

Case Report

An unusual presentation of a “foreign body in oesophagus” for over 6 months in a child

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Abstract

A 4-year-old male child with a history of chronic cough over 6 months was admitted to ENT unit. He was diagnosed to have a foreign body oesophagus on X-ray chest, which he ingested 6 months ago. He had been treated for cough many times and the diagnosis was made after he underwent oesophagoscopy and bronchoscopy. CT showed an oesophageal foreign body eroding in to the trachea with tracheoesophageal fistula formation. The foreign body was removed via thoracotomy, a 6-hour surgery involving a thoracic surgeon, a paediatric surgeon and an ENT surgeon. The child had an uneventful recovery after 6 days in ICU.

Keywords: Foreign Body, Esophagus, Thoracotomies

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Introduction

Foreign body impaction in the digestive tract can present in many ways. Still identification as a 'foreign body impaction' may be a challenge. Non-identification can lead to lethal complications. We report a case in which a child had a foreign body in the oesophagus for over 6 months.

History

A 4-year-old male child was brought by his parents to the ENT ward, Lady Ridgway Hospital for children with the complaint of a foreign body in a chest x-ray (incidental finding). There was no clear history of foreign body ingestion, dysphagia or odynophagia. The child was treated for a non-resolving cough for over 6 months. He had been treated by many general practitioners with antibiotics, anti-histamines, steroids and bronchodilators but the cough continued. He was then seen by an ENT surgeon and advised to take a chest x-ray, and was found to have a foreign body in the oesophagus.

He was admitted and underwent a planned oesophagoscopy and bronchoscopy. There was a metal bobbin in upper thoracic oesophagus and the anterior wall of oesophagus was eroded. Bronchoscopy revealed the other part of bobbin was in trachea with tracheal wall erosion.

The child recovered from anaesthesia and was subsequently admitted to the ICU. He was ventilated with a tracheal tube passed beyond the perforated level of trachea.

Later a planned combined surgery was performed by, a Thoracic surgeon, paediatric surgeon and an ENT surgeon and the foreign body was removed via thoracotomy. The trachea and oesophagus were repaired with a pleural patch and tissue glue. The child recovered after a week of ICU stay.

Discussion

Foreign body impaction in aero-digestive tract is not an uncommon presentation to paediatric ENT unit. In children, it is common in less than 4 years^[1]. The impaction can be at any level. If it aspirated or obstructed at the glottis the patient experiences difficulty in breathing, and cough. Complete obstruction leads to death^[2]. Bronchial obstruction leads to a hyperinflated lung due to the 'ball valve' action of the foreign body.

Considering the oesophagus, it is common to get obstructed at the narrowings of the oesophagus at the cricopharyngeus, aortic arch, left main bronchus and the lower oesophageal sphincter level^[3]. Clinical features may vary from an asymptomatic state as in this child to a complicated state such as mediastinitis.

This child had no obstructive symptoms. The bobbin was placed in such a way, that food passed through it. Due to the pressure effect, the oesophageal wall and the tracheal wall underwent necrosis. Once the bobbin partially migrated in to the trachea, respiratory symptoms started to develop. (The serosal layer provides stability due to its elastin and collagen. There is no serosa layer in oesophagus.)

Oesophageal perforation can give rise to features of mediastinitis^[4] but, in this child it was absent probably due to the fact that he was regularly treated with antibiotics for his cough. Also, the pathological process of perforation is slow allowing the mucosa to grow and to form a fistula which may have further mediastinitis. Furthermore, the space provided by the bobbin might have allowed food material to pass down to the stomach rather than in to mediastinum.

Radiography plays a major role in diagnosis of unusual airway presentations at the otorhinolaryngology clinic. As in the case of this patient, no one thought about imaging even though it was a chronic cough. A chest x-ray is a primary investigation and very informative. If the foreign body is radiopaque and large enough it can be

seen clearly. Conditions such as pneumomediastinum, subcutaneous emphysema, pleural effusion, pneumothorax, gas under the diaphragm also can be seen^[5].CT and contrast studies gives detailed information about the disease.Water soluble contrast study is used widely as the first line of contrast investigation. Gastrograffin is also being increasingly used. It is less toxic and excreted via the renal route. Barium on the other hand can cause severe inflammation and mediastinitis.

On the suspicion of a foreign body oesophagoscopy can be performed but, if there is a long standing history, the best decision is not to remove the foreign body without proper evaluation. If we had attempted to remove the foreign body without a bronchoscopy and CT scan, the outcome could have been fatal because of chemical mediastinitis and bleeding in to trachea.

When deciding treatment options it is always better to have a multi-disciplinary decision and approach. As the airway and oesophagus is shared by many specialties.

Conclusion

Even though foreign body oesophagus is a straight forward diagnosis in the ENT setup, it can present in a totally different manner. In any unusual presentation, meticulous investigation is more important rather than immediate surgical extraction. A high degree of clinical suspicion, imaging and a multi-disciplinary approach are the mainstay of management in such cases.

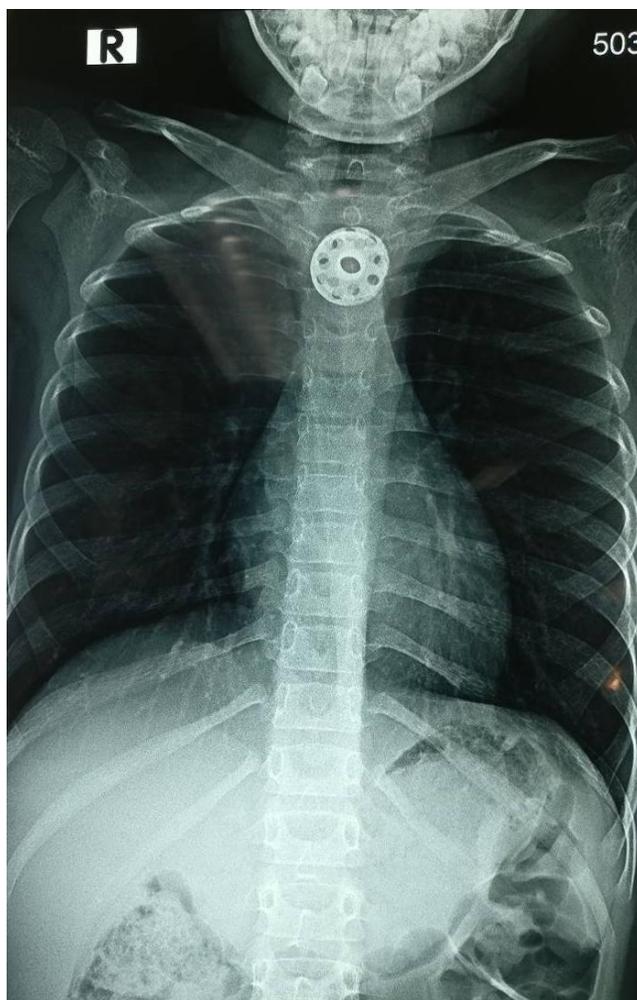


Fig 1- X ray PA view showing bobbin in oesophagus



Fig 2 - Bobbin with two flanges

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