

SPONTANEOUS EXPULSION OF INTRABRONCHIAL METALLIC FOREIGN BODY: A CASE REPORT

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استنشاق الأجسام المعدنية إلى القصبة الهوائية تعد من الحالات النادرة وغالباً ما تكون عند الأطفال ، ويتطلب استخراجها في معظم الأحيان التدخل الجراحي لتفادي المضاعفات . في هذه الحالة المقدمة تم لفظ الجسم المعدني بصورة تلقائية عند شخص بالغ بعد مرور ساعتين على استنشاقه .

Inhalation of metallic foreign bodies is a rare event occurring mostly in children, and often requires early surgical intervention to avoid complications. We report a case of spontaneous expectoration of an intrabronchial metallic nail in an adult, 2 hours after inhalation.

INTRODUCTION

Foreign body inhalation, is common in children and is usually hazardous and potentially lethal. The larynx performs a very efficient sphincteric function to protect the lower respiratory tract and, therefore, it is unusual for a foreign body to be inhaled rather than swallowed.¹ In 1921, Jackson suggested that spontaneous expulsion of intrapulmonary foreign bodies occurs so rarely that removal should be performed early to avoid subsequent complications.^{2,3}

We report a case of inhaled nail into the right lower lobe bronchus with spontaneous expulsion after 2 hours.

CASE REPORT

A 23-year-old male prisoner presented to our hospital with a history of having attempted to swallow a nail while under surveillance. A struggle had ensued, and the patient had had bouts of coughing followed by right-sided and retrosternal chest pain which was relieved almost instantly. There

was no associated dyspnoea, haemoptysis or abdominal pain. He was fully conscious, alert and cooperative on arrival to the Emergency Room. Physical examination showed no abnormality. Chest roentegenogram demonstrated a curved nail lodged in the right lower lobe bronchus (Figure 1 & 2). This was confirmed by CT scan. It was decided that bronchoscopic removal would be attempted; in case it fails failed surgical removal would be adopted. During the pre-operative preparation, the patient turned on his left side, started to cough and expectorated the foreign body spontaneously. It was about 2 cm long and weighed 2.6 gm (Figure 3).

There was no post expectoration dyspnoea, haemoptysis or chest pain. He was kept for 24 hours under observation. Repeated chest roentegenogram was normal and he was discharged.

DISCUSSION

Intrathoracic foreign bodies are classified into intrapulmonary and extrapulmonary.

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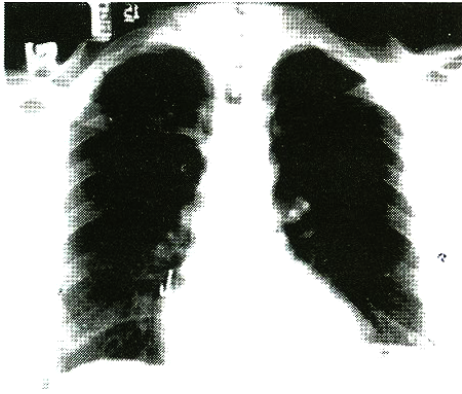


Figure 1: Radiograph of the chest postanterior film demonstrating the foreign body

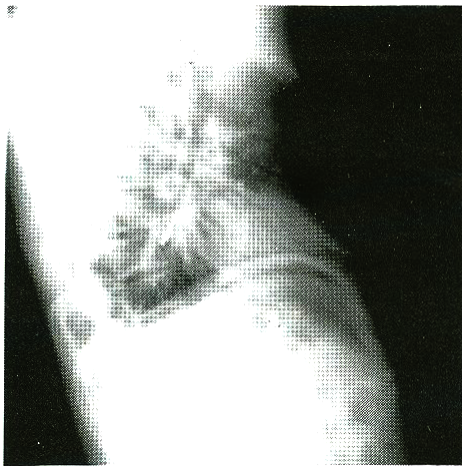


Figure 2: Radiograph of the chest lateral film demonstrating the foreign body

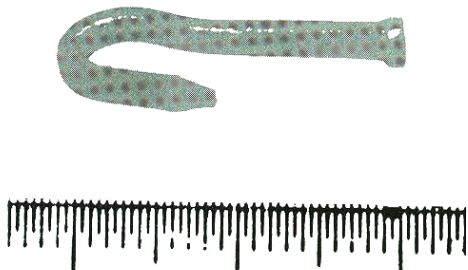


Figure 3: The expectorated foreign body

Extrapulmonary foreign bodies are usually due to penetrating injuries such as bullets or shrapnel. These are usually asymptomatic because they are encapsulated by fibrous tissue and, therefore, have minimal propensity to impinge upon surrounding structures.⁴ Bronchial erosion and migration by retained intrathoracic foreign bodies is an extremely rare event. To our knowledge there are only 5 reported cases in literature. On the other hand, intrapulmonary foreign bodies are usually aspirated most commonly by children with peak incidence between 1 and 2 years.⁵ From anatomic consideration, inhaled foreign bodies are commonly located in right bronchial system as compared to the left (Table 1).⁵

Types of inhaled foreign bodies are usually food items such as peanuts, water melon seeds etc. Metallic foreign body aspiration is rare and often requires surgical removal.

Clinical manifestations depend on type, size and location of the foreign body. The diagnosis can be immediately established as in our patient, or, it can be delayed for the weeks or months especially if the history is not clear. Such cases may present with established complication such as emphysema, atelectasis, bronchiectasis, pneumonia or lung abscess.

Roentgenograms are mandatory in establishing the diagnosis, locating the site of the foreign body and can also be helpful in demonstrating the presence of respiratory complications.

Removal of intrabronchial foreign bodies should be performed once the diagnosis is made. This can be achieved either by bronchoscopy or thoracotomy. Spontaneous expectoration of foreign bodies is rare. Since time is of essence, delay in intervention complicates the picture and makes subsequent removal even more difficult.

Table 1: Comparison of inhaled foreign bodies in the right and left bronchial systems

Site	%
Right main stem bronchus	42.0-70.0
Left main stem bronchus	18.7-32.6
Right segmental bronchi	22.0
Left segmental bronchi	3.0
Trachea	27.5
Larynx	1.0-7.5

In conclusion, extrapulmonary foreign bodies, if asymptomatic, are best left alone. Intrapulmonary ones on the other hand, should be diagnosed promptly both clinically and radiologically and early intervention is advised to avoid complications.

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