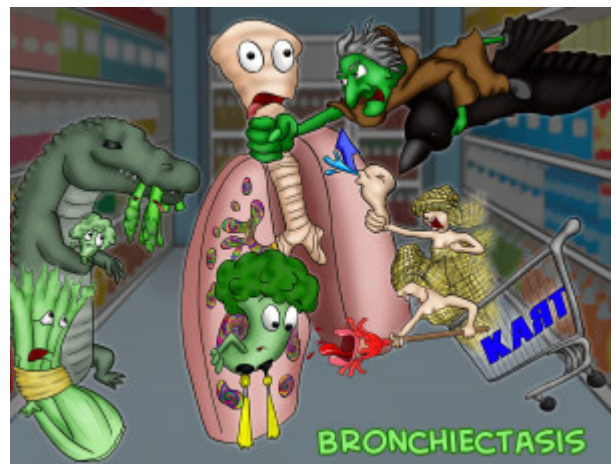


Bronchiectasis

Bronchiectasis is an obstructive lung disease caused by bronchial obstruction or chronic necrotizing infection. The subsequent muscle and elastic tissue damage permanently dilates the airways, which may trap air in the lungs and lead to collapse of the bronchioles. Bronchiectasis is associated with poor ciliary motility, a result of congenital causes like Kartagener's Syndrome, or acquired causes like smoking. Other predisposing conditions are cystic fibrosis, which impairs clearance of mucus from the airways, and allergic bronchopulmonary aspergillosis (ABPA), an immune response to *Aspergillus* fungus. Common symptoms include hemoptysis and increased purulent sputum production.



PLAY PICMONIC

Obstructive Lung Disease

Lungs Being Choked

Bronchiectasis is classified as an obstructive lung disease, where blocked air flow traps air in the lungs. This results in V/Q mismatch, increased residual volume (RV) and decreased FEV1/FVC ratio.

Chronic Necrotizing Infection

Crone Riding Necrosis Crow

Recurrent pulmonary infections or bronchial obstruction can lead to the destruction of bronchial elastic tissue and muscle.

Permanent Airway Dilation

Tie-dye Dilated Airway

Chronic infection and bronchial tissue damage may permanently dilate the airways and lead to collapse of the bronchioles.

Poor Ciliary Motility

Immobilized Celery

Congenital diseases like Kartagener's syndrome, or acquired causes like smoking may cause impaired ciliary function. Ciliary defects are often associated with chronic airway infections.

Kartagener's Syndrome

Kartagener's-kart

A dynein arm defect results in immotile cilia, which is associated with male infertility (immotile sperm), decreased female fertility and situs inversus. In addition to bronchiectasis, inability to expel bacteria and particles can lead to recurrent sinusitis.

Cystic Fibrosis

Sisters with Fibrous-sacks

Cystic fibrosis impairs clearance of mucus. Mucus plaques can obstruct airways and lead to infections characteristic of bronchiectasis.

Allergic Bronchopulmonary Aspergillosis

Allergy-alligator Eating Broccoli and Asparagus

An immune response to the airway-colonizing *Aspergillus* fungus can lead to allergic bronchopulmonary aspergillosis (ABPA). ABPA is a common predisposition for bronchiectasis.

Hemoptysis

Red-mop coughing blood

Hemoptysis is the coughing up of blood or blood-containing sputum from the lungs, bronchi, trachea or larynx. In addition to bronchiectasis, hemoptysis is a symptom of infection (tuberculosis), bronchitis, and cancer.

Increased Sputum

Spit-thumb

Chronic cough with increased purulent sputum production is a common symptom. Hemoptysis, the production of blood-containing sputum, may also occur.