Bronchiectasis in non-cystic fibrosis patients: clinical features, diagnosis, and management.

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Introduction

Bronchiectasis is a chronic pulmonary disorder characterized by permanent dilatation and destruction of the bronchi, leading to impaired mucociliary clearance and recurrent infections. While it is a well-recognized complication in cystic fibrosis (CF), bronchiectasis also occurs independently of CF and is increasingly diagnosed in clinical practice due to greater awareness and improved imaging modalities [1, 2, 3, 4].

Clinical Features

Non-cystic fibrosis bronchiectasis (NCFB) often presents with a chronic productive cough, daily sputum production, recurrent respiratory infections, hemoptysis, and shortness of breath. Fatigue, weight loss, and digital clubbing may occur in advanced cases. The disease may be localized or widespread and tends to follow a progressive course without appropriate management [5,6, 7].

Etiology and Risk Factors

NCFB can result from a wide range of underlying conditions including previous pulmonary infections (e.g., tuberculosis, pneumonia), immune deficiencies, autoimmune diseases (e.g., rheumatoid arthritis), allergic bronchopulmonary aspergillosis, primary ciliary dyskinesia, and airway obstruction. In a significant number of cases, the cause remains idiopathic [8, 9, 10].

Diagnosis

High-resolution computed tomography (HRCT) is the gold standard for diagnosing bronchiectasis, revealing bronchial wall thickening, airway dilatation, and a lack of bronchial tapering. Pulmonary function tests often show an obstructive pattern. Microbiological analysis of sputum is crucial for identifying colonizing or infecting organisms, particularly *Pseudomonas aeruginosa*, which is associated with more severe disease and poorer outcomes.

Conclusion

Bronchiectasis in non-CF patients is a heterogeneous and under-recognized condition with significant morbidity. Early diagnosis, identification of underlying causes, and a personalized multidisciplinary approach are essential to improve outcomes and quality of life in affected individuals. Ongoing research into targeted therapies and disease-modifying strategies continues to evolve in this field.

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