Case Report

DOI: http://dx.doi.org/10.18203/2349-2902.isj20194092

Impacted foreign body in oesophagus video assisted thoracoscopic surgery approach

Raj Gajbhiye, Bhupesh Tirpude*, Vikrant Akulwar, Hemant Bhanarkar, Aashish R. Chavan

Department of Surgery, GMC, Nagpur, Maharashtra, India

Received: 23 June 2019 Accepted: 06 August 2019

*Correspondence:
Dr. Bhupesh Tirpude,

E-mail: btirpude@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Ingested foreign body in oesophagus is very common in emergency department. The most frequently ingested foreign bodies in children are coins, alkaline batteries while in adults' meat, fish bones, denture. Most of the ingested foreign bodies pass spontaneously but 1% or less will require surgery. Here we report an interesting case of a mentally retarded young girl with impacted large stone in the lower oesophagus in whom endoscopic approach had failed. Then video assisted thoracoscopic surgery was done successfully to extract the impacted foreign body. A thoracoscopic approach is much safer and feasible in such cases.

Keywords: Impacted, Foreign body oesophagus, Video assisted thoracoscopic surgery

INTRODUCTION

Foreign body (FB) ingestion is an everyday occurrence and a common emergency presentation. Many ingested FBs become impacted, often in the oesophagus, and have the potential to cause serious complications, apart from significant distress to the patient and family.

It begins with an overview of the types of objects usually encountered and their usual impaction sites at the time of presentation, and then formulates an approach towards such patients.

CASE REPORT

Here we report an interesting case of a 29 years old girl was brought to emergency department from mental asylum complaining of retrosternal chest pain and episode of vomiting immediately after meal intake with history of foreign body ingestion 1 day back. We did X-ray of this patient (Figure 1) suggestive of large foreign body in lower esophagus. Endoscopic removal was failed

because it was large and impacted at lower oesophagus with mucosal edema and hard in consistency.

A video-assisted right thoracoscopy in the prone position was performed to remove the foreign body. Three ports were used: 10 mm optical port below angle of scapula and two working port four finger apart on each side. In thoracoscopy there was bulging due to foreign body at lower oesophagus (Figure 2). The esophagus was opened longitudinally for approximately 4 cm and the impacted stone was removed under direct thoracoscopic view using an endograsper, and enveloped in a plastic bag. The edges of the esophagomyotomy were closed with a double-layer running suture of bradded absorbable suture 3-0 including the mucosa and the muscle layers. The mediastinal pleura were then approximated with a running suture. The plastic bag containing the stone (Figure 3) was removed from the anterior trocar site by slightly enlarging the incision. The postoperative course was uneventful. A gastrographin swallow study performed on postoperative day 3 showed a regular esophageal transit and the absence of leaks. He was discharged well from the hospital on postoperative day 8. At the 6-month follow-up visit the patient was doing very well without any complaint in swallowing.



Figure 1: X-ray chest lateral view suggestive of large foreign body lower in esophagus.

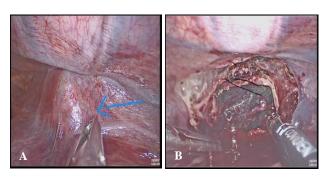


Figure 2: (A) Thoracoscopic approach with foreign body at lower esophagus; (B) THOracoscopic view of oesophagotomy and removal of stone.

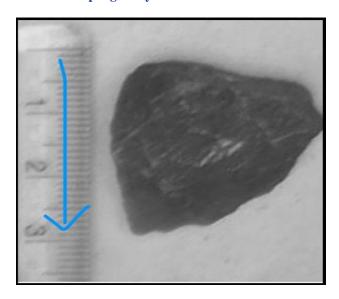


Figure 3: Large foreign body of 3×4 cms stone.

DISCUSSION

A wide variety of esophageal foreign bodies are seen in clinical practice. Coins are the commonest overall and the commonest single type in children, while bones comprise the bulk of FBs in adults and elders. Other objects regularly seen include meat, cartilage, dentures, bezoars, fruit stones, toys, batteries and buttons. Among the more dangerous ones are batteries, needles, safety razors, dentures with wires, spring coils and pieces of glass. Factors that predispose towards greater risk of esophageal FB impaction include male gender, underlying esophageal stricture, neuromuscular disease (myasthenia gravis), external and mechanical factors, ankylosing spondylitis, mental retardation, psychiatric illness, (as in our case), use of dentures. 1,3,4,5

While some ingested FBs may be aspirated, most are either regurgitated or pass through the gastrointestinal tract without causing any complications. The lodgment site has been found to be influenced by age, FB type and duration of ingestion, as well as certain individual pathological conditions like stricture, stenosis, fistula, etc.^{1,4} Overall, 28-68% of gastrointestinal FBs are found in the esophagus. The most frequent lodgment site in childreen is at the level of the cricopharyngeus muscle (which is the narrowest part of the esophagus), and in adults it is at the lower esophageal sphincter or at the site of any predisposing lesion. 1,4 Since most of the presentations are in children the overall commonest site of FB presentation in the esophagus is in its upper third. 1,4,8 The individual characteristics of the ingested body also determine the lodgment site. Large and rigid FBs tend to lodge in the pyriform fossa and esophagus.⁷ While fish bones are usually found in the pharynx, coins and impacted meat are usually in the proximal and distal parts of the esophagus respectively. Aspirated objects often consist of nuts or seeds.

The most critical aspect of dealing with these patients is treatment.

There are a variety of management options available. These include flexible endoscopy, rigid endoscopy, Foley catheter removal, esophageal bougienage, forceps extraction and surgery apart from a few other innovative practices. While esophagoscopy may be the most popular approach, every technique has its advantages and limitations and the eventual decision is usually a result of personal and local preferences.

In literature, few cases of thoracoscopic removal of ingested foreign bodies have been reported.⁸

In our patient foreign body was large hard and impacted at lower oesophagus hence it was difficult to remove with endoscopy hence we opted for video assisted thoracoscopic approach for removal of impacted large foreign body.

CONCLUSION

In large and impacted foreign bodies video assisted thoracoscopic approach was better, safe and feasible. In the era of minimal access surgery video assisted thoracoscopic surgery should be consider as one of the approach for such foreign body. Further data and study needed for its efficacy and feasibility.

Funding: No funding sources Conflict of interest: None declared Ethical approval: Not required

REFERENCES

- 1. Al-Qudah A, Daradkeh S, Abu-Khalaf M. Esophageal foreign bodies. Eur J Cardiothorac Surg. 1998;13(5):494-8.
- 2. Sittitrai P, Pattarasakulchai T, Tapatiwong H. Esophageal foreign bodies. J Med Assoc Thai. 2000;83(12):1514-8.
- 3. Macpherson RI, Hill JG, Othersen HB, Tagge EP, Smith CD. Esophageal foreign bodies in children: diagnosis, treatment, and complications. AJR Am J Roentgenol. 1996;166(4):919-24.

- 4. Baraka A, Bikhazi G. Oesophageal foreign bodies. Br Med J. 1975;1(5957):561-3.
- Abdullah BJ, Teong LK, Mahadevan J, Jalaludin A. Dental prosthesis ingested and impacted in the esophagus and orolaryngopharynx. J Otolaryngol. 1998;27(4):190-4.
- 6. Hawkins DB. Removal of blunt foreign bodies from the esophagus. Ann Otol Rhinol Laryngol. 1990;99(12):935-40.
- 7. Uba AF, Sowande AO, Amusa YB, et al. Management of oesophageal foreign bodies in children. East Afr Med J. 2002;79(6):334-8.
- 8. Palanivelu C, Rangarajan M, Parthasarathi R, Senthilnathan P. Thoracoscopic retrieval of a "smiling" foreign body from the proximal esophagus. Surg Laparosc Endosc Percutan Tech. 2008;18:325-8.

Cite this article as: Gajbhiye R, Tirpude B, Akulwar V, Bhanarkar H, Chavan AR. Impacted foreign body in oesophagus video assisted thoracoscopic surgery approach. Int Surg J 2019;6:3421-3.