

A case of recurrent respiratory infection in a child due to undiagnosed foreign body

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ABSTRACT

Foreign body (FB) inhalation is a medical crisis requiring prompt intervention by a team of anesthetist and endoscopist. It is of utmost importance to ensure safety of procedure and to minimize intra and post operative complications. FB inhalation often occurs in unattended child. A high degree of suspicion on the part of clinicians substantially cut down delay in diagnosis. We are reporting a case of neglected foreign body which remained in the bronchus for five months before diagnosis was made and safe endoscopic removal was achieved.

Key words: respiratory tract infection, foreign body inhalation, endoscopy

INTRODUCTION

Foreign body (FB) inhalation is one of the most common accident in children especially in the first four years of age.^{1,2} This age group is vulnerable particularly due to inadequate dentition and immature swallowing coordination.³ Unsuspected long standing foreign body may lead to complications such as recurrent pneumonia, bronchiectasis, atelectasis and even death. The accurate diagnosis is often missed as the initial choking episode is not witnessed as in the instant case. Delayed condition may mimic asthma, URTI or recurrent pneumonia.⁴

CASE REPORT

A five year old boy was admitted in pediatric ICU in respiratory distress. Attendants furnished past history of recurrent fever and dry cough since five months. Fever was mild grade, not associated with chills, rigor or with diurnal variation. Fever subsided with medication by a local practitioner. There was no previous history of tuberculosis or asthma. Patient's heart rate was 112/min, respiratory rate-46/min and temperature- 100 °F. On percussion, there were hyperresonant lung fields in infraclavicular and mammary space. Auscultation revealed considerably reduced bilateral air entry.

Hematological investigation showed increased

total leukocyte count. Chest X-ray showed hyperinflation of lungs along with mediastinal shift. CT scan of chest revealed non-visualization of distal part of left bronchus (10-12mm). Proximal 2/3rd part (20-25 mm) of left bronchus and its division into upper and lower lobe bronchii was well visualized. Non visualization of the distal part of left bronchus could be due to mucus plug or radiolucent bronchial body which necessitated bronchoscopy for further evaluation. Diagnostic bronchoscopy under general anesthesia was planned. Patient was induced by propofol 1 mg/kg and scoline 1 mg/kg. One puff of lignocaine spray (10%) was given before induction. Glycopyrrolate 0.1 mg and antiemetic prophylaxis was given. Deepening of anesthesia was maintained with intermittent halothane. Oxygen was administered via jet ventilation by the side of bronchoscope. A blue bottom cap of a pen was retrieved successfully.

DISCUSSION

Literature strongly advocates that all patients presenting with positive history of foreign body inhalation, even when the physical finding and radiological examination is negative, must be subjected to bronchoscopic evaluation.⁵ The severity of signs and symptoms depend on the site, size, composition and period for which FB has been lodged. The rapid fatigue of cough reflex after acute choking episode due to adaptation of surface

sensory receptors is followed by asymptomatic phase which tends to create a false sense of security.⁴ Parental casualness, misdiagnosis and lack of suspicion also lead to delayed diagnosis.

Non-radiopaque FB, as in this case, is very difficult to document unless X-ray is obtained in expiratory phase where air trapping, obstructive emphysema or mediastinal shift may be evident. In cases of retained foreign body possibilities of granulation and post-obstructive infection exists. Their removal becomes difficult due to poor visualization associated with swelling, secretions, granulations and bleeding. These supplementary challenges further reinforce the need for earlier intervention. Although most patients have complete recovery after removal of FB, the risk of long term complications increases with increasing elapsed time from inhalation to diagnosis.⁶ Complications are noted in 60% of patients, who are diagnosed 30 days after aspiration.⁷

CONCLUSION

Tracheobronchial FB constitutes a serious and

potentially fatal situation. The diagnostic triad is cough, wheezing and decreased breath sound on affected side.⁸ Although the radiological findings can help to confirm the presence of FB, negative findings do not exclude the possibility. Therefore all children who present with a history of suspected FB inhalation even without clinical and radiological evidence should undergo diagnostic bronchoscopy.⁹

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