

Bronchial Atresia Presenting with Two Bronchoceles

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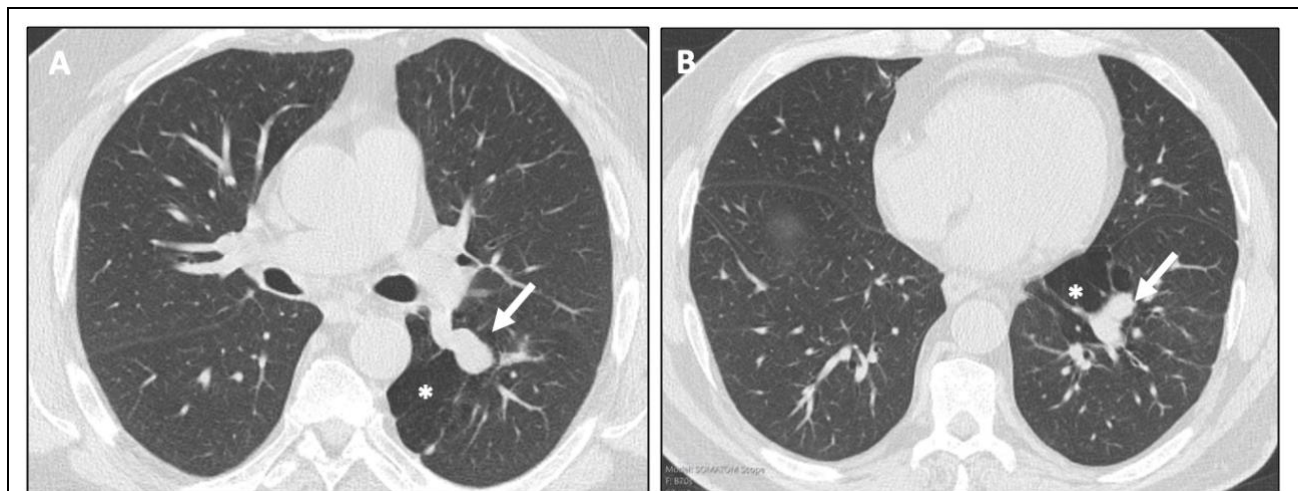


Figure 1: Chest CT axial images with branching tubular opacities (white arrows) in the superior segment (A) and medial basal segment (B) of the left lower lobe representing bronchoceles with focal oligoemic areas (*) of the adjacent lung parenchyma.

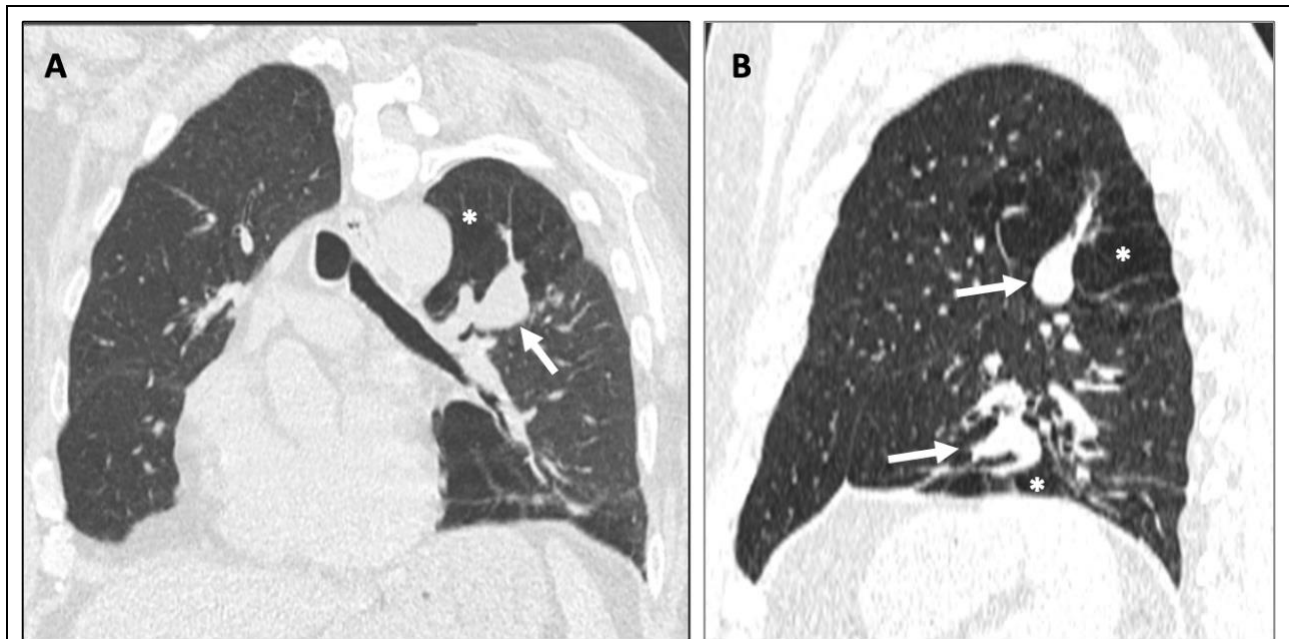


Figure 2: Chest CT reformatted coronal oblique (A) and sagittal oblique (B) images depicting branching tubular opacities (white arrows) that do not communicate with the bronchial lumen on the superior segment and medial basal segment of the left lower lobe. Focal oligoemic areas of the adjacent lung parenchyma (*) extend to the left upper lobe apicoposterior segment due to an incomplete left major fissure.

Clinical Image

Bronchial atresia is a rare congenital lung abnormality characterized by the focal obliteration of the bronchial lumen, on a lobar, segmental or subsegmental level, usually associated with peripheral mucus impaction (bronchocele or mucocele) [1,2]. It presents with adjacent segmental or subsegmental hyperinflation, and reduction of vascularization of the involved segment or lobe.

A 66-year-old Caucasian man, former smoker (40 pack-years), with past medical history of arterial hypertension, type 2 diabetes mellitus, dyslipidemia, and obstructive sleep apnea was evaluated due to snoring and insomnia. The physical examination and laboratory tests were unremarkable. The pulmonary function tests presented no abnormalities.

Chest Computed Tomography (CT) identified at the superior and medial basal segments of the left lower lobe, hyperinflation and hyperlucent lung parenchyma, with tubular-shaped opacities with no communication with the adjacent bronchial tree representing bronchoceles. The findings were consistent with bronchial atresia presenting with two segmental bronchoceles of the left lower lobe.

Bronchial atresia is a developmental lung abnormality usually presenting as an incidental finding on imaging. The presentation with two bronchoceles is uncommon. Although it may be associated with recurrent infections in 20% of the cases, most of the patients are young, asymptomatic and have no abnormalities on physical examination or laboratory tests. Chest CT is the preferred modality for diagnosing bronchial atresia [1]. Treatment is conservative in asymptomatic patients. When there is suspicion of malignancy as the cause of obstruction or complications secondary to the atretic bronchus, surgical resection may be performed [1].

Keywords: Bronchial atresia; Bronchocele; Mucocele; Congenital abnormality; Segmentary hyperinflation

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