A 'Nail-Biting' Incident!

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Case Report

A 47-year-old male patient was referred to our institution for endoscopic diagnosis and treatment of a left main stem bronchus obstruction. He reported significant cough during the previous 6 weeks; he described the cough as initially dry and then productive of clear sputum and persistent in spite of usual cough treatment (antihistamines H1) and 2 courses of antibiotics (10-day courses of oral amoxicillin/clavulanic acid). Physical examination was normal.

His past medical history was essentially unremarkable except for a 25-pack-year smoking history.

Computed tomography of his chest revealed the presence of an obstruction of the left main stem bronchus by 2 distinct exophytic lesions (fig. 1).

A bronchoscopic examination was performed. These 2 lesions were identified on the posterior membrane of the left main bronchus, just beyond the main carina, and were apparently adhered to the mucosa by a thick yellow material of unclear nature (fig. 2).

What is your diagnosis?

Fig. 1. CT scan, sagittal view, showing 2 distinct lesions partially obstructing the left main stem bronchus (black arrows).

Fig. 2. Endoscopic visualization of the lesions connected by a thick yellow material.

Diagnosis: Aspirated Foreign Body: A Big Toenail

Resection of these 2 lesions via rigid bronchoscopy was undertaken. A foreign body was retrieved with rigid forceps and the surrounding granulation tissue was resected using the bevel of the rigid bronchoscope. The procedure was well tolerated without postoperative complications.

A pathologic examination identified the foreign body as a fragment of toenail (2 cm in length; fig. 3). Retrospectively, the patient admitted to an episode of aspiration while eating peanuts 2 months prior to presentation.

The origin of the nail remains rather obscure. One possibility is that it was included alongside peanuts at the packaging level, raising interesting concerns about compliance with strict hygienic measures in the originating factory. Alternatively, and one would hope more likely, the aspirated nail could have been the patient's, and it could have found its way into the patient's airway after falling in the peanut container. A last potential explanation could invoke onychophagia, a common disorder by which patients are inclined to compulsively trim their nails with their teeth [1, 2]. While this remains unlikely, as the size of the nail suggests that it originated from the first toe, it remains in the realm of possibilities, though it was denied by the patient. Onychophagia (literally 'eating nails') is a misnomer, as patients usually do not swallow the bitten nails unless, as is suggested by this intriguing story, they find their way into a bowl of peanuts. To our knowledge, this is the second case reporting a nail as the etiology of an aspirated foreign body in adults [3]. This

case illustrates, one more time, how some unexpected things can find their way into the bronchi [4].

Tracheobronchial foreign body (TFB) aspiration is rare in adults although incidence rates increase with advancing age [4]. Risk factors for TFB aspiration in adults are a depressed mental status or impairment of the swallowing reflex [5]. Symptoms associated with TFB aspiration may range from acute asphyxiation with or without complete airway obstruction to cough, dyspnea, choking, or fever. In adults, acute presentation is rare since the TFB is usually wedged distally in lower lobe bronchi or the bronchus intermedius. Dyspnea is uncommon in adults with confirmed TFB; it is reported in only 25% of the patients. Coughing is seen in up to 80% of cases [5]. The diagnosis of TFB in adults is complicated by the fact that patients do not always recall a history of choking. The diagnosis is frequently overlooked, except when patients report a typical choking episode or in the presence of radiopaque TFB [6]. In adults, many other medical conditions mimic breathing abnormalities similar to those associated with TFB aspiration. If the history is not suggestive, then only a high index of suspicion can ensure proper diagnosis and timely removal of the foreign body [5].

Key Words

Nail biting • Onychophagia • Foreign body • Aspiration • Adult • Bronchoscopy

Fig. 3. A big toenail 2 cm in length.

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