Case Report ISSN 2835-6276

American Journal of Medical and Clinical Research & Reviews

Laparoscopic removal of ingested foreign bodies

Kamal Khadija, Mourafi Lamia, Barigou Youssef, Majd Abdessamad, Bouali Mounir, Elbakouri Abdelillah, El Hattabi Khalid, Bensardi Fatimazahra, Fadil Abdelaziz

*Correspondence: Barigou Youssef

Received: 01 Dec 2024; Accepted: 05 Dec 2024; Published: 15 Dec 2024

Citation: Barigou Youssef. Laparoscopic removal of ingested foreign bodies. AJMCRR. 2024; 3(12): 1-4.

Abstract

The ingestion of foreign bodies is a condition frequently encountered, particularly in patients with psychiatric history.

In this article, we discuss the case of a 23-year-old patient with chronic alcohol and tobacco use and drug addiction, without notable psychiatric history, who presents to the emergency department for foreign body ingestion with the aim of self-destruction, accompanied by epigastric and periumbilical pain, as well as an episode of rectal bleeding. He was initially managed by gastroenterologists and underwent three attempts to extract foreign bodies via endoscopy.

However, it was decided to remove the remaining foreign bodies via laparoscopy due to difficulties encountered during endoscopy. The patient was admitted to the surgical department and underwent gastric foreign body extraction under laparoscopic surgery. During exploration, there was a noted distension of the transverse colon estimated at 8 cm, and foreign bodies were perceived in the stomach at the level of the greater curvature.

Keyword: foreign bodies, endoscopy, laparoscopy.

Introduction

Ingestion is a common pathology and can be either accidental or intentional. Most ingested foreign bodies pass spontaneously through the digestive tract without complications, but in rare cases (1%), their ingestion causes problems that require medical intervention either endoscopically or surgically.

This article reports the case of a young patient who presented to the emergency department for ingestion of multiple foreign bodies over several months, which required management through both endoscopic and laparoscopic procedures to extract.

Observation

The patient is a 23-year-old with chronic alcohol and tobacco use and drug addiction, without notable psychiatric history.

He presented to the emergency department for ingestion of foreign bodies (3 lighters, a nail clipper, and pieces of glass) with the intent of self-destruction, accompanied by epigastric and periumbilical pain, as well as an episode of rectal bleeding.

There was a history of ingesting 18 batteries in April 2024, with 2 batteries remaining in the digestive tract.

Upon clinical examination at admission, the patient was conscious and stable hemodynamically and respiratorily. Abdominal examination revealed self-mutilation scars and epigastric and periumbilical tenderness.

The patient was initially managed by gastroenterologists. During his hospitalization, he ingested additional foreign bodies (4 plastic caps and a plastic ring). He underwent three endoscopic extraction attempts. The first endoscopy resulted in the removal of a plastic cap from the subcardial area.

The second endoscopy revealed several foreign bodies: 2 plastic bottle caps, 1 lighter, 1 plastic ring, a venous catheter with several vein guards.

An abdominal-pelvic CT scan showed multiple spontaneously hyperdense formations of various sizes and shapes within the digestive lumen of the cecum, the lower third of the left colon, the rectosigmoid junction, and the rectum, generating artifacts that hindered exploration without notable colonic distension.

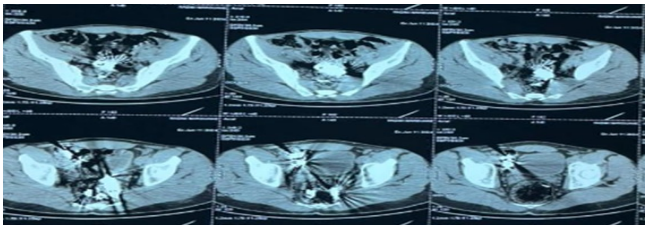

Figure 1: Pelvic CT scan showed multiple spontaneously hyperdense formations.

A third endoscopic extraction attempt was performed, where a venous catheter and a plastic cap were successfully removed without notable incidents, but the extraction of the remaining intragastric foreign bodies (lighter, plastic cap) could not be achieved.

Given the chronicity of foreign body ingestion since April, the decision was made to proceed with surgical management via laparoscopy.

The patient was admitted to the surgical department and underwent laparoscopic extraction of gastric foreign bodies. During exploration, there was no evidence of fluid or collections, but there was a noted distension of the transverse colon estimated at 8 cm, and foreign bodies were detected in the stomach at the level of the greater curvature.

The procedure was a laparoscopic extraction of gastric foreign bodies.

Postoperative course was uncomplicated, with no abnormalities.

Psychiatric management was provided with immediate initiatio of antipsychotic treatment.

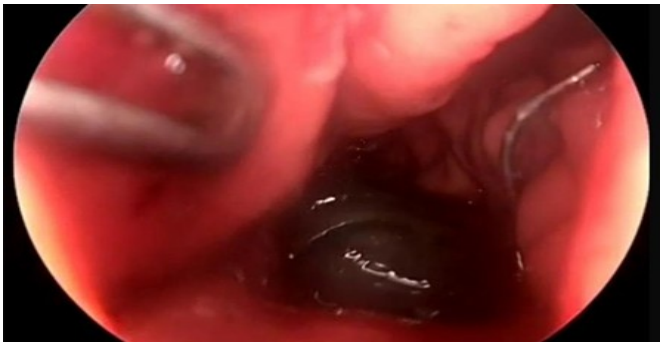

Figure 2: Visualisation of intragastric foreign bodies by gastrotomy.

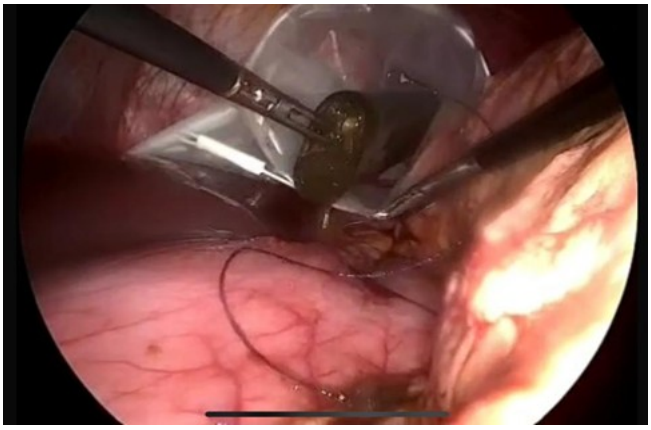

Figure 3: Extraction of a lighter.

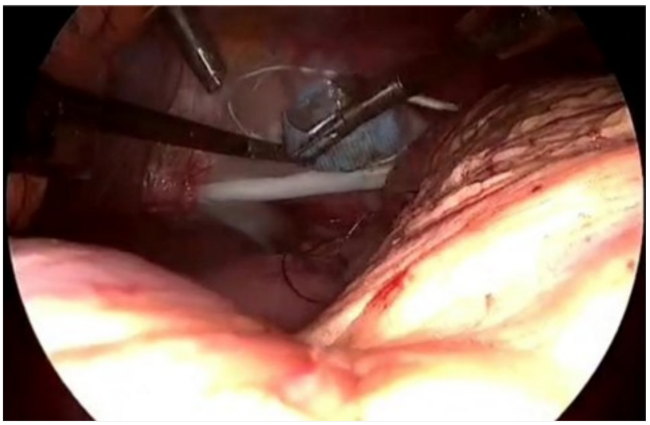

Figure 4: Extraction of a plastic cap.

Figure 5: the ingested batteries.

Figure 6: Pieces of lighters.

Figure 7: Nail clippers and catheter cap

Discussion

The ingestion of foreign bodies is a common pathology, and various objects can be found in different segments of the digestive tract, whether small or large(1).

These foreign bodies can be ingested accidentally, intentionally, or for self-destructive purposes. Patients presenting with this condition are often followed for psychiatric disorders(1).

Most ingested foreign bodies are expelled through the stool, and only 1% can cause perforation(2).

In a small number of patients, removal of the foreign body from the gastrointestinal tract presents challenges such as perforation, obstruction, or delayed expulsion leading to infection, as in the case of our patient(3)(2).

Patients may present with few or no symptoms for an extended period and may not seek medical attention in time, as in our patient's case, leading to delayed diagnosis and treatment, as well as severe complications (perforation, obstruction, penetration, and gastrointestinal bleeding).

This condition should be managed as conservatively as possible(1).

Endoscopic approaches are recommended as the first-line treatment, as demonstrated by our patient, who underwent three attempts at foreign body removal via esophagogastroduodenoscopy before proceeding to a more invasive method(4).

Laparoscopy is also indicated in rare cases where endoscopic removal fails(2).

Conclusion

In conclusion, ingestion of foreign bodies is a frequently encountered condition, especially in patients with psychiatric history. Management depends on the ingested foreign body, its effect on the digestive tract and the body, and the timing of endoscopic intervention. This condition should be treated as conservatively as possible.

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