



# An Occult Bronchial Foreign Body Aspiration Mimicking Lung Cancer

## Akciğer Kanserini Taklit Eden Rastlantısal Bronşial Yabancı Cisim Aspirasyonu

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### Abstract

We present a case with occult bronchial foreign body presenting with hemoptysis mimicking a lung carcinoma. A 77-year-old man presented to our clinic for repeated attacks of hemoptysis for the previous four years. Computed tomography of the thorax showed consolidation in the lower left lobe. Fiberoptic bronchoscopy revealed a brownish black lesion in the proximal part of the lower left lobe bronchus with granulation tissue. It was removed and upon examination, it was found to be a piece of hazelnut.

**Key words:** Foreign body, bronchial, bronchoscopy, hazelnut.

### Özet

Akciğer kanserini taklit eden hemoptizi ile başvuran rastlantısal olarak saptanan bir bronşial yabancı cisim aspirasyonu olgusunu sunuyoruz. Yetmiş yedi yaşında erkek hasta kliniğimize son dört yıldır tekrarlayan hemoptizi yakınması ile başvurdu. Toraks bilgisayarlı tomografisi sol alt lobda konsolidasyon gösteriyordu. Fiberoptik bronkoskopi sol alt lob bronşunun proksimalinde, kahverengi-siyah renkte granülasyon dokusunun eşlik ettiği lezyon saptadı. Lezyon çıkartıldı ve lezyonun fındık parçası olduğu görüldü.

**Anahtar Sözcükler:** Yabancı cisim, bronşial, bronkoskopi, fındık.

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Tracheobronchial foreign body (TFB) aspiration is commonly seen in children, but is extremely rare in adults without an underlying predisposing factor such as neurological disorder, sedative use, alcohol consumption, and advanced age (1). It typically presents as an acute and sometimes life-threatening event. However, tracheobronchial aspiration of foreign bodies may occasionally manifest insidiously, resulting in nonspecific symptoms (2). The most important diagnostic factor leading to the diagnosis of TFB aspiration is a high clinical index of suspicion (3). It is rarely considered in adults with subacute or chronic symptoms, unless a clear history of an aspiration event can be obtained. Thus, foreign bodies can remain occult for many years (3,4). These cases are usually diagnosed as pneumonia, asthma, bronchiectasis, lung abscess, or malignancy (3-6). We describe a case with an occult bronchial foreign body aspiration with radiological appearance mimicking lung cancer.

## CASE

A 77-year-old Turkish man with repeated attacks of hemoptysis for the previous four years presented to our clinic. He was a smoker. He had been treated for Chronic Obstructive Lung Disease for two years. He did not give any history of foreign body aspiration. He had received multiple courses of antibiotics, with no improvement of his symptoms. The chest radiograph was consistent with consolidation in the left lower lobe. At our hospital, the results of the physical examination were normal. Routine biochemical analyses and electrocardiogram were within normal limits. Erythrocyte sedimentation ratio was 25 mm/hour. Computed tomography of the thorax showed consolidation on the left lower lobe (Figure 1). Fiberoptic bronchoscopy revealed a brownish black lesion in the proximal part of left lower lobe bronchus with granulation tissue. It was removed and on pathological examination it was found to be a hazelnut piece. Computed tomography of the thorax after four weeks showed a marked clearance of consolidation on the left lower lobe (Figure 2).

## DISCUSSION

A tracheobronchial foreign body may be defined as any solid object aspirated below the level of the vocal cords. The aspiration of the foreign body into the tracheobronchial tree is a serious medical problem associated with significant morbidity and mortality (2). It is the fourth leading cause of accidental deaths in children under five years of age, accounting for about 8% of such deaths (7). Although TFB aspiration can be seen in all ages, it was



**Figure 1:** Computed tomography of the thorax shows consolidation on the left lower lobe.



**Figure 2:** Computed tomography of the thorax done after 4 weeks shows marked clearance of consolidation on the left lower lobe.

reported that children younger than five years of age account for approximately 84% of cases; it is rare in adults (8). Previous reports have suggested that the leading causes of TFB aspiration in adults are altered mental status, trauma, neurological disease, neuromuscular disorders, advanced age, or dental procedures (1-3,7). The classic history of TFB aspiration is of a sudden onset of cough followed by wheezing or dyspnea. However, inhalation of TFB may cause chronic respiratory symptoms with non-specific findings on a chest radiograph or computed tomography of the thorax (2,3). The percentage of negative radiographs in patients with suspected TFB aspiration varies between 8-80% in adults (2). Furthermore, most TFBs are non-radiopaque (4). The single diagnostic factor leading to the diagnosis of TFB aspiration is a high index of suspicion. Aspiration is rarely considered in the absence of an acute clinical presentation or a high index of suspicion (2,3). In such cases, it may remain undetected for a long period. Kogure et al. (9) reported a case of bronchial foreign body retention of 39 years. Neglected foreign bodies can cause chronic res-

piratory symptoms and they are usually diagnosed as pneumonia, asthma, bronchiectasis, lung abscess, or malignancy (3-6,10). We describe a case of an occult bronchial foreign body. The patient had no acute presentation or a high level of suspicion. He presented with repeated attacks of hemoptysis for the previous four years. Because the foreign body is non-radiopaque in the chest radiograph and computed tomography of the thorax, no foreign body was detected. He had a radiological appearance mimicking lung carcinoma. Fiberoptic bronchoscopy is the gold standard for the detection of aspirated tracheobronchial foreign bodies, allowing successful removal in most cases (2,3). A bronchoscopic examination was carried out because of the suspicion of lung cancer. The bronchoscopic examination revealed the diagnosis of bronchial foreign body aspiration. The foreign body was removed by bronchoscopy.

In conclusion, occult tracheobronchial foreign body is rare in adults. It may result in radiological appearance mimicking lung carcinoma. The possibility of a bronchial foreign body should not be excluded in the differential diagnosis of radiographic lesions or chronic respiratory symptoms even in the absence of acute presentation or a high level of suspicion of aspiration.

## CONFLICTS OF INTEREST

None declared.

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