somatic innervation)
C) Both equally
D) Neither (pleura is insensitive)

2. What structure marks the transition between visceral and parietal pleura?

A) Carina
B) Pulmonary root (hilum)
C) Diaphragm
D) Mediastinum

3. What is the function of the pulmonary ligament?

A) To attach the trachea to the mediastinum
B) To anchor the lower pole of the lung to the mediastinum
C) To separate the left and right pleural cavities
D) To support the diaphragm

4. Normally, how much fluid fills the pleural cavity?

A) 0 mL (dry)
B) 5-10 mL (thin film)
C) 50-100 mL
D) 200+ mL

5. Where does the visceral pleura transition to parietal pleura?

6. What is the pulmonary ligament?

7. Why can fluid in the pleural cavity increase during inflammation?

8. Define: What is the pleural cavity?

9. Define: Is the visceral pleura sensitive to pain?

10. Define: What are pleural recesses?

Answer Key

1. B) Parietal pleura (somatic innervation) - The parietal pleura has somatic innervation and is pain-sensitive; the visceral pleura is not.

2. B) Pulmonary root (hilum) - At the pulmonary root, the visceral pleura becomes continuous with the parietal (mediastinal) pleura.

3. B) To anchor the lower pole of the lung to the mediastinum - The pulmonary ligament is a pleural reflection below the pulmonary root that supports the lower lung.

4. B) 5-10 mL (thin film) - A thin film of 5-10 mL lubricates the pleural surfaces; excess fluid is an effusion (pathological).

5. At the pulmonary root (hilum) - the region where bronchi, blood vessels, and nerves enter the lung. Here, the visceral layer continues as the mediastinal parietal layer.

6. A fold of pleura (parietal reflection) extending below the pulmonary root between the mediastinal and diaphragmatic parietal layers. It attaches the lower pole of each lung to the mediastinum and supports the lung's inferior region.

7. Normally, fluid is produced by and reabsorbed from the pleura in balance. During inflammation (pleurisy) or infection, increased capillary permeability allows fluid to accumulate (pleural effusion).

8. A potential space between visceral and parietal pleura, normally containing only a thin film of lubricating fluid (~5-10 mL).

9. No - it lacks somatic innervation. Only the parietal pleura is pain-sensitive.

10. Potential spaces at the lung borders (costodiaphragmatic and costomediastinal) that expand during inspiration, allowing deeper lung ventilation.