Spontaneous Pneumothorax

Spontaneous pneumothorax occurs due to rupture of a subpleural emphysematous bleb that leads to the accumulation of air in the pleural space. It is more common in tall and thin young males.

PLAY PICMONIC

Mechanism

Accumulation of Air in Pleural Space

Air in Space between Lungs and Chest-wall

Rupture of apical blebs causes air to accumulate in the pleural space.

Tall and Thin Young Males

Tall, Thin, and Young Male

Spontaneous pneumothorax is more common in taller and thinner (asthenic) individuals.

Bleb or Bulla Rupture

Bulb and Bull from Rupture

The mechanism for formation of these blebs or bulla is unknown but have been attributed to congenital abnormalities, inflammation of the bronchioles and disturbances of the collateral ventilation.

Underlying Disease

Underlying Diseased-villain

Spontaneous pneumothorax is more common in individuals with underlying disease of the small airways. Examples of this include interstitial lung disease, infection of the lung, lung cancer, COPD, and connective tissue diseases.

Signs and Symptoms

Hypoxemia

Hippo-blood-O2

Ventilation-perfusion mismatch can lead to decreased PaO_2.

Chest Pain

Chest Pain-bolt

Dyspnea and chest pain are the most common symptoms.

Decreased Breath Sounds

Down-arrow Muffled Lungs

Decreased breath sounds are heard due to presence of air in the pleural space.

Hyperresonance

Hiker-resonating

Increased intrapleural pressure can lead to hyperresonance on percussion.

Shortness of Breath (SOB)

S.O.B.

Dyspnea (SOB) and chest pain are the most common symptoms.