

BRIEF OVERVIEW

BRONCHIECTASIS

Bronchiectasis > Definition

- Abnormal dilatation of the bronchi and bronchioles.
- It is Chronic suppurative airway infection with sputum production, progressive scarring and lung damage occur.

> Main microorganisms

- H. Influenzae
- Strep. Pneumoniae
- Staph. Aureus
- Pseudomonas aeruginosa

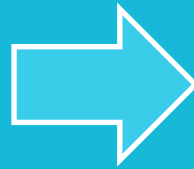
Bronchiectasis > Pathology

Congenital Defect

- Ion Transport
- Ciliary Function

Acquired

- Infection
- Toxin



**Chronic
Inflammation &
Infection**



**Permanent Dilatation
& Thinning of
Airways**

Localized

- Lymph node
- Tumor
- Foreign Body



**Accumulation of
Pus beyond lesion**



Bronchiectasis

Bronchiectasis > Pathology

- **Bronchiectatic cavities** - lined by granulation tissue, squamous epithelium or normal ciliated epithelium
- Inflammatory changes in the deeper layers of the **bronchial wall** and hypertrophy of the **bronchial arteries**
- Chronic inflammatory and fibrotic changes are usually found in the **surrounding lung tissue**, resulting in progressive destruction of the normal lung architecture in advanced cases.

Bronchiectasis > Causes

Congenital

- Cystic fibrosis (CF)
- Young's syndrome
- Primary ciliary dyskinesia (Immotile Cilia Syndrome)
- Kartagener's syndrome
- Primary hypogammaglobulinaemia

Post-infection

- Measles
- Pertussis
- Bronchiolitis
- Suppurative pneumonia
- Tuberculosis
- HIV

Other causes

- Bronchial obstruction – Tumor, Foreign body
- Allergic bronchopulmonary aspergillosis (ABPA)
- Ulcerative colitis
- Idiopathic

Bronchiectasis > Symptoms

- Cough - Chronic, daily, persistent
- Sputum - Copious, continuously purulent
- Pleuritic pain - Due to pleural involvement or Segmental collapse
- Haemoptysis - Streaks, larger volumes or rarely, Massive
- Infective exacerbation - Increased sputum volume with fever, malaise, anorexia
- Halitosis - Accompanies purulent sputum
- General debility - Difficulty maintaining weight, anorexia, exertional breathlessness

Bronchiectasis > Physical Signs

- Unilateral or Bilateral
- No signs - If no secretions and no lobar collapse
- Coarse Cracles - large amounts of sputum in the bronchiectatic spaces
- Diminished breath sounds - Collapse due to blockade by secretions
- Bronchial breath sounds - Collapse in advanced disease with scarred open bronchus
- Finger Clubbing
- Wheeze - In asthma, COPD, ABPA

Bronchiectasis > Complications

Pneumonia

Pleural effusion

Pneumothorax

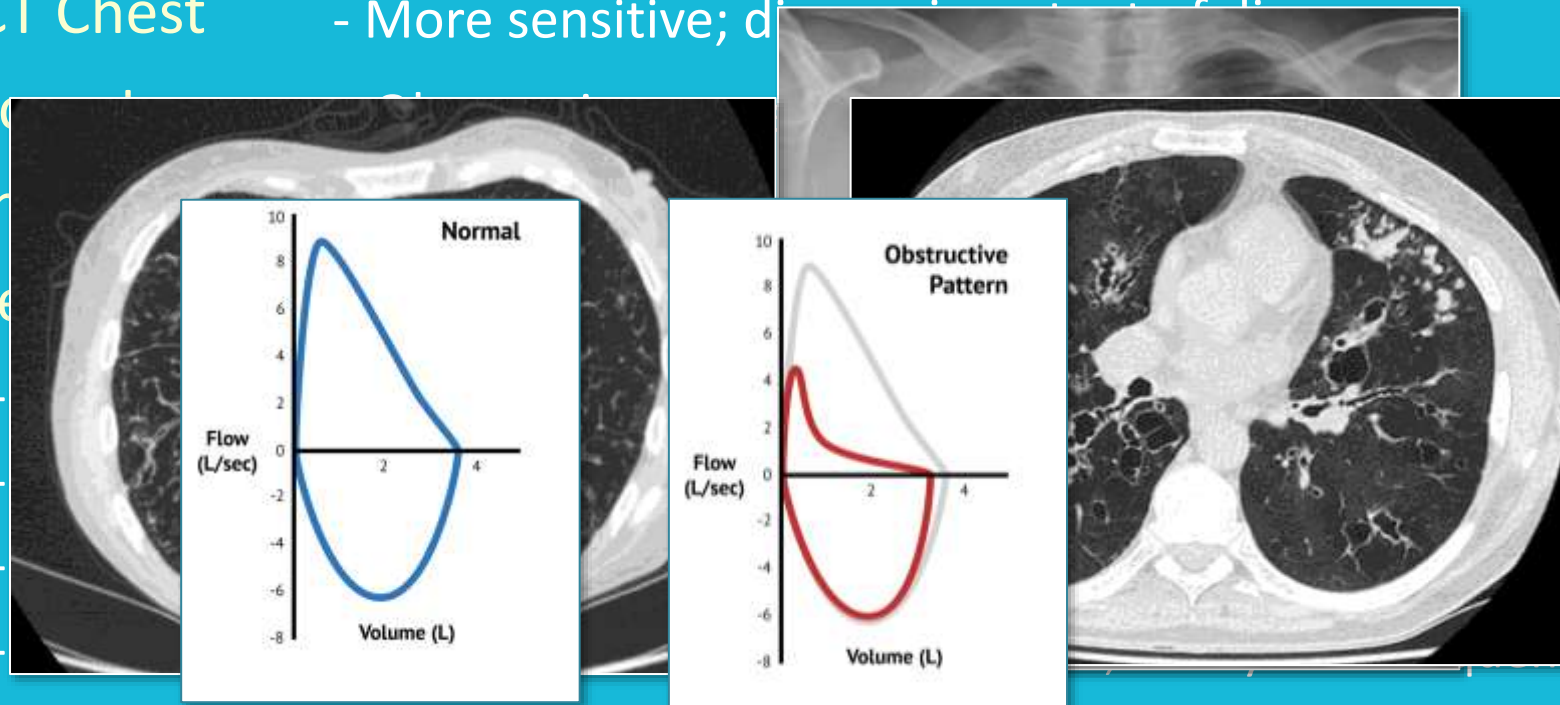
Haemoptysis

Cerebral abscess

Amyloidosis

Bronchiectasis > Investigations

- Sputum culture
- Chest X-ray - Cystic shadows; thickened bronchial walls (Tramline & Ring shadows)
- HRCT Chest - More sensitive; diagnosis of choice
- Spirometry
- Bronchoscopy
- Other investigations

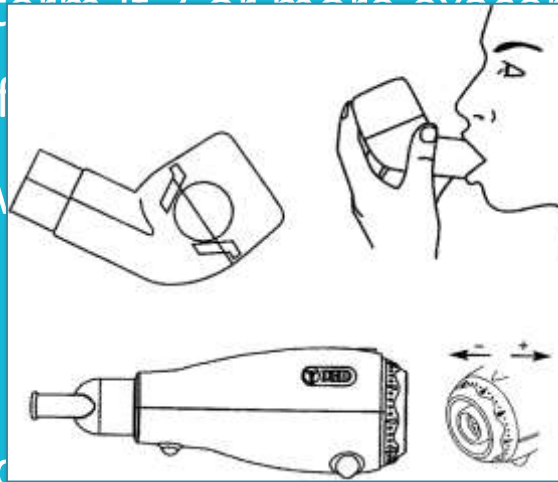


es for culture

y; Electron microscopy

Bronchiectasis > Management

- Chest Physiotherapy & Mucolytics
- Antibiotics - After Culture; long term if 2 or more exacerbations in a year
- Hemoptysis Treatment - Infliximab; embolization in severe cases
- Bronchodilators
- Corticosteroids
- Itraconazole
- Surgery - Localized disease or to control massive hemoptysis



Bronchiectasis > Prognosis

- Progressive with ciliary dysfunction and cystic fibrosis >>> respiratory failure
- In other patients, the prognosis good if physiotherapy is performed regularly and antibiotics are used aggressively

Bronchiectasis > Prevention

- Adequate prophylaxis for and treatment of childhood infections
- Early recognition and treatment of bronchial obstruction

Last Second **Medicine**

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