

Lower Respiratory Infections: Bronchitis and Pneumonia

Biomedical Engineering - URJC

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Universidad
Rey Juan Carlos

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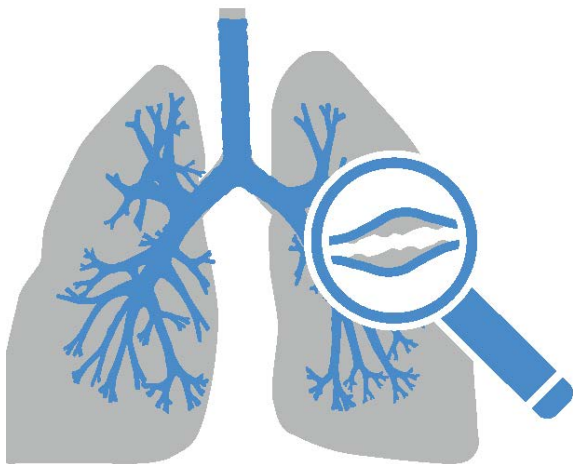
2 Lung Abscess

Bronchiectasis and Lung Abscess

Introduction

- **Bronchiectasis:** Abnormal bronchial dilation due to elastic and muscular wall destruction.
- **Lung Abscess:** Localized pus collection leading to cavitation, often caused by microbial infection and aspiration.

Bronchiectasis

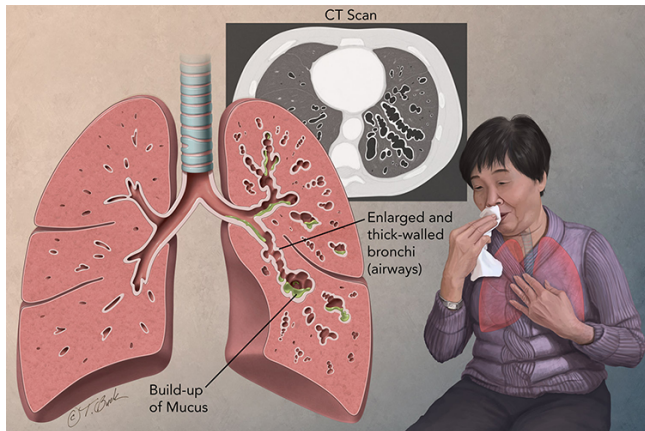


Bronchiectasis Overview

Causes and Presentation

- Definition and Causes: Destruction of bronchial wall components from recurrent infections.
- Common Symptoms: Chronic cough, mucopurulent sputum, **acropachy** o *clubbing*, and recurrent pulmonary infections.
- Diagnostic Method: High-resolution chest CT for confirmation.

Bronchiectasis



Bronchiectasis

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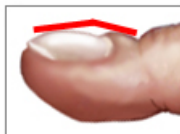
CLUBBING OF THE FINGERS



Bronchiectasis



Ángulo normal
de la uña



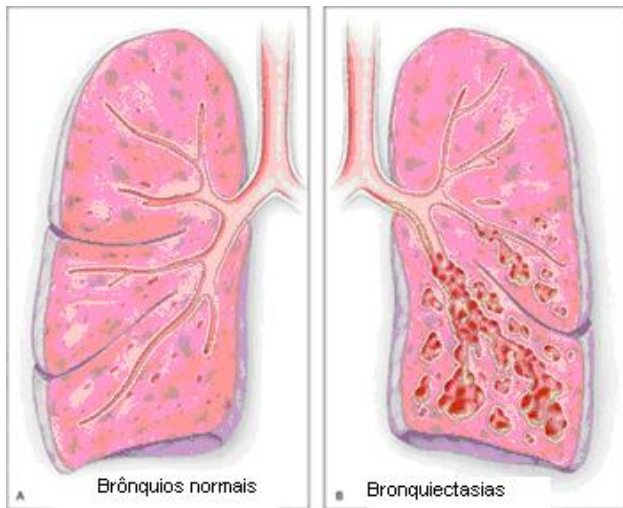
Ángulo
distorsionado
del lecho de
la uña

Dedos en palillo de tambor



ADAM.

Bronchiectasis



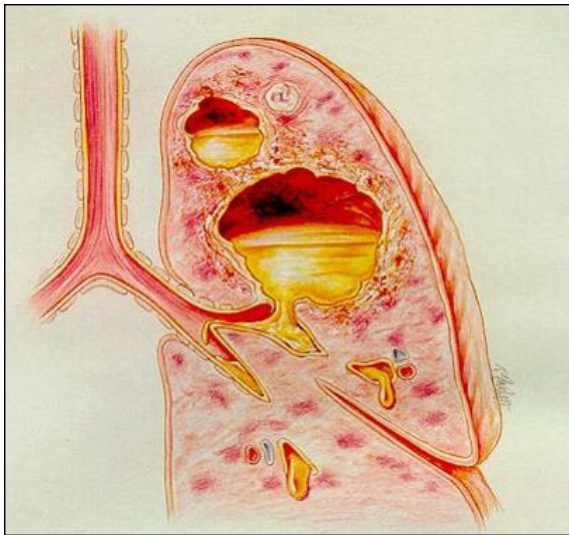
Managing Bronchiectasis

- Importance of Diagnostic Testing: Identifying underlying causes crucial for effective treatment.
- Antibiotic Usage: Three scenarios - acute exacerbations, **Pseudomonas aeruginosa** eradication, and long-term suppression.
- Airway Clearance: Daily regimen for treatment success.
- Additional Therapies: Exercise training, pulmonary rehabilitation, and self-management education.

Lung Abscess Overview

- Definition and Formation: Localized pus collection leading to cavity formation, caused by microbial infection and aspiration.
- Clinical Manifestation: Fever, productive cough, and putrid expectoration.
- Diagnosis: Chest x-ray showing air-fluid levels in cavities.

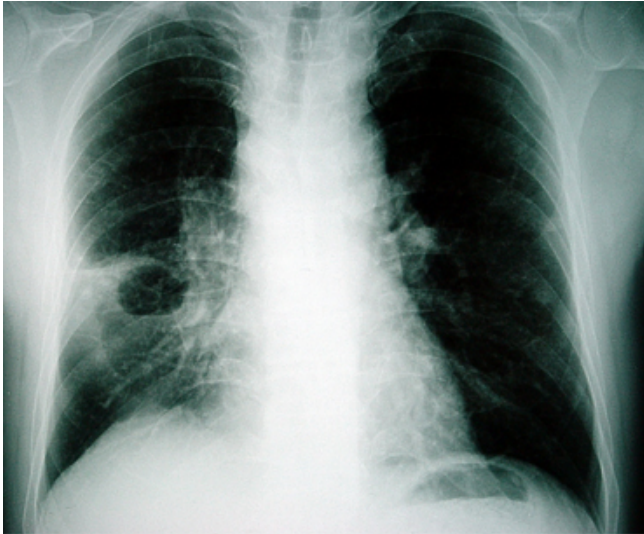
Bronchiectasis



Causes and Microbial Flora

- Aspiration of Gastric Contents: Common cause leading to microbial infection and necrosis.
- Microbial Flora: Involvement of anaerobic bacteria and microaerophilic streptococci in abscess formation.

Bronchiectasis



Managing Lung Abscess

- Antibiotics: Tailored to microbial flora, focusing on anaerobic bacteria.
- Considerations: Fever and cough management, potential need for drainage procedures.
- Surgical Therapy: Reserved for cases unresponsive to medical management, including lung transplantation.