Middle East J Dig Dis. January 2023;15(1):57-59

doi 10.34172/mejdd.2023.321 http://mejdd.org

Middle East Journal of Digestive Diseases MEJDD

Case Report

Intentional Ingestion of a Foreign Body – Why We Need Psychiatrists

Ashish Chauhan[1*], Vishal Bodh[1], Rajesh Sharma[1], Brij Sharma[1]

[1]Department of Gastroenterology, Indira Gandhi Medical College, Shimla, India

Abstract

Foreign body ingestions are common medical emergencies. In adults, foreign body ingestions occur in patients with psychiatric disorders and prison inmates. A majority (80-90%) of foreign bodies pass spontaneously. Endoscopic and surgical interventions are required in only 10-20% and 1%, respectively. A plain radiograph may be the only diagnostic test required. A computed tomography scan may be needed when a perforation is suspected. Food boluses are the most commonly ingested foreign bodies. Snare and rat tooth forceps are frequently used accessories for the retrieval of foreign bodies. The focus of the emergency team is on the management of an acute case of foreign body ingestion, and the psychiatric aspect of the disease gets often ignored.

Keywords: Intentional foreign body ingestion, Recurrent ingestion, Endoscopy, Psychosis, Schizophrenia

Cite this article as: Chauhan A, Bodh V, Sharma R, Sharma B. Intentional ingestion of a foreign body – why we need psychiatrists. *Middle East J Dig Dis* 2023;15(1):57-59. doi: 10.34172/mejdd.2023.322.

Received: January 21, 2022, Accepted: October 11, 2022, ePublished: January 30, 2023

Introduction

Foreign body ingestion is one of the common emergencies encountered by gastroenterologists. Most (80-90%) of foreign bodies pass spontaneously. Endoscopic and surgical interventions are required in only 10-20% and 1%, respectively.[1] Adults presenting with foreign body ingestion frequently have psychiatric ailments, mental retardation, alcohol intoxication, or do this for secondary gain.[2] Intentional foreign body ingestions and repetitive ingestions occur commonly in patients with psychiatric diseases. Managing these patients can be difficult, as underlying psychiatric pathology needs to be treated to prevent a recurrence. We report a case of a young man with an intentional ingestion of a long metallic foreign body, which extended from mid-esophagus to stomach with an esophageal luminal breach that was retrieved endoscopically.

Case Report

We report a case of a 23-year-old young gentleman, a known case of schizophrenia presenting with a history of ingestion of some foreign body 17 days back. He complained of dysphagia and odynophagia and did not have any history of chest pain, fever, or shortness of breath. He had poor compliance with treatment for schizophrenia. He had a normal hemogram, and renal and liver function tests. His chest radiograph was suggestive of a foreign body extending from the D3-D4 intervertebral disc to the D12 vertebral body (Figure 1A and 1B). Gastroduodenoscopy revealed a long metallic foreign body in the esophagus. The proximal end of the foreign body caused a luminal breach in the mid esophagus leading to fistula formation, and its distal end was lying at the greater curvature of the stomach (Figure 2A and 2B). The foreign body was grasped with a rat-tooth forceps and gently pushed into the stomach after dislodging it from its proximal end. Then, the foreign body was retrieved using a rat-tooth forceps. The metallic foreign body had a length of approximately 20 cm (Figure 3). The patient was kept on a nasogastric tube feeding to allow the healing of the fistula. His chest computed tomography revealed extravasation of some water-soluble contrast at the upper esophagus. A follow-up water-soluble contrast study of the upper gastrointestinal tract revealed no contrast extravasation.

Discussion

Most foreign body ingestions occur mainly in children. In adults, foreign body ingestion is seen commonly in patients with psychiatric disorders and prison inmates. Complications of foreign body ingestion include obstruction, perforation, and bleeding. Any patient with a history of pain, dysphagia, and respiratory distress needs urgent attention. Most of the foreign bodies causing obstruction do so in the esophagus, particularly the upper one-third.[3]

The management of foreign body ingestion depends upon the type of the foreign body, the shape of the foreign body, the location of impaction, the time elapsed since ingestion, and the presence of any complications such as perforation or bleeding. Moreover, as the time of ingestion increases, the chances of the successful retrieval of the foreign body decrease.[4] It has been shown in a study by Hong and colleagues that the duration of ingestion > 12

*Corresponding Author: Ashish Chauhan, Email : marquez.dvl@gmail.com

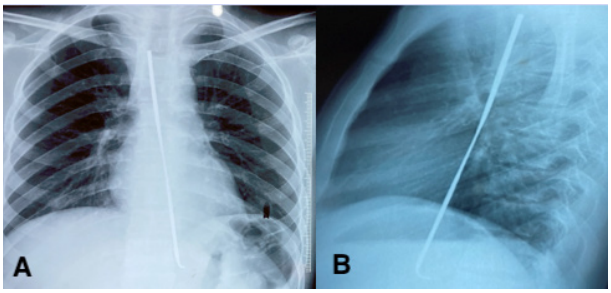

Figure 1. Chest radiograph (1A) Posteroanterior view showing a radio-dense linear opacity with curved distal end extending from D3-D4 intervertebral disc to D12 vertebral body (1B) Lateral view showing same opacity

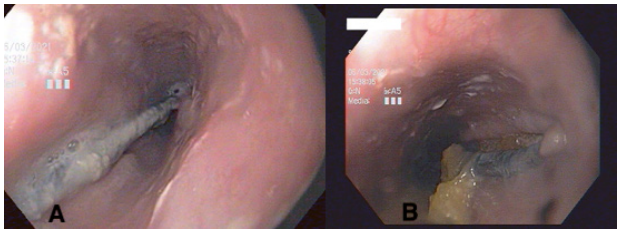

Figure 2. (A) Endoscopic view of esophagus showing long metallic foreign body in esophagus (B) Same foreign body causing luminal breach at the mid esophagus

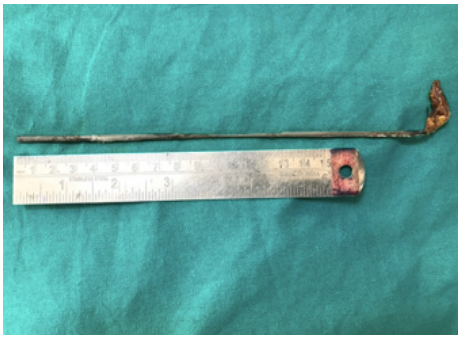

Figure 3. Foreign body of approximately 20 cm after endoscopic retrieval

hours and the sharpness of the foreign body are the two risk factors for complications and failure of endoscopic retrieval of the foreign body.[5]

Most ingestions in children are accidental, and in adults, most ingestions are intentional. In a study involving adult patients, intentional ingestions accounted for 90% of total ingestions, and 85% of ingestions occurred in patients with psychiatric disorders.[6] In a study involving 414 adult patients, the most common foreign body was food bolus, the most common location was the esophagus, and 30% had some underlying esophageal pathology, mainly stricture.[3] In another large series from China involving 1088 foreign body ingestions, only 10% had non-conclusive endoscopy, and the most common foreign bodies encountered were coins in children (<14 years), food boluses in adults (14-59 years old), and dentures in the elderly (>59 years).[7] Intentional foreign body ingestion involves metallic objects (60%), whereas accidental ingestion involves food-related items (90%).[4] In a study comparing intentional with accidental foreign body ingestion, intentional ingestions occurred more commonly in males, prison inmates, and patients with psychiatric diagnoses. Endoscopic failure was more common in intentional ingestions than accidental ingestions (10% vs 1%).[4] In another study that looked exclusively for intentional foreign body ingestions in 305 subjects, the commonly ingested foreign bodies were pens (23%), batteries (9%), knives, and razor blades (7% each). Intentional foreign body ingestions occur commonly in the stomach in contrast to accidental ingestions that have been reported mainly in the esophagus.[8] In a study involving recurrent foreign body ingestions, successful retrieval was achieved in 90%, and perforation occurred in 6% of the patients.[9] The European Society of Gastrointestinal Endoscopy (ESGE) has classified foreign bodies as sharp, blunt, long, food bolus, and others. Sharp foreign bodies have a higher complication rate and warrant early endoscopic intervention.[1] The present ESGE recommendations warrant urgent endoscopy (preferably within 2 hours and latest by 6 hours) for sharp objects, disc battery, and complete obstruction in the esophagus; and endoscopy within 24 hours for sharp objects, large blunt objects, magnets, and disc batteries in the stomach; and non-urgent endoscopy for medium-sized foreign bodies in the stomach.[1]

The radiography of the chest and abdomen is the first investigation to localize radio-opaque foreign bodies. In a suspected case of perforation due to a foreign body, contrast-enhanced computed tomography (CECT) is the preferred investigation to localize the perforation and rule out other complications such as mediastinitis or perforation. The management of the commonly encountered food bolus impaction involves just gently pushing the bolus into the stomach.[1] The foreign bodies in the cervical esophagus are challenging to remove as the working space for the endoscopist is very small. Retrieving sharp foreign bodies may cause mucosal injury to the esophagus, and a cap to cover the endoscope helps prevent this complication. Endoscopic retrieval is successful in greater than 90% of patients, but the success rate is less in intentional ingestion.[4] Most commonly used accessories in endoscopic foreign body retrievals are rat tooth forceps and polypectomy snares (70-80%).[4,7] The focus of the emergency team is on the management of an acute case of foreign body ingestion, and the psychiatric aspect of the disease gets often ignored. Intentional foreign body ingestion occurs with four psychiatric diagnoses: Psychosis, malingering, personality disorders, and pica. There is a high risk of recurrence of such behavior in intentional ingestions, hence, a psychiatric assessment is quintessential in managing these patients. Psychotic patients ingest foreign bodies due to psychotic beliefs or command hallucinations.[10] Intentional ingestion of foreign bodies is usually impulsively driven and has a very high chance of recurrence, hence family needs to be counseled regarding the natural course of the disease. Managing such events in psychiatric patients can be challenging as these patients may be uncooperative and may not come

forward with a history of ingestion. The management of foreign body ingestion often is restricted to the retrieval of the foreign body, which leads to the recurrence of such behavior. Hence, treating the psychiatric component is also necessary to prevent a recurrence.[11]

Conclusion

Intentional foreign body ingestion is seen commonly in patients with psychiatric diagnoses and mostly involves metallic objects. Endoscopy has a high success rate, but underlying psychiatric diagnosis needs to be addressed to prevent a recurrence.

Authors' Contribution

AC: Conceptualization, writing-original draft, writing-review & editing, final approval of manuscript and guarantor of the article. VB: Conceptualization, writing-original draft, writing-review & editing. RS and BS: Editing and finalization of the manuscript.

Competing Interests

The authors declare no conflict of interest related to this work.

Funding

None.

References

1. Birk M, Bauerfeind P, Deprez PH, Häfner M, Hartmann D, Hassan C, et al. Removal of foreign bodies in the upper gastrointestinal tract in adults: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2016;48(5):489-96. doi: 10.1055/s-0042-100456
2. Henderson CT, Engel J, Schlesinger P. Foreign body ingestion: review and suggested guidelines for management. *Endoscopy* 1987;19(2):68-71. doi: 10.1055/s-2007-1018238
3. Mosca S, Manes G, Martino R, Amitrano L, Bottino V, Bove A, et al. Endoscopic management of foreign bodies in the upper gastrointestinal tract: report on a series of 414 adult patients. *Endoscopy* 2001;33(8):692-6. doi: 10.1055/s-2001-16212
4. Zong Y, Zhao H, Sun C, Ji M, Wu Y, Zhang S, et al. Differences between intentional and accidental ingestion of foreign body in China. *BMC Gastroenterol* 2020;20(1):90. doi: 10.1186/s12876-020-01224-z
5. Hong KH, Kim YJ, Kim JH, Chun SW, Kim HM, Cho JH. Risk factors for complications associated with upper gastrointestinal foreign bodies. *World J Gastroenterol* 2015;21(26):8125-31. doi: 10.3748/wjg.v21.i26.8125
6. Palta R, Sahota A, Bemarki A, Salama P, Simpson N, Laine L. Foreign-body ingestion: characteristics and outcomes in a lower socioeconomic population with predominantly intentional ingestion. *Gastrointest Endosc* 2009;69(3 Pt 1):426-33. doi: 10.1016/j.gie.2008.05.072
7. Li ZS, Sun ZX, Zou DW, Xu GM, Wu RP, Liao Z. Endoscopic management of foreign bodies in the upper-GI tract: experience with 1088 cases in China. *Gastrointest Endosc* 2006;64(4):485-92. doi: 10.1016/j.gie.2006.01.059
8. Dalal PP, Otey AJ, McGonagle EA, Whitmill ML, Levine EJ, McKimmie RL, et al. Intentional foreign object ingestions: need for endoscopy and surgery. *J Surg Res* 2013;184(1):145-9. doi: 10.1016/j.jss.2013.04.078
9. Huang BL, Rich HG, Simundson SE, Dhingana MK, Harrington C, Moss SF. Intentional swallowing of foreign bodies is a recurrent and costly problem that rarely causes endoscopy complications. *Clin Gastroenterol Hepatol* 2010;8(11):941-6. doi: 10.1016/j.cgh.2010.07.013
10. Gitlin DF, Caplan JP, Rogers MP, Avni-Barron O, Braun I, Barsky AJ. Foreign-body ingestion in patients with personality disorders. *Psychosomatics* 2007;48(2):162-6. doi: 10.1176/appi.psy.48.2.162
11. Poynter BA, Hunter JJ, Coverdale JH, Kempinsky CA. Hard to swallow: a systematic review of deliberate foreign body ingestion. *Gen Hosp Psychiatry* 2011;33(5):518-24. doi: 10.1016/j.genhosppsych.2011.06.011