

## Unusual Intra-Bronchial Foreign Body: About a Case Report

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### Abstract

### Case Report

Tracheobronchial foreign bodies Inhalation is a frequent reason for consultation in pediatrics, but rarely seen in adults. We report the case of a 40-year-old woman, without any particular pathological history, presented for a blood-streaked purulent sputum, right subclavicular tingling chest pain and dyspnea on exertion among two days following accidental inhalation of a turkey bone. The clinical examination and the chest X-ray were normal, the chest CT scan showed a calcified foreign body in the right lower lobar bronchus. Flexible bronchoscopy allowed an extraction of the turkey bone without complications, which was located in the initial part of the intermediate bronchus. The evolution was marked by a complete recovery. Foreign body inhalation is a real emergency and its management must be fast, based on delicate extraction by endoscopy to avoid complications.

**Keywords:** Foreign body, intra-bronchial, flexible bronchoscopy, turkey bone.

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## INTRODUCTION

Accidental foreign body inhalation is exceptional in adults, rarely seen asymptomatic. The symptomatology is variable, it can be noisy asphyxiation or silent when the foreign body inhalation goes unnoticed [1]. We report the case of a patient who inhaled a turkey bone while she laughed in the middle of eat and only consulted when a respiratory symptoms appeared.

## OBSERVATION

A 40-year-old woman, with no particular pathological history, presented for a blood-streaked purulent sputum, right subclavicular tingling chest pain and dyspnea on exertion dating back to two days after an accidental inhalation of a fragment of food (turkey bone) while she was laughing in the middle of a meal and that she coughed afterwards, the patient felt a relief with cessation of the cough. It was only the next day that she consults after the appearance of the respiratory symptoms.

No abnormalities were found in the physical examination. The chest X-ray was normal (Figure 1), but in view of the strong suspicion of a penetration

syndrome, we completed by a chest computed tomography which showed a calcified foreign body in the intermediate bronchus (Figure 2).

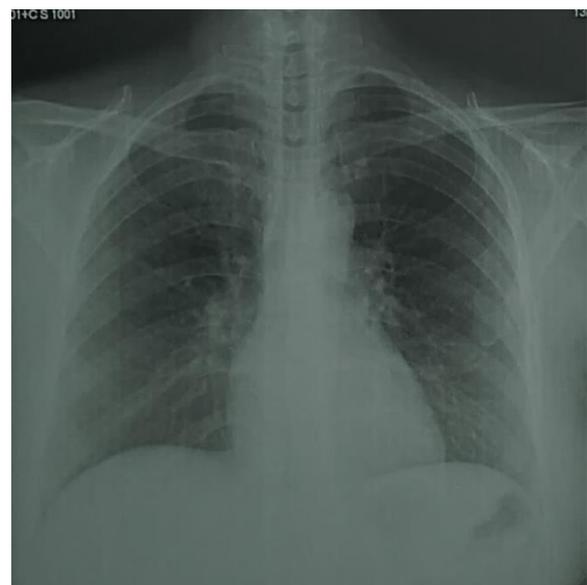
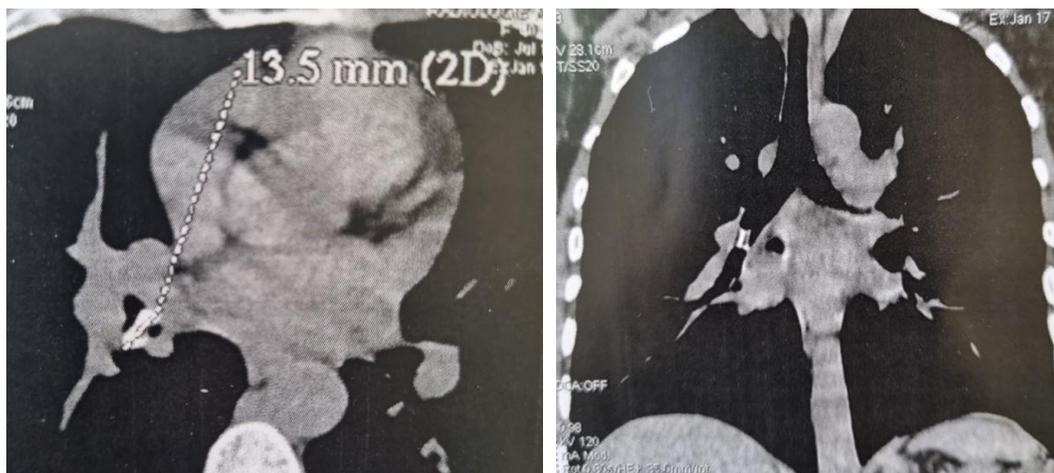


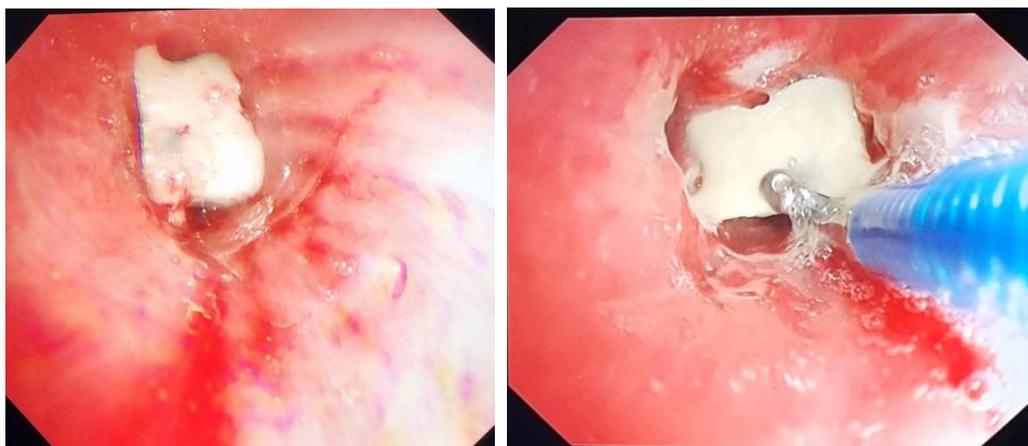
Figure 1: Frontal chest X-ray: normal



**Figure 2: Chest CT scan: a calcified foreign body in the right intermediate bronchus**

Flexible bronchoscopy showed the foreign body surrounded by purulent secretions almost completely obstructing the initial part of the intermediate bronchus and inflammation of the adjacent mucosa (Figure 3). A turkey bone was extracted without complications (Figure 4), and referred for

anatomopathological study which confirmed that it was a bony foreign body. The patient was kept on oral amoxicillin/clavulanate 1g 3 times a day for 8 days. The clinical evolution was good and the patient recovered completely from the previous symptoms.



**Figure 3: Endoscopic view of the foreign body**



**Figure 4: A turkey bone after removing by a flexible bronchoscopy**

## DISCUSSION

Accidental tracheobronchial foreign body (FB) inhalation is rare among adolescents and adults, and is generally observed after the age of sixty, due to the incidence of false routes, which may be related to neuromuscular dysfunction, psychic disorders, alcoholism, sedative use or dental trauma [2].

The FB inhaled varies according to clothing habits and dietary which can be a food product such as peanuts, coffee beans, ... as the case of our patient [1] or a metal object such as a coin, dental prosthesis or scarf pin, which is a particular foreign body that is increasingly common among women who wear the Islamic veil [2–5].

The preferential FB's location is the right main stem bronchus because of its obliquity and its caliber, which is slightly greater than the left main stem

bronchus, as was the case in several series where the right location was predominant [3–5].

The FB entry into the airway is usually marked by a penetration syndrome like our patient presented [6, 7], it can be manifested by a sudden symptoms by a coughing fit, a wheezing dyspnea, a stridor, a cyanosis, an hemoptysis. However, in some cases, when it goes unnoticed and the diagnosis is made late, it leads to chronic pulmonary diseases that can mimic asthma, or recurrent bronchopulmonary infections, atelectasis, bronchial dilatation or pulmonary abscess [8].

Chest X-ray allows easy diagnosis when the FB is radiopaque. In case of radiolucent FB, an obstructive emphysema, atelectasis, localized bronchial dilatations, pneumonia and exceptionally pneumothorax or pneumomediastinum may be seen [9]. Chest CT scan allows the diagnosis to be made when the thoracic radiography is not contributing by highlighting the intra-bronchial FB and its location.

The treatment is based on the FB removal by endoscopic way, but there is no defined consensus concerning the extraction method [7, 8]. Flexible and rigid bronchoscopy remain the best methods to diagnosis and treat the FB. Although rigid bronchoscopy is the method of choice for the FB removal in the pediatric population, in adults the choice between the two methods depends on the availability in the hospital centers and the FB size [7]. The use of thoracic surgery is reserved for complicated cases or in case of classical methods failure, in particular in case of distal migration of the small-sized FB towards the sub-segmental bronchi [10].

## CONCLUSION

Foreign body inhalation is rare but largely preventable in adults, remains a common problem in clinical practice that must be managed rapidly to avoid complications.

**Conflict of Interest:** No conflict of interest.

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