

Case report:

It was inhaled not swallowed-Neglected 5 month foreign body airway

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Abstract:

A delayed detection of foreign body airway implicated high morbidity. The longer duration of the foreign body in the lung can lead to a more sinister complication. A radiolucent foreign body, non organic foreign body and unwitnessed foreign body ingestion contribute significantly to the delay in the diagnosis of foreign body aspiration. We report a case of an undiagnosed radio opaque foreign body in the right bronchus for five months in a 8-year-old child, which the onset of foreign body ingestion was witnessed by parents. Eventually he presented with pneumonia and atelectasis.

Keyword: foreign body aspiration; tracheobronchial foreign body; long-term complications

*Bangladesh Journal of Medical Science Vol. 18 No. 04 October'19. Page : 820-822
DOI: <https://doi.org/10.3329/bjms.v18i4.42912>*

Introduction

Foreign body aspiration (FBA) is relatively less common in school-aged-children. Majority (64%) of patients with airway foreign body (FB) were between one and three years of age with decreasing frequency in older age group¹. Late diagnosis of FBA were defined as occurring beyond three days between the time of aspiration of the foreign body, or onset of symptoms, and correct diagnosis. The incidence of major complications was 95% in cases with a delay in diagnosis of over 30 days after aspirating the foreign bodies². We report a case of an 8-year-old child with FBA, from retrospective history he is positive for suspected foreign body ingestion for five months, presented with pneumonia and atelectasis.

Case report

An 8-year-old boy presented to the paediatrician with

productive cough and fever for one 1 week duration. Three days prior to presentation, the parents took the child to a general practitioner with similar complaints for which the child was started on a course of antibiotic and analgesics, but the symptoms seems not improved.

Upon examination, the child was not toxic looking but febrile and mildly tachycardic. He was not in respiratory distress and no wheezing heard. Lung auscultation revealed a reduced breath sound over basal area of right lung with no lung crepitation noted. Other systematic examination reveals normal finding.

Chest x-ray showed a radiopaque foreign body seen at the right perihilar region. Triangular opacity seen at right lower zone with loss of right cardiophrenic angle. The right hemidiaphragm is elevated with rib

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crowding at the right lower zone (Figure 1).

Further history from parents uncovered that they witnessed the child accidentally ingested a 'metal pin' five months ago while playing. Immediately after the ingestion, he had bouts of cough which resolved abruptly. No treatment was sorted as they were confident that the 'metal pin' would have been ingested and most probably had passed out in the stool as the child had been symptom free since then. Rigid bronchoscopy was performed and a foreign body (Figure 2) was successfully removed from the right secondary bronchus. Intraoperatively, there was granulation tissue and purulent discharge surrounding the foreign body. Post removal of the foreign body, the child showed good improvement with intravenous antibiotic and was discharged home well after five days.



Figure 1: Foreign body at right perihilar region with right lower lobe atelectasis

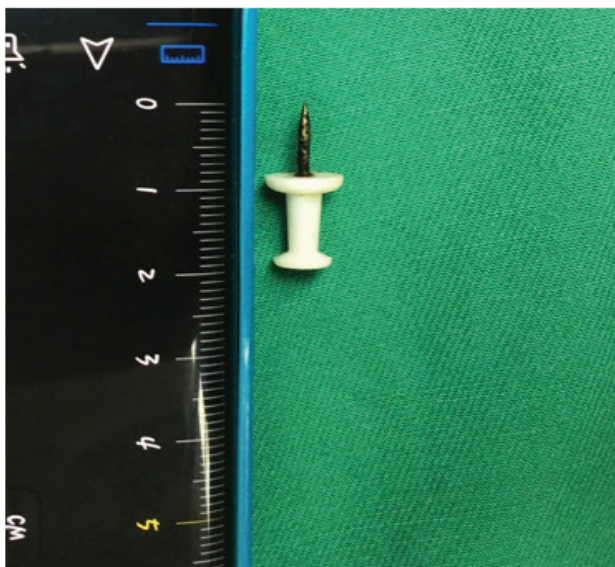


Figure 2: Thumbtack removed from right secondary bronchus

Discussion

Children under the age of three years made up about 90% of the total number of cases of FBA. In normal children more than three years old, delay in diagnosis appears to result from a failure to give serious consideration to the diagnosis as the suspicion may be absent especially among the school-age-children². FBA can be fatal if it results in acute respiratory distress or if it remains unrecognized for a long time. Extraction of chronic FB can be difficult due to intense reaction of the mucous membrane.

Undiagnosed, retained FB may also cause serious complications like pneumonia, bronchiectasis, or atelectasis. The longer it takes to diagnose FBA, the higher the morbidity. Significant incidence of complications was reported in cases that took longer than four weeks in diagnosing FBA. 60.7% presented with complications that included pneumonia, bronchiectasis, atelectasis, bronchoesophageal fistula and subcutaneous emphysema³.

There are patients who develop complications such as persistent cough and wheezing up to four weeks after removal of foreign body. The complication rate was as high as 60% in children who were diagnosed with FBA after 30 days had elapsed and bronchiectasis was a major complication in 25% of these patients⁴.

Duration and characteristics of FB affect symptoms and the outcome especially in delayed cases. Delayed arrivals and referrals followed by bronchoscopy resulted in a higher morbidity rate. The occurrence of FB inhalation may be followed by a symptom-free period. The FB remains unperceived and this leads to misdiagnosis⁵.

FBA was incorrectly diagnosed and treated as pneumonia in 27% of cases in one study. This in turn prolonged the diagnosis of FBA by a mean of 49 days than in patients with a correct initial diagnosis, even though a history of choking was often present⁶. A non organic non obstructing foreign body can be sub clinical for a period of time until there is mucosal reaction and secondary infection took place. FBA can also mimic other disease processes, leading to a misdiagnosis of pneumonia, croup, asthma, or bronchitis. Especially in a radiolucent foreign body. The common clinical symptoms are cough, dyspnea, wheezing, fever, and stridor. Chronic cough, recurrent or persistent pneumonia, unexplained fever, lung abscess, and general malaise are common presentations of chronic airway FB³.

Parental negligence is the most important factor among those that caused a delay in diagnosis of FBA. Approximately 50% of FBs were not detected

for more than 3 days, usually because the initial choking episode was not witnessed, because there were no symptoms and signs after the choking episode, or because the parents lacked medical knowledge. In some cases, parents did not notice the aspiration. They seek medical attention only when some complications such as pneumonia, bronchitis, and fever had been developed like in this case.

Conclusion

In conclusion, parental awareness is important. A witnessed foreign body ingestion which is followed by choking episodes must not be taken lightly and it needs medical attention. A simple chest x-ray will easily detect a radio opaque foreign body. A non organic, non obstructing foreign body may not give any early symptom that can lead to delay in diagnosis and subsequently high morbidity. Early bronchoscopy and foreign body removal could

prevent unwanted complications during and even after the removal of foreign body.

Ethical clearance: This case report was approved ethically from ethics committee of Universiti Sains Malaysia Health Campus, 16150 Kota Bharu, Kelantan, Malaysia.

Conflict of interest: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Individual Contribution of the Authors:

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