

EMBEDDED SHARP METALLIC ANGULATED NAIL IN OESOPHAGUS OF AN INFANT: A MATTER OF CONCERN

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ABSTRACT

INTRODUCTION

Foreign bodies in esophagus can cause serious complications so they need urgent intervention to avert complications. We report here a case of 8 months old child who accidentally ingested a angulated nail with sharp end which was treated and foreign body was removed by oesophagoscopy. The peculiarity of this case concerns with shape, size and location of foreign body and age of the patient.

KEYWORDS

Foreign body, Esophagus, Infant, Nail, Sharp.

HOW TO CITE THIS ARTICLE: Rohila V, Bhuie HS, Mathur N et al. Embedded sharp metallic angulated nail in esophagus of an infant a matter of concern. J Evid Based Med Healthc 2015; 2(59), 8983-85. DOI: 10.18410/jebmh/2015/1272

INTRODUCTION: Foreign body in the oesophagus is not an uncommon entity. The peak incidence of such ingestion is between 6 months and 3 years old.¹ Various types of foreign bodies are reported. Foreign bodies in food passage are more common than air passage. Although majority of foreign bodies ingested pass down spontaneously, foreign bodies that are sharp, pointed and large in size need to be removed to avert serious complications.² We highlight the urgent need of diagnosis and management of these cases with endoscopic accessories and technical artistry in safe retrieval of foreign body in children. Foreign body ingestion in childhood is a frequent and frightening experience to parents and caregivers. Foreign body in childhood have serious and fatal outcome. It is unusual for infants to ingest sharp foreign bodies.³ We present here an unusual case of ingested sharp angulated iron nail in oesophagus by a 8 months old child.

CASE REPORT: An eight month old child presented to our department with history of ingestion of sharp foreign body. Patient was restless and unable to eat and drink after ingestion of foreign body. Soft tissue neck (Antero posterior and lateral view) and chest radiograph revealed an angulated radio-opaque foreign body in front of the pre-vertebral space at the level of C₄-T₁.

The patient was worked up for oesophagoscopy and foreign body removal was done under general anaesthesia. Intra-operatively sharp end of nail was found embedded in posterior oesophageal wall.

Submission 27-11-2015, Peer Review 28-11-2015, Acceptance 02-12-2015, Published 24-12-2015.

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DOI: 10.18410/jebmh/2015/1272

The sharp end of nail was released using rotatory movement while with crocodile forceps cautiously from the mucosa, the sharp end was brought into the lumen of the oesophagoscope and nail was removed. Post-operative recovery was unremarkable.

DISCUSSION: Unintentional foreign body ingestion is seen frequently in children and is a widespread problem all over the world. The majority of cases in children are between 1 month and 6 yrs.⁴ The coins, marbles, keys, toys, buttons, batteries and rings are some of the common foreign bodies ingested by the children.⁵ Whereas in an adult it occurs more commonly among those with psychiatric disorders, or mental retardation, prisoners and alcoholics.^{6,7}

The foreign body usually lies close to one of the three oesophageal anatomical constrictions: the cricopharyngeal ring, the aortic arch narrowing or the oesophageal-gastric junction.⁵

Angulated foreign bodies tend to be trapped in the proximal oesophagus. Penetrating or sharp foreign bodies are more dangerous as they tend to get buried in the mucosa of the oesophagus or perforate it with disastrous consequences.⁵ To confirm diagnosis of foreign body of the oesophagus radiography is necessary. X-ray soft tissue neck (AP and Lateral view) and chest radiograph are important diagnostic tools, especially in defining the location of the foreign bodies. A barium swallow X-ray study could be useful in cases of non-radio-opaque foreign body, but due to risk of barium aspiration and irritation of damaged oesophageal mucosa, this procedure is no longer used. MRI scan can be used in suspected or radio-lucent foreign body and to confirm location and injury to nearby structures.

Once a foreign body is diagnosed the otorhinolaryngologists have to decide the mode of intervention and degree of urgency. The urgency depends on the increased risk of perforation, mediastinitis or aorto-

oesophageal fistula.² Perforation of the oesophagus can occur immediately after a sharp object has entered the oesophagus. Perforations are more likely due to prolonged impaction of the foreign bodies. Children's are more susceptible for perforation due to thin oesophageal wall.³ Sharp objects require urgent intervention, since complication can be as high as 35%. In our case, patient was 8 months old and sharp object is there, so risk of perforation is high. Perforation can be suspected by a linear shadow of gas along the oesophagus.³ Case merits discussion on account of the mode of ingestion of a large sharp angulated nail in an 8 months old baby. Nevertheless it highlights the importance of parental/adult supervision in childhood and hazards of leaving infant unattended. It thus becomes important for all health personnel to propagate the concept of child care. (i.e. care provided by an individual outside nuclear family or in a setting separate from child's home) as an important factor to prevent aerodigestive tract foreign body emergency in the vulnerable paediatric age group.⁸

Impaction of sharp objects may result in perforation while attempting to remove it. Oesophagotomy has been advised for impacted foreign bodies in infants.³ In our case we used rigid oesophagoscopy, and removed foreign body using alligator forceps. We strongly recommend that whenever a foreign body is seen embedded in oesophageal wall, it should not be pulled as such, as it may cause injury to wall. Instead of pulling it, first it should be dislodged cautiously by rotatory movement and then gently removed with oesophagoscope with sharp end turned inside the oesophagoscope. Hollinger.⁹ described different methods like ensheathing, bending or rotating the sharp ends of foreign bodies to remove endoscopically.¹⁰

Rigid oesophagoscopy under general anaesthesia and foreign body removal using forceps is preferred modality of management in children.^{2,11} Delay or hesitation in performing endoscopy can result in life-threatening complications and irreparable damage. Open surgery is considered inevitable only when perforation or aorto-oesophageal fistula is present or endoscopic removal is dangerous.⁵



Fig. 1: X-Ray neck and chest A P view



Fig. 2: X-Ray neck lateral view



Fig. 3: Foreign body

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