

Case Report

Incidental intraoperative diagnosis of retained foreign body lung misdiagnosed as pulmonary tuberculosis

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ABSTRACT

Tracheobronchial foreign body aspiration (FBA) is a very common and lethal problem among children. It can easily be diagnosed with a typical history of choking crisis. Clinical examination and radiology play a secondary role in diagnosis. Acute choking episode may lead to death or else to serious sequels such as bronchiectasis, atelectasis, and recurrent pneumonia. Here, we report an interesting case of bronchiectasis in a young female initially thought to be a consequence of pulmonary tuberculosis, who was subsequently found to have retained foreign body in the left lower lobe lung which was the actual cause of her symptoms.

KEY WORDS: Foreign body, lung, pulmonary tuberculosis

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INTRODUCTION

Foreign body aspiration (FBA) is one of the most common and lethal problems which accounts for 7% of life threatening accidents in children aged 1–3 years.^[1-3] As it is a life threatening emergency, it requires prompt removal. However, often it may remain undetected due to atypical history or misleading clinical and radiological findings.^[3,4] Delayed diagnosis may occur when parents under appreciate the symptoms or when physicians overlook clinical and radiological findings. The diagnosis and removal of the object become much more difficult in such cases. Here, we report a case of bronchiectasis due to long-term retained foreign body left lower lobe lung which was initially thought to be as postpulmonary tuberculosis (TB) sequel.

CASE REPORT

A 17-year-old girl was referred to our hospital with chief complaints of recurrent hemoptysis for 1 year with fever off

and on. Although the history of occasional mild hemoptysis was present for the last 5 years, its frequency gradually increased to as many as 5 times in a month. The patient was referred to our institute from a Government Medical College Hospital for surgery. There she was diagnosed as a case of bronchiectasis as a posttubercular sequel. Chest X-ray and contrast-enhanced computed tomography chest confirmed the diagnosis of medial basal segment bronchiectasis of the lower lobe of left lung [Figures 1 and 2]. In spite of sputum negative for Acid Fast Bacilli (AFB), the patient had been given a full course of antitubercular therapy on daily basis for 6 months 5 years ago. Bronchial artery embolization was also done for her persisting symptoms 6 months prior to her referral to our institute. Finally, the decision of surgery was taken as there was no improvement in her symptoms. Left thoracotomy was done. Mild to moderate adhesions was found intraoperatively, and finally, left lower lobectomy was performed. Histopathological report of the postoperative specimen of the left lower lobe lung

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revealed foreign body with nonspecific changes. Retrograde history from the parents revealed the occurrence of FBA (small piece of plastic whistle) long back approximately 10 years ago when the patient was about 7 years old. The patient remained asymptomatic for next 5 years after FBA as told by parents. Positive history further added to the diagnosis of the left lower lobe bronchiectasis as a complication of long-standing retained foreign body in lung. The postoperative course was uneventful, and the rest of the lung expanded completely [Figure 3].

DISCUSSION

FBA mostly occurs in the right side of tracheobronchial tree. Zhijun *et al.* in their therapeutic experience from 1428 patients with pediatric tracheobronchial foreign body found that these foreign bodies were located in the trachea in 75 cases (5.25%), right bronchial tree in 780 patients (54.62%), left bronchial tree in 567 cases (39.71%), and bilateral bronchial tree in six cases (0.42%). Types of foreign body included peanuts (1244 cases, 87.12%), beans (93 cases, 6.51%), and others (91 cases, 6.37%).^[5] Coughing, choking, acute dyspnea, sudden onset of symptoms, and wheezing are the main features of FBA in tracheobronchial tree. Sometimes, it can subside spontaneously and quickly even when a foreign body is *in situ*. Of all these signs and symptoms, the most predictive one is witnessed aspiration associated with a choking episode (penetration syndrome). Metrangelo *et al.* had described that neither clinical signs and symptoms nor radiology has sufficient diagnostic sensitivity or specificity, on which one can rely for the diagnosis. Only the presence of choking crisis, when elicited in history, has good sensitivity and specificity (96% and 76%, respectively) in their series.^[3] FBA may lead to airway compromise and death or serious sequels such as bronchiectasis, atelectasis, and recurrent pneumonia. To prevent these complications, prompt diagnosis and removal of foreign body are mandatory.^[6,7] Whenever a choking crisis is present in the patient's history, tracheobronchoscopy is indicated without relying on other diagnostic tools.^[3] However, absence of early symptoms and radio-opaque objects should not exclude the possibility of foreign body inhalation. In this case, the reason behind not reaching the correct diagnosis preoperatively was neglecting the importance of detailing the remote history of FBA and absence of symptoms as well during aspiration. Another reason for incorrect diagnosis was confusing the sequel of FBA with that of pulmonary TB.^[8]

CONCLUSION

To conclude, FBA can be diagnosed with typical history of choking crisis itself. It is the under appreciation of symptoms of choking crisis which leads to retained foreign body. Bronchiectasis and all other long-term complications which occur after pulmonary TB can also occur due to retained foreign body lung. Hence, the importance of a proper history

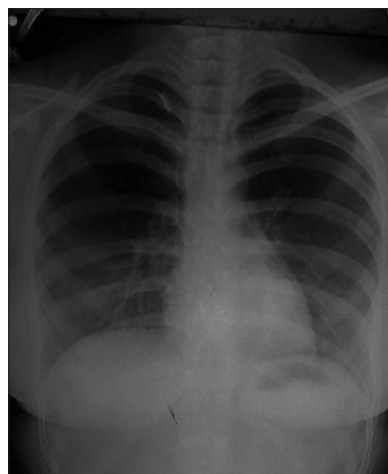


Figure 1: Preoperative chest X-ray showing left lower lobe lung bronchiectasis

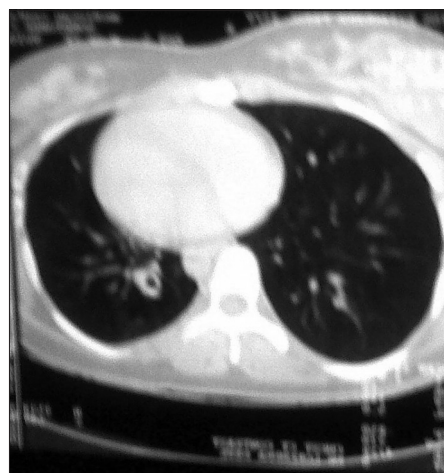


Figure 2: Preoperative contrast enhanced computed tomography chest showing left lower lobe lung bronchiectasis

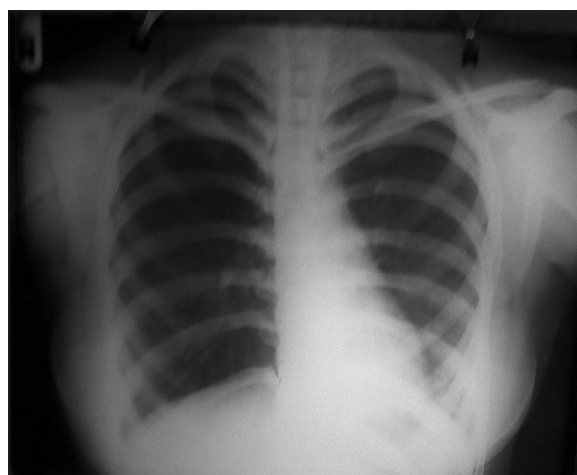


Figure 3: Postoperative chest X-ray showing expanded left lung

taking cannot be overlooked, and possibility of FBA should always be ruled out in such cases before making a diagnosis

of pulmonary TB and thus subjecting the patient to long-term and cumbersome antituberculosis therapy unnecessarily.

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Conflicts of interest

There are no conflicts of interest.

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