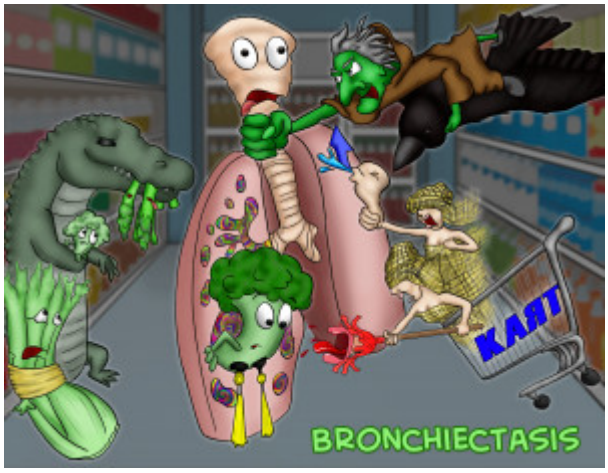
Bronchiectasis

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 (APBA), an immune response to Aspergillus fungus. Common symptoms include hemoptysis and increased purulent sputum production.



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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.

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