

Module Respiratory System CBL on Pulmonary Embolism

Learning Objectives

1. To learn types & mechanisms of hypoxia
2. To learn common causes of sudden onset of Chest pain
3. To learn common causes of acute shortness of breath
4. To learn mechanism of hypoxia responsible for acute pulmonary embolism

Clinical Case

A 50-year-old lady recently diagnosed with Carcinoma Breast presented to the Emergency Department with sudden onset of sharp pain in the left side of the chest just below the nipple; aggravated with inspiration. There is blood in the sputum with acute shortness of breath as well. Pulse is regular 110 beats/min with 110/70 mmHg without significant difference in both arms. Respiratory rate is 30 breaths/min. and is afebrile. She is hypoxemic with a partial pressure of arterial oxygen (PaO₂) on room air of 55 mmHg. Chest auscultation was normal with no added sound. CVS was normal. Peripheral pulses (arterial) are palpable. ECG revealed increased heart rate otherwise normal. Ventilation Perfusion Scan revealed a defect in perfusion (Q) with normal ventilation (V) (i.e. the defect is mismatched V/Q) consistent with pulmonary embolus).