

Bronchiectasis (Obstructive)

Pathophysiology

- **Permanent, abnormal dilation and destruction of the bronchial walls.** Cilia are damaged.
- Onset is usually early in childhood.
- **Infection in a patient with airway obstruction** or impaired defense or drainage mechanism precipitates the disease.
- Cause is identified in fewer than half of patients. Less common today due to modern antibiotics.

Causes

- **CF is the most common** (50% of cases). Infection, alpha1 antitrypsin, post-infectious (TB, aspergillus), rheumatic diseases (RA, Sjogrens), toxins, humoral immunodeficiency (abnormal lung defense), and airway obstruction.

Bronchiectasis (Obstructive) (cont)

Symptoms

- **Chronic cough** with large amounts of **mucopurulent, foul-smelling sputum.**
- Rhino sinusitis. Dyspnea, pleurisy, wheezing, crackles, clubbing.
- **Hemoptysis due to rupture of blood vessels** near bronchial wall surfaces; usually mild and self-limited but sometimes can be brisk and present as an emergency.
- Recurrent or present pneumonia. More likely to have **larger volume of sputum, recurrent fever, hemoptysis, and Pseudomonas** than chronic bronchitis.

Diagnosis

- **CT is the study of choice.** Bronchoscopy only in certain cases. CT shows **dilated central bronchi** that are larger than the adjacent pulmonary artery branches, as well as **thickening of the bronchial walls.**

Pulmonary Function Tests

- Obstructive pattern.

CXR

- Abnormal in most cases with nonspecific findings.

Bronchiectasis (Obstructive) (cont)

Treatment

- Antibiotics for acute exacerbations (infections are signaled by change in quality/quantity of sputum, fever, chest pain).
- Bronchial hygiene with hydration, **chest PT (postural drainage, chest percussion)** to help remove mucus, and inhaled bronchodilators.
- The goal is to prevent complications.
- **Corticosteroids and macrolide to reduce airway inflammation.**

XXXX

XXXX

XXXX

YYYY

YYY

YYYY

YYYY

YYYY

