https://doi.org/10.29309/TPMJ/2024.31.12.8387

The Professional Medical Journal
www.theprofesional.com
2024, Volume, 31 Issue, 12

CASE REPORT

Aspiration of an unusual Foreign Body: A case report.

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Article Citation: Bukhari SMR, Mehdi H, Nadeem MA. Aspiration of an unusual Foreign Body: A case report. Professional Med J 2024; 31(12):1775-1778. https://doi.org/10.29309/TPMJ/2024.31.12.8387

ABSTRACT… Foreign body aspiration is an important cause of death in children, having a spectrum of presentations. Date seed aspiration is an unusual event and here we present a case of a 4-year-old child who was referred to our hospital after aspirating a date seed. 12 days prior to referral, the child aspirated the seed and had breathing difficulty and cough. The parents took the child to a hospital for examination and CT Virtual Bronchoscopy was done revealing FB in the right main bronchus at which point the child was referred to our hospital where bronchoscopy was done and the child recovered without any complication.

Key words: Bronchoscopy, Date Seed Aspiration, Foreign Body Aspiration, Respiratory Distress.

INTRODUCTION

Foreign body aspiration (FBA), although preventable, is a significant contributor to bring about mortality and morbidity in children. It is more common in children due to the habit of putting things in their mouths and having a weak laryngeal reflex.[1] Aspirated objects range from organic to inorganic material including nuts, seeds, plastic pieces, toys, and coins. Depending upon the location of the foreign body in the airway, the clinical presentation can vary from being asymptomatic to having a cough, respiratory distress, choking, and hemoptysis.[2] FBA is common but underdiagnosed which can lead to life-threatening complications.[1,3] Detailed history and clinical examination lead to patients that require investigations including chest X-ray and CT for diagnosis and localization of a foreign body.[4] To date, bronchoscopy remains the mainstay for managing a foreign body.[3] We present an unusual case of date seed aspiration in a four-year-old child.

CASE REPORT

A 4-year-old child was admitted through our emergency department on 19-08-24 with a history of foreign body (date seed) aspiration 12 days back. Initially, the child was brought to another hospital by his parents after aspirating date seed and had difficulty breathing and a cough. Vital signs were normal. On physical examination, reduced breath sounds and air entry on the right side was found. CT Virtual Bronchoscopy was done showing a foreign body at the right main bronchus measuring 19mm in length and 6.4mm in width having an attenuation value of 178HU with relatively increased lucency of the right lung. No evidence of consolidation, bronchiectasis, or pleural effusion was found on either side (Figure-1). After the diagnosis of FB in the right bronchus, the child was referred to the ENT department of Nishtar Hospital. At that point, there was no active respiratory distress or cough. The child was afebrile with normal vital signs. On examination, diminished breath sounds over the right lung were found with other systemic examinations being within normal limits. The CBC report at our lab was within normal limits except MCHC 31.50 g/dL slightly low and high RDW 47.80%. Anti HCV screening was done and Anti HCV and HbsAg were negative. CXR showed small opacity in the right associated with opacification of the

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Article received on: 12/09/2024
Accepted for publication: 13/11/2024

right lung predominantly in the right hilar/perihilar location concerning collapse. Mild haziness was seen in the rest of the visualized lung along with compensatory hyperinflation of the left lung (Figure-2). IV antibiotics given were Ceftriaxone 500mg B.D, Dexamethasone 0.5cc B.D and 15ml of Paracetamol TDS. Bronchoscopy was done after 2 days and the date seed (Figure-3) was removed without any complication. Suctioning was done and recovery was uneventful. Post-op, the child was given Plab-M 500ml stat, Paracetamol 15ml IV TDS, Dexamethasone 0.5cc IV B.D, and nebulization therapy was continued with Ipratropium bromide. Intravenous antibiotics were given for a total of 3 days. Post-operatively physical examination was done and air entry was found equal on both sides, which was previously reduced on the right side. Further investigations were not deemed necessary. The child was discharged one day after bronchoscopy. Upon discharge, the child was active and feeding well. On follow-up after 15 days, the child was well.

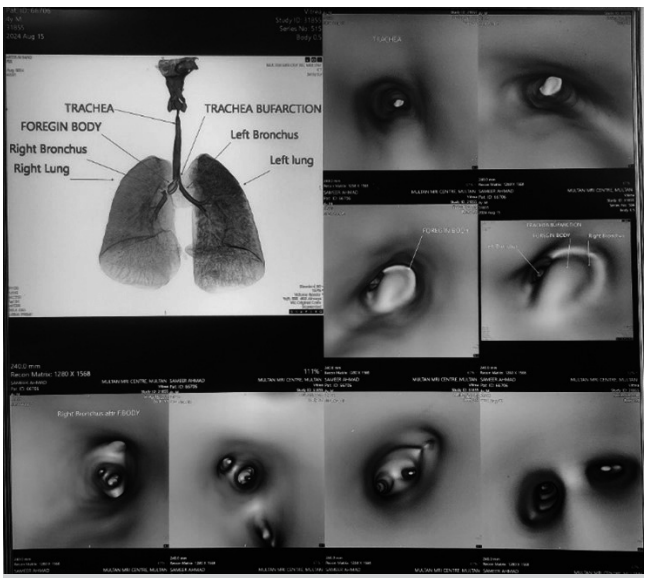

Figure-1. CT Virtual Bronchoscopy showing foreign body at the right main bronchus

Figure-2. Chest Xray AP view showing small opacity in right main bronchus with opacification & mild haze over right lung

Figure-3. Date seed specimen removed by bronchoscopy

DISCUSSION

Foreign body aspiration (FBA) is a very common condition prevalent in children between the ages of one and two years comprising 60% of the cases but less common in ages >3 years which are about 10%,[5] which is most likely related to accidental aspiration. The most common sites of lodgement include the right main bronchus (40.2%), followed by the left main bronchus (28.4%), trachea (14.1%), and larynx (8.4%).[3]

Our case involved a 4-year-old child who aspirated a date seed, a rare occurrence as dates are less commonly ingested compared to other foreign bodies like coins.[6] The seed was found lodged

into the right main bronchus, which aligns with the typical site of lodgement in FBA cases.[7]

The child initially presented with difficulty breathing and coughing immediately, consistent with the typical signs of FBA, which include choking, dyspnea, and coughing.[8] However, by the time the child was referred to our hospital, there were no such symptoms. On examination, the diminished breath sounds over the right lung persisted.

The foreign body irritates and can trigger an inflammatory response, leading to congestion and edema of the tracheobronchial mucosa depending upon the type of FB; worse in organic than inorganic FB.[9] In this case, the date seed, being organic, posed a significant risk due to its potential to induce severe pneumonitis and other complications but despite its organic nature and 12 days having passed since the aspiration, the child did not develop any complication.

CXR showed a small opacity in the right main bronchus with opacification of the right lung concerning collapse and CT Virtual Bronchoscopy revealed a foreign body lodged in the right main bronchus with no evidence of bronchiectasis or pleural effusion, suggesting that the inflammatory response was not severe.

The child underwent bronchoscopy two days after admission, which provided detailed information about the foreign body's location and its impact on the surrounding structures, and the date seed was successfully removed. Postoperatively, the child received intravenous antibiotics, corticosteroids, and nebulization therapy to manage any residual inflammation and to ensure smooth recovery. Despite the date seed being of considerable size as shown in Fig. 3 the child did not have any pre, peri, or post-op complications.

FBA can sometimes be misdiagnosed as other respiratory conditions such as asthma, pneumonia, or upper respiratory infections, leading to delays in appropriate management.[4] In this case, the timely referral to our hospital and the use of CT Virtual Bronchoscopy facilitated accurate diagnosis and prompt treatment.

The use of bronchoscopy in this case underscores its critical role in the management of FBA.[2] Furthermore, this case highlights the importance of early recognition especially the use of virtual bronchoscopy, and appropriate intervention in cases of FBA, particularly when the presentation may be subtle. The successful management of this child, by the use of bronchoscopy and appropriate postoperative care, resulted in a favourable outcome, with the child being discharged in good health and showing no complications on follow-up.

CONCLUSION

Foreign body aspiration being underdiagnosed requires a detailed history for early diagnosis and prompt treatment which can prevent life-threatening complications. Physicians should be aware of rare presentations and supervision of children can help prevent the situation altogether. Each case of FBA has its own challenges but bronchoscopy remains the choice of treatment.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

SOURCE OF FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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