

## CASE REPORT

# Occult Aspiration of a Chicken Wishbone as a Cause of Hemoptysis

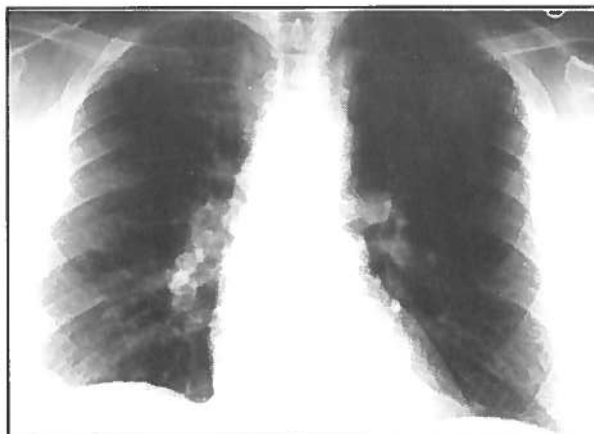
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**ABSTRACT.** Aspiration of foreign bodies is more common in children than adults. The clinical and radiological findings between these two age groups are different. It is a clinical diagnosis often overlooked in adults. We hereby present an elderly male patient who was referred to us due to a one year history of hemoptysis. He was heavy smoker, so the initial working diagnosis was malignancy. Upon

bronchoscopic evaluation, a foreign object was found which is very uncommon in adults. The unusual location of the aspirated material is another interesting feature of our case. Clinicians should be aware that aspiration of foreign objects may occur also in adults. *Keywords:* Aspiration, Foreign object, Pneumonia, Respiratory distress.

A 73 year old man with essential arterial hypertension, non-insulin dependent diabetes mellitus, angina pectoris and congestive heart failure was admitted to the Veterans Affairs Medical Center of San Juan for evaluation of hemoptysis. He was well controlled and stable of his illnesses. He was taking Norvasc 5 mg p.o. daily, Glyburide 5 mg p.o. daily, Isordil 10 mg p.o. twice a day and nitroglycerin sublingually when necessary. He complained of chronic productive cough, often accompanied by blood streaks since one year previous to admission. The patient was a 37 pack/year smoker until 19 years prior to his symptoms. He had a positive tuberculin skin test 5 years previous to the hospitalization and received prophylaxis with isoniazid for 6 months. The patient denied loss of appetite, weight loss, fever, exposure to asbestos or history of malignancy in the past. On physical examination, he was normotensive, afebrile, alert, oriented in three spheres, in no respiratory distress. He

had a normal heart rate and rhythm although a mildly prolonged expiratory phase and occasional ronchi over the left lower base were present. His abdominal exam was unremarkable. There was no edema, cyanosis or clubbing of his extremities. The patient's chest radiograph (Fig. 1) showed a parenchymal infiltrate



**Figure 1.** Initial chest radiograph showing a parenchymal infiltrate in the left lung.

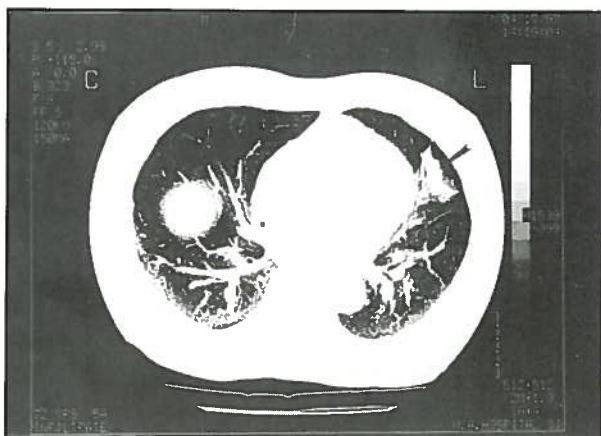
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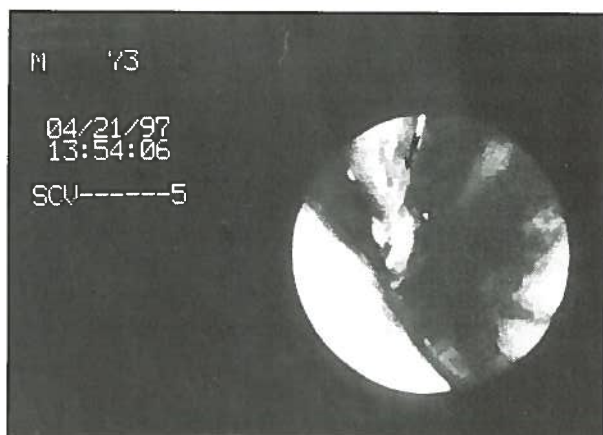
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associated to soft tissue stranding in the left perihilar region superior segment of the left lobe with involvement of the lingular segment. A chest CT scan showed the same infiltrates and a 1.5 cm precarinal nodule. No masses were identified (Fig. 2).

A fiberoptic bronchoscopy was performed and a white cylindrical object was found in the left main bronchus



**Figure 2.** Chest CT scan showing associated infiltrate and density at the superior segment of the left lower lobe (arrow).

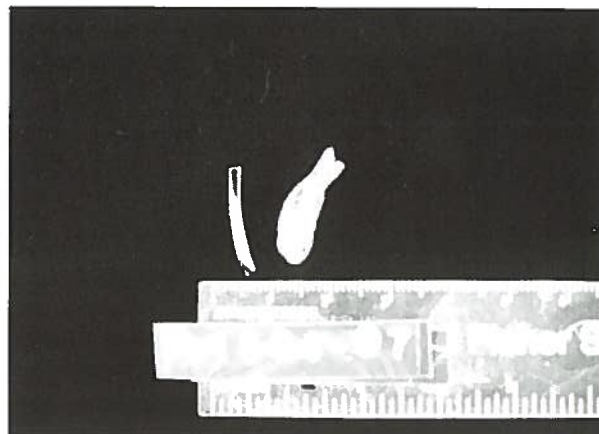


**Figure 3.** Bronchoscopic view showing a white cylindrical foreign body (arrow) in the left main bronchus.

(Fig 3). Its base was epithelialized with granulation tissue and was partially obstructing the basal segments of the left lower lobes. The area was very friable and no attempt to remove the object was made for that reason. After the bronchoscopy, the patient recalled a choking episode while eating chicken three years before.

The surgical service was consulted, and it was decided to perform a segmentectomy to remove the foreign body and thus avoid massive bleeding from the abundant granulation tissue covering it. During the surgical procedure, the left lung basal segment was removed along with a chicken bone. (Fig. 4) The pathological examination showed acute and chronic inflammation of segmental and subsegmental bronchi; squamous cell metaplasia of subsegmental bronchi, focal dysplasia with bronchiectasis; focal chronic inflammation, fibrosis and

atelectasis of pulmonary parenchyma; and fibrous pleural adhesions. The patient completed 10 days of antibiotic therapy and was discharged home asymptomatic.



## Discussion

Foreign object aspiration is uncommon in adults and often goes unnoticed (1). The medical literature reports aspiration of foreign objects that can go unnoticed for up to 40 years. Most patients present with cough, dyspnea, chest pain or hemoptysis but some are asymptomatic (2). A chronic aspirated object may mimic other diseases such as asthma (3), bronchitis, chronic obstructive pulmonary disease exacerbation and malignancy. The most common objects aspirated by adults are food particles, being peanuts the most frequent, followed by iatrogenic aspiration of respiratory and dental paraphernalia (2). Underlying neurological conditions, loss of consciousness, sedatives and alcohol ingestion may predispose to aspiration. The chest radiographs are helpful localizing radio-opaque objects. In other instances atelectasis and volume loss may be the only signs that suggest the presence of an endobronchial obstruction (4). Series in children report that up to 31% of chest radiographs are negative (3). Hyperaeration of the nonoccluded pulmonary segment has been found by others as the most prominent finding in more than a third of cases (5).

The right main bronchus is the most common site for lodgement of foreign bodies. It is reported in 52-56% of cases, followed by the left main stem bronchus in 26-39% of them (6). The reduced angulation that the right main bronchus has in relation to the trachea, makes it the preferred site for aspiration. In children, this

difference in angulation between the two main bronchus does not exist (5). Removal of the aspirated object is necessary due to the risk of developing complications such as recurring pulmonary infections, chronic cough, asphyxia, cardiac arrest, laryngospasm, pneumothorax, strictures, hemoptysis, ventilation-perfusion mismatch and bronchiectasia (2).

In children, the rigid bronchoscope is the instrument of choice for the removal of endotracheal foreign objects (2,4,7). In adults the fiberoptic bronchoscope has been used to remove these objects (2,4), although the procedure may be time consuming and sometimes not successful. The narrow aspiration channel of the flexible bronchoscope restricts the size of the forceps or snares that can be used to retrieve the object. On the other hand, its greater maneuverability allows to reach locations not accessible with the rigid bronchoscope (2). The rigid bronchoscope allows the retrieval of larger objects and facilitates the use of greater variety of forceps. Recently, a technique of gravity assisted removal with dental amalgam was reported in the literature (8). The surgical removal of intrabronchial foreign objects is reserved for patients prone to bleed when removed by bronchoscopy or in those where destruction of the lung parenchyma is advanced (2-7).

Our case shows that although uncommon, aspiration of foreign objects in adults, does occur. The unusual location of the aspiration material makes our case very interesting. In the evaluation of adults with unusual or chronic respiratory complaints, aspiration of foreign objects should be considered in the differential diagnosis.

### Resumen

La aspiración de objetos extraños en adultos es raro, y cuando ocurre, usualmente es en el pulmón derecho. El

caso que informamos trata de un adulto que aspiró un hueso de pollo y se alojó en el pulmón izquierdo. Al cabo de 3 años del evento, el paciente desarrolló hemoptisis, razón por la cual viene al hospital. Luego de una broncoscopia se determina que hay un hueso incrustado en el bronquio izquierdo el cual está rodeado por tejido de granulacion, lo que podría provocar una hemorragia masiva al intentar extraerlo. Se practica una segmentectomia logrando remover el cuerpo extraño exitosamente y sin complicaciones hemorragicas.

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