

TRACHEO-BRONCHOPATHIA OSTEOCHONDROPLASTICA A RARE CASE REPORT

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ABSTRACT

A 42 year old male, diabetic, non-smoker, alcoholic, came with complaints of productive cough and fever for 1 week. On examination, patient was tachypneic and auscultatory findings revealed reduced breath sounds over left infrascapular and infra axillary areas. Chest imaging studies showed left loculated pleural effusion with multilobar consolidation in left upper lobe, lower lobe right lower lobe with tracheobronchial wall thickening along the anterior wall causing irregular tracheal narrowing (Fig 3,4). ANA, ANCA was negative and there was no symptoms suggestive of relapsing polychondritis. Diagnostic bronchoscope revealed the presence of discrete nodules, in the anterior wall of trachea (Fig 1), following which biopsy was taken that revealed the presence of inflammatory process with foci of cartilagenous ossification (Fig 2). BAL revealed significant growth of *Pseudomonas aeruginosa*. Patient improved with culture sensitive antibiotics and follow up was uneventful.

KEYWORDS : Tracheobronchopathia Osteochondroplastica, cartilagenous ossification, discrete nodules

INTRODUCTION

Tracheobronchopathia osteochondroplastica (TO) is a rare, benign condition characterized by the presence of multiple submucosal nodules composed of cartilaginous or bony tissue within the tracheobronchial tree. These nodules typically project into the airway lumen, sparing the posterior membranous wall, as they originate from the airway cartilages.

Epidemiology and Clinical Presentation

TO predominantly affects individuals in their fifth to sixth decades of life, with a higher incidence in males. The disease often remains underdiagnosed due to its subtle or asymptomatic nature. When symptoms do occur, they may include chronic cough, dyspnea, wheezing, hemoptysis, and recurrent respiratory infections. Diagnosis is frequently incidental during imaging studies such as computed tomography (CT) scans or during bronchoscopy, which remains the gold standard for diagnosis. Bronchoscopic findings typically reveal multiple nodular protrusions into the airway lumen, preserving the posterior wall. Management strategies are generally conservative, focusing on relieving symptoms and monitoring disease progression. Bronchodilators may be prescribed to alleviate airway obstruction, and bronchoscopic interventions can be considered in cases with significant airway narrowing or obstruction. TO is considered a benign condition with a generally favorable prognosis. However, patients should be monitored for potential complications such as airway obstruction and recurrent infections.

Presentation

A 42 year old male, diabetic, non-smoker, alcoholic, came with complaints of productive cough and fever for 1 week.

On examination, patient was tachypneic and auscultatory findings revealed reduced breath sounds over left infrascapular and infra axillary areas.

Chest imaging studies showed left loculated pleural effusion with multilobar consolidation in left upper lobe, lower lobe right lower lobe with tracheobronchial wall thickening along the anterior wall causing irregular tracheal narrowing (Fig 3,4). ANA, ANCA was negative and there was no symptoms suggestive of relapsing polychondritis.

Diagnostic bronchoscope revealed the presence of discrete nodules, in the anterior wall of trachea (Fig 1), following which biopsy was taken that revealed the presence of inflammatory process with foci of cartilagenous ossification (Fig 2). BAL revealed significant growth of *Pseudomonas aeruginosa*.

Patient improved with culture sensitive antibiotics and follow up was uneventful.

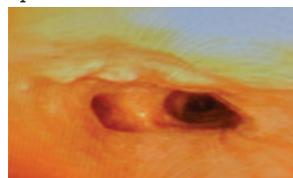


Figure 1

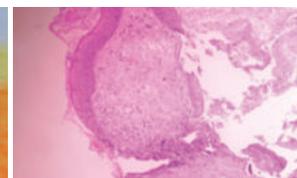


Figure 2

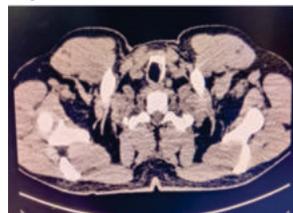


Figure 3

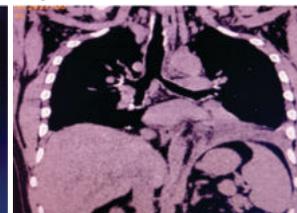


Figure 4

CONCLUSION

Tracheobronchopathia osteochondroplastica is a rare but important cause of airway disease characterized by the development of osteocartilagenous nodules in the trachea and bronchi. Its symptoms can mimic other respiratory conditions, making diagnosis challenging. Imaging, particularly HRCT, is crucial for confirming the diagnosis, and management is typically supportive, with bronchodilators, corticosteroids, and antibiotics used as needed. While TBO is often benign with a favorable prognosis, severe cases may require surgical intervention.

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