

STEP 1 REVIEW

RESPIRATORY

High-Yield Clinical Presentations



MED STUDENT SUCCESS

True Learn Question Bank

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- Premature baby with respiratory distress
- Hypoxia
- CXR: Ground glass appearance

NRDS

- Smoke inhalation, Nitroprusside use, Burn victim
- Headache, N/V, SOB
- Normal PaO₂, Elevated lactate

Cyanide poisoning

- Car running in garage
- Headache, N/V, SOB, flu-like symptoms
- Elevated carboxyhemoglobin
- Normal PaO₂

CO Poisoning

- Headache, fever,
- sneezing, rhinorrhea
- Tenderness to palpation of sinuses

Rhinosinusitis

- Teenage male
- Recurrent epistaxis
- Lesion noted in the nasal canal

Nasal Angiofibromas

- Asian male
- Persistent unilateral nasal congestion, recurrent Epistaxis
- Necrotic lesion noted on the nose, associated with EBV

Nasopharyngeal carcinoma

- S/P Thoracic surgery
- Fever, tachycardia, Cloudy fluid draining from sternum
- Clicking of sternum

Mediastinitis

- FEV/FVC ratio $<70\%$
- Examples includes COPD, Asthma, Bronchitis

Obstructive lung disease

- FEV/FVC ratio $>70\%$, normal
- Examples include Pulmonary fibrosis, Sarcoidosis

Restrictive lung disease

- SOB, Cough
- Smoker
- CXR: Barrel Shaped chest with flattened diaphragm
- No improvement of $<FEV/FVC$ ratio with bronchodilator

Emphysema

- Coughing up clear sputum
- Smoker, viral, bacterial
- Reid Index >0.5

Bronchitis

- Child, SOB
- Nighttime cough and Wheezing
- FEV/FVC improves with bronchodilator

Asthma

- Productive cough with purulent sputum, occasional hemoptysis
- Recurrent respiratory infections
- CT scan shows bronchial wall thickening, dilation and mucus plugging

- Progressive exertional dyspnea, nonproductive cough
- FEV/FVC normal
- CT shows “honeycombing pattern”

- Exposure to chemicals (plastic/paint manufacturing), animal protein (bird dropping/feathers), fungi
- Dry cough, dyspnea worse with exposure
- CT shows ground-glass opacities, centrilobular nodules, air trapping

Bronchiectasis

Idiopathic pulmonary fibrosis

Hypersensitivity pneumonitis

- African American female with a persistent dry cough
- Hypercalcemia
- CXR shows hilar lymphadenopathy

Sarcoidosis

- Construction, Shipbuilding, Mining
- Dry cough, dyspnea
- CXR shows pleural plaques

Asbestosis

- Aerospace industry
- Dry cough, dyspnea
- CXR shows hilar lymphadenopathy, interstitial infiltrates

Berylliosis

- Coal miner
- Cough productive of black sputum
- CXR shows opacities in the upper posterior lung fields

Coal Workers Pneumoconiosis

- Sandblaster
- Dry cough, dyspnea
- CXR shows nodules in the upper/middle lobes and “eggshell calcification”

Silicosis

- Obese male with daytime fatigue, sleepiness
- Snoring, waking up at night

- BMI >30, daytime fatigue, excessive sleepiness
- PaCO₂ >45 mmHg while awake
- Diagnosis of exclusion

- Chronic pulmonary disease
- Dyspnea on exertion, LE edema
- JVD, Loud P2
- Parasternal heave (RVH)

**Obstructive Sleep
Apnea**

**Obesity hypoventilation
syndrome**

**Pulmonary artery
hypertension**

- Recent trip, prolonged hospitalization, immobile
- Sudden onset SOB
- Pleuritic chest pain
- Tachycardic, hypoxic

Pulmonary Embolism

- Tall male with sudden SOB
- Decreased BS, Hyperresonance to percussion on one side
- CXR shows unilateral collapsed lung

Pneumothorax

- Tall male with sudden SOB
- Hypotensive, tachycardic
- JVD
- Decreased BS, Hyperresonance to percussion on one side
- CXR tracheal deviation away from collapsed lung

Tension pneumothorax

- Post-op (mucus plug), tumor, foreign body
- Dyspnea, cough, hypoxia
- CXR increased opacity in affected lung, absence of air bronchograms

Obstructive Atelectasis

- Pneumo/Hydro/Hemothorax, Pleural effusion
- CXR increased opacity in affected lung, tracheal deviation away from affected side

Compressive Atelectasis

- Radiation exposure, ILD, Pulmonary fibrosis, TB
- Progressive dyspnea
- CXR shows fibrotic/shrunken lungs

Contraction Atelectasis

- NRDS, ARDS, Post-op (shallow breathing)
- Decreased BS, hypoxic
- CXR shows ground-glass appearance

Adhesive Atelectasis

- Fever, productive cough
- Decreased BS, crackles, dullness to percussion on one side
- CXR consolidation in affected lung

Lobar Pneumonia

- Fever, productive cough
- Wheezing, crackles heard over multiple lung fields
- CXR shows patchy consolidation around bronchi and lower lung fields

Bronchopneumonia

- College student
- Low grade fever, dry cough
- CXR shows ground-glass appearance, interstitial infiltrates

- PNA, Sepsis, Fat Embolism, Contusion
- Diffuse crackles
- CXR diffuse, bilateral alveolar/interstitial infiltrates

- Dyspnea, pleuritic CP, dry cough
- Decreased BS, Dullness to percussion
- CXR shows effusion, blunting of costophrenic angles

Interstitial Pneumonia

ARDS

Pleural Effusion

- Female, non-smoker
- Cough, hemoptysis, weight loss
- Pain, enlargement, swelling of wrist, hand
- CXR shows peripheral mass

- Smoker with cough, hemoptysis and weight loss
- High Ca, High PTHrp
- CXR shows centrally located mass

- Smoker with hemoptysis, cough, weight loss
- Moon facies, buffalo hump
- Hyponatremia
- Proximal muscle weakness
- CXR shows centrally located mass in hilum

Adenocarcinoma

Squamous cell carcinoma

Small cell carcinoma

- Smoker with hemoptysis, WL
- CXR shows peripheral mass
- Bx finding: large, undifferentiated cells

Large cell carcinoma

- Flushing, wheezing, diarrhea
- Elevated urine 5-HIAA
- CXR: central mass

Bronchial carcinoid tumor

- Asbestos exposure
- CXR shows diffuse pleural thickening, pleural plaques

Mesothelioma

- Shoulder pain
- Drooping of eyelid, miosis, anhidrosis
- CXR shows upper lung mass

Pancoast tumor

- Bilateral swelling of the face, neck and upper extremities
- Engorged veins on chest
- CXR: right hilar mass

SVC Syndrome

THANK YOU!

Questions?

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More STEP Resources: medstudentsuccess.com



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