

## Images in Allergy

### Broncholithiasis Masquerading as Asthma

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Broncholithiasis is the presence of osteoid material molded in the bronchial lumen.<sup>1</sup> It produces chronic inflammation leading to airway obstruction mimicking asthma.

A 52-year-old lifelong nonsmoker woman complained of constant, progressive, dry cough for 3 months. The patient denied precipitating factors, previous events, and aggravating or alleviating factors. Her cough was associated with halitosis, subjective weight loss, chest tightness, wheezing, urinary stress incontinence, and dyspnea. Past medical history was significant for exercise-induced bronchospasm, she denied the use of prescribed or over-the-counter medication, and the physical examination revealed expiratory wheezing.

On the basis of findings, we diagnosed asthma. The result of the methacholine challenge was positive; nonetheless, the patient did not improve after a trial of 2 dry-powder inhalers with high-dose inhaled corticosteroids/long-acting beta-agonist (fluticasone propionate/salmeterol and fluticasone furoate/vilanterol), and systemic steroids. Two episodes of pneumonia complicated her course, and a chest computed tomography performed after the second episode revealed a broncholith in the right bronchus (Figure 1). Finally, the foreign material was extracted with a bronchoscope (Figure 2), leading to complete symptomatic relief.

Most cases of broncholithiasis are secondary to chronic lymphadenitis caused by histoplasmosis, foreign body aspiration, ossified bronchial cartilage, and osteoid material migration from other parts of the body.<sup>1</sup> Patients often present with chronic cough, dysphagia, lithoptysis, hemoptysis, and recurrent pneumonias.<sup>1</sup> Often, findings in x-rays are nonspecific (hilar calcification or parenchymal infiltrates, depending on the etiology), so a computed tomography is required to diagnose, localize, and detect the degree of airway obstruction.<sup>1</sup> Clinical management is preferred over surgery because of the risk of bleeding; however, severe cases require bronchoscopic or surgical extraction.<sup>1</sup>

In conclusion, broncholithiasis can produce airway obstruction and chronic inflammation resembling asthma.<sup>1</sup> Physicians must consider alternative diagnoses in patients with atypical asthma, unresponsive to medical treatment in spite of a positive methacholine challenge test result.<sup>2</sup>

#### REFERENCES

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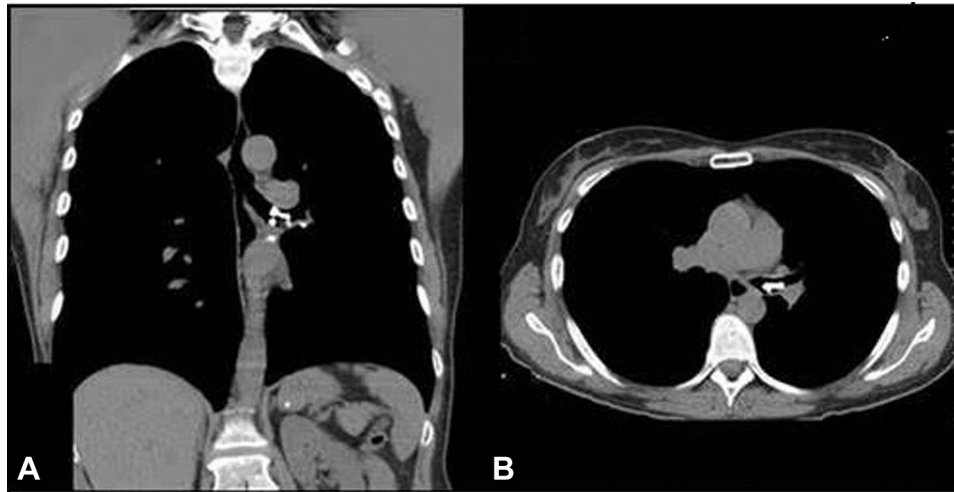


**FIGURE 1.** Chest CT with endobronchial lesion. (A) Coronal view showing endobronchial lesions at the level LC2 (Left Carina 2) and the takeoff of the upper lobe. (B) Axial CT chest view showing the same endobronchial lesion at the takeoff of the left upper lobe. CT, Computed tomography.



**FIGURE 2.** Broncholith material after bronchoscopic removal.