
A forgotten foreign body in bronchus

Sir,

Foreign body aspiration (FBA) is more common in children than in adults.^[1] Hence, it is rarely considered in adults unless the patient gives a clear history of aspiration.^[2] Depending on the composition of the foreign body and duration of retention in the tracheobronchial tree, inflammatory reaction in the tissue, at the site of retention may vary. Nevertheless, it should be diagnosed early so that sequelae caused by its retention are prevented.^[3] We report here a case of aspiration of a plastic whistle at the age of 12 years which was diagnosed on contrast-enhanced computed tomography (CECT) thorax 20 years later when patient presented as postobstructive collapse with bronchiectasis and secondary infection.

A 32-year-old man presented with a history of cough associated with minimal mucopurulent expectoration for 15 days and left-sided dull aching chest pain off and on for 2 years. He had a history of recurrent respiratory infections in the past. He was a nonsmoker and had no history of exposure to biomass fuel. There was no history of wheezing episodes in the past. He was an owner of a hardware shop. On examination, the only positive findings were the presence of clubbing, impaired note on percussion, and crepitations on auscultation in the left infrascapular area. His chest radiograph showed retrocardiac haziness

probably due to left lower lobe collapse and secondary infection. He was advised to get a CECT thorax after a course of antibiotics. CECT thorax showed the presence of a foreign body in the left lower lobe bronchus [Figure 1]. There was atelectasis due to fibrosis and bronchiectasis in the left lower lobe [Figure 2]. On probing, he revealed history of aspiration of a plastic whistle at the age of 12 years which he had totally forgotten as the episode had happened 20 years back. He could not recollect any major respiratory illness prior to that. Three months later, he underwent flexible bronchoscopy at his native town in Kerala for its removal which was unsuccessful and was advised surgery for the same. The patient refused surgery. Ten months later, following a violent bout of cough, the whistle got spontaneously expelled out [Figure 3]. Postexpulsion, he felt sense of relief from resistance while breathing.

Aspiration of a foreign body causes sudden onset of cough and a sensation of choking. However, once these acute symptoms subside, episode may be forgotten over a period of time.^[4] It is difficult to diagnose FBA if the patient does not recollect the history.^[5] It may remain undetected until such time when patient develops either recurrent secondary infection distal to obstruction or bronchiectasis or changes of atelectasis which leads to various investigations in search of underlying etiology.

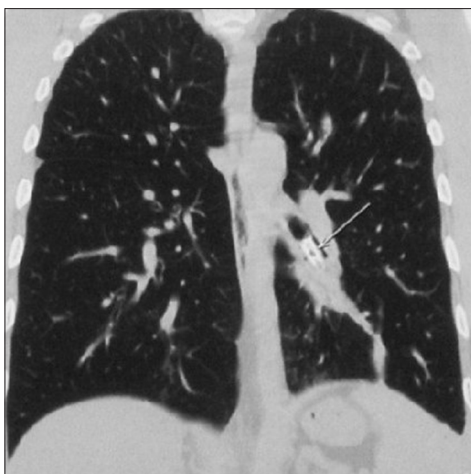


Figure 1: Contrast-enhanced computed tomography thorax showed presence of a foreign body in the left lower lobe bronchus

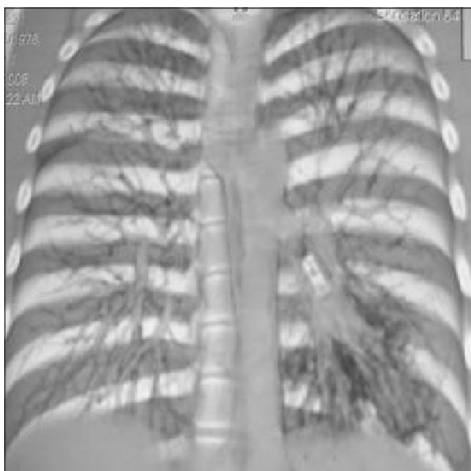


Figure 2: Computed tomography thorax shows atelectasis of the left lower lobe

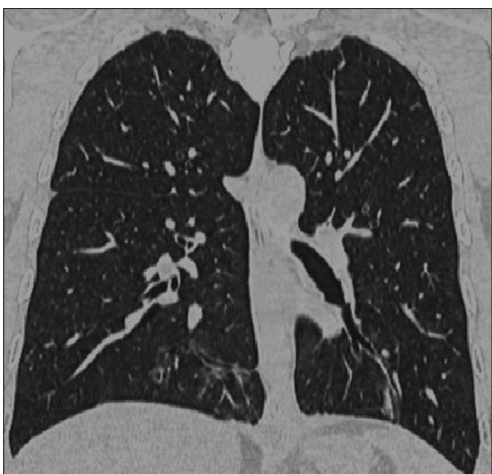


Figure 3: Left lower lobe bronchus after expulsion of aspirated whistle

The longest period of foreign body retention in an adult recorded in the medical literature is 40 years.^[2]

Aspiration of foreign bodies in all airway locations have been reported in literature.^[6]

Tissue response to a foreign body varies according to the duration of its retention and its composition. Longer the duration of its retention, more will be the granulation and impaction in the surrounding tissue.^[7] Foreign bodies comprising metal, plastic, etc., being inert will cause less inflammation of the tissue than of organic nature such as nuts and grains.^[7]

There may be delay in diagnosis due to nonvisualization of the foreign body on chest radiograph if it is not radiopaque. When suspected a chest radiograph in inspiratory and expiratory phase may aid in diagnosis by demonstrating air trapping beyond obstructed segment.^[8] Computed tomography (CT) thorax shows foreign body as dense structure within a bronchial lumen. Furthermore, secondary changes such as volume loss, bronchiectasis, and hyperlucency due to air trapping are well visualized on CT thorax.^[2] In a study by Davies *et al.*, it has been observed that in children with FBA on the left side with evidence of collapse consolidation on the initial chest radiograph, there are more chances of developing long-term complications.^[9]

In adults, the most common initial diagnostic tool used for FBA is flexible bronchoscopy. In most cases, it allows for its successful removal.^[1] Flexible bronchoscopy can also be used in patients who are already intubated at the time of initial presentation. At the time of bronchoscopy, following removal of the foreign body, a “second look” should always be undertaken to identify any additional foreign bodies, complications of FBA, and iatrogenic injuries.^[5]

Spontaneous expulsion of aspirated foreign body is a rare phenomenon and few cases have been published in literature.^[10]

This case report highlights the fact that an aspirated foreign body should be diagnosed and removed as early as possible. If forgotten and left to remain in the tracheobronchial tree for prolonged period of time, postobstructive sequelae such as bronchiectasis and recurrent secondary infection are likely to develop. In this patient, foreign body being of plastic material, the inflammation at the site of retention must have been less intense. This might have been one of the reasons for it being dislodged and eventually expelled out spontaneously.

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Conflicts of interest

There are no conflicts of interest.

Sanjivani J Keny, Uday C Kakodkar

Department of Pulmonary Medicine, Goa Medical College,
Caranzalem, Goa
E-mail: sanjukeny@dataone.in

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