

Oesophageal Foreign Bodies: How common is the problem?

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ABSTRACT

Aim: To determine the types and frequency of oesophageal foreign bodies in a tertiary care hospital.

Methods: This was a prospective study carried out in the department of Otolaryngology and Head & Neck Surgery, Hayat Abad Medical Complex, Peshawar, Pakistan between January 2010 and December 2012. All cases were thoroughly evaluated including history, head and neck examination and imaging immediately before surgery.

Results: A total of 63 cases were included in this study. Out of which 28 (44.4%) patients were children and 35 (55.5%) were adults. Coin was the most common foreign body in the pediatric population (82.1%) whereas meat bolus were the commonest ones (91.4%) in adults. In the pediatric population the commonest site of impaction was upper esophagus (92.8%) whereas upper and mid esophagus were the commonest site (65.7%) in adults.

Conclusion: Coins being the commonest foreign bodies in children are relatively easier to remove due to their higher location and less chances of trauma. While in the adults, meat bolus and bones being the commonest foreign bodies are difficult to remove due to chances of trauma to esophagus.

Key words: Foreign body; Oesophagus; Rigid oesophagoscopy

INTRODUCTION

Foreign body stuck in the oesophagus is a common entity in emergency practice. Small children have a common curiosity of putting objects into their mouth when they find them.¹ It is even difficult for them to control the foreign body because of lack of posterior dentition. Foreign body in adults is mainly accidental.² People with deranged mental status might ingest a foreign body that might get stuck for a prolonged period as a neglected one.³ Although common in children, they are not uncommon in adults.⁴ Recurrent episodes of foreign body impaction are common due to structural anomaly in the oesophageal lumen or compression from outside the lumen.² Coins are the commonest foreign bodies in children while dentures, meat bolus and bones are more common in adult population.³ If these foreign bodies are not removed in time they may result in a no of complication in form of dysphagia, esophageal stenosis and even oesophageal perforation. Battery cell is very notorious because it has chemicals which enhance foreign body reaction with subsequent complication.⁵ This study was carried out to determine the incidence and varieties of foreign bodies stuck in the oesophagus in paediatric and adult population that presented in our hospital.

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PATIENTS AND METHODS

This was a prospective study carried out in the department of Otolaryngology and Head & Neck Surgery, Hayat Abad Medical Complex, Peshawar, Pakistan between January 2010 and December 2012. All the patients of any age and either sex where foreign body was retrieved from oesophagus were included while those cases where no F.B found on oesophagoscopy were excluded from study. The study was approved from hospital ethical board and well informed consent was obtained from all patients prior to oesophagoscopy. All cases were thoroughly evaluated including history, head and neck examination and imaging immediately before surgery. The imaging technique was X-ray soft tissue neck antero-posterior and lateral views for all the patients. The operative procedure was rigid oesophagoscopy and foreign body removal under general anaesthesia for all the patients. Data was collected on a proforma and analyzed using SPSS 11.6.

RESULTS

A total of 63 cases were included in this study. Out of which 28 (44.4%) patients were less than 15 years and 35 (55.6%) patients were above 15 years of age. Mean age of the patients in paediatrics and adult groups were 7.7±4.23 years and 43.05±20.64 years respectively. The age of the patients was ranging from 6 months to 79 years. There were 41 males and 22 females with male to female ratio of 1.8:1. Rigid

oesophagoscopy was performed in 63 patients and it was successful to remove the foreign bodies. In three of the paediatric populations, foreign bodies were removed with Magill's forceps. Coin was the most common foreign body in the paediatric population and was seen in 82.1% of cases. Plain X-ray showed a circular radiopaque shadow in the postero-anterior view. Bone was seen in 10.7% cases whereas ear ring was seen in 1.5 % cases. In the paediatric population, 92.8% of all the foreign bodies got stuck in the upper oesophagus while in adults 62.85% were stuck in upper oesophagus. Similarly, 7.1% of the foreign body was stuck in the mid oesophagus in the paediatric population and 42.8% in adult population. In the lower oesophagus there was 8.5% of foreign body stuck in adult population whereas no such incidence was noted in paediatric population (Table 1).

Table 1: Site of impaction of foreign bodies in adult and paediatric population (n = 63)

Site of foreign body	Children		Adults	
	No.	%	No.	%
Upper oesophagus	26	92.8	22	62.8
Mid oesophagus	2	7.2	10	28.6
Lower oesophagus	-	-	3	8.6



Fig 1: P/A view of neck showing coin stuck in upper esophagus

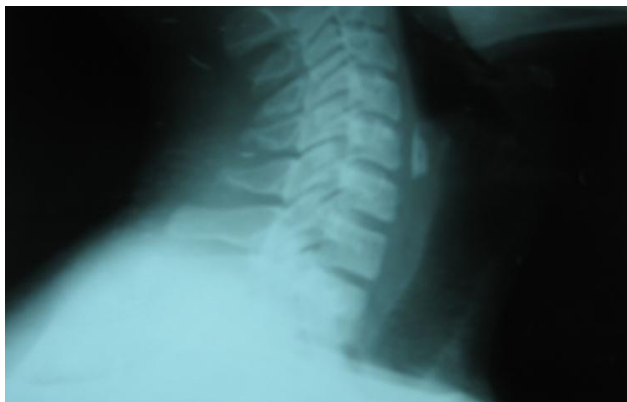


Fig 2: X-Ray neck lateral view showing bone stuck in upper esophagus

DISCUSSION

In the paediatric population, coins were the most common foreign bodies in our series seen in 82.1% of cases. In many paediatric series coins were the commonest foreign body in the oesophagus with the range of 76-88%^{1,5,6}. Contrary in the adult population meat bolus was the most common foreign bodies that retrieved from the oesophagus. Most of the studies in the adult population have shown that meat bolus and bones are the most common foreign bodies to be impacted in the esophagus.^{2,4,7} In 91.4% of our adult populations, foreign bodies in the oesophagus were bones. Other foreign bodies were denture, food particle and ear ring.⁸ Neglected foreign bodies are also not uncommon in the paediatric population. Children having the common habit of putting things in their mouth will swallow the foreign body that might get stuck in the oesophagus without being noticed by the parents.⁹ In our study, a child of 13 months was brought with a neglected foreign body in the oesophagus. The child was drooling most of the times and was not showing interest in sucking his mother's milk for one week.¹⁰ In the paediatric population, 92.8% of all the foreign body got stuck in the upper oesophagus while in adults 62.8% were stuck in upper esophagus.¹¹ Similarly, 7.2% of the foreign body was stuck in the mid oesophagus in the paediatric population and 28.5% in adult. In the lower oesophagus there was 8.6% of foreign body stuck in adult population whereas no such incidence was noted in paediatric population.⁸ Overall 76.19% of all foreign bodies got stuck in the upper oesophagus, 19% in the mid oesophagus and 5% in the lower esophagus.¹² Upper oesophagus was the commonest site of foreign body impaction. A review of 400 cases of foreign body oesophagus has also described findings similar to our series.¹³ This might be due to the fact that coin becoming more flat and oesophagus being narrower, coins might have been impacted at the cricopharyngeal junction. Coins being at a higher level were easier to remove. Bones being sharp were difficult to remove than coins. Similarly meat bolus become slippery and become difficult to be hold with forceps. Bones can cause trauma to oesophagus but the coins do not cause trauma. Most of the foreign bodies (92.8%) in children were located in the cricopharyngeal junction (upper oesophagus) and thus were relatively easier for removal.¹⁴ Repeated foreign body ingestion is common in pre-existing narrow oesophageal lumen or mentally impaired persons¹³. Parents or caretakers have to be much careful in these situations. They should suspect the foreign bodies when there is difficulty in swallowing

and drooling of saliva basically in mentally retarded individuals¹⁵.

CONCLUSION

Coin being the commonest foreign bodies in children, are relatively easier to remove due to their higher location and less chances of trauma while in the adults, meat bolus and bones being the commonest foreign body and difficult to remove due to the lower location and chances of trauma.

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