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Unusual Cause of Acute Abdomen by Foreign Body: Intentional Spoon Ingestion

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Abstract **Case Report**

Introduction There is a wide variety of uncommon and unusual gastrointestinal causes of acute abdominal pain in which foreign bodies are included. ***Case report*** 30-year-old patient with severe chest and epigastric pain, previous vomiting and loss of consciousness. A thoracic X-ray study revealed a 15-cm-long metallic object located in the esophagus and two more apparently located in the stomach. The patient underwent an emergent laparotomy, a transverse incision was made to the stomach (gastrotomy) at the perforation site, removing 4 metallic soup spoons; then, it was closed primarily. ***Conclusions*** Intentional ingestion of foreign large metallic bodies is infrequent but not uncommon. Diagnosis should be suspected primarily in patients with history of psychiatric disorders or substance use. Clinical manifestations may vary according to the site of the gastrointestinal tract perforation. A surgical approach may be the best option due to a large size of the objects, time of clinical presentation and risk of subsequent complications.

Keywords: stomach, acute abdominal pain, epigastric pain, emergent laparotomy, foreign large metallic bodies, Intentional Spoon Ingestion.

INTRODUCTION

There is a wide variety of uncommon and unusual gastrointestinal causes of acute abdominal pain in which foreign bodies are included.

Ingesting a foreign body is not an uncommon event; almost 80 to 90% of foreign bodies pass without complication, and even fully in approximately one week [1], but perforation may betide anywhere along the gastrointestinal tract, most commonly at physiologic or pathologic sites of narrowing [2]. Sometimes, the foreign body may perforate a hernia sac, Meckel's diverticulum, or the appendix [3].

The most common are dietary foreign bodies such as fish and chicken bones [4].

Three courses may happen after a perforation in the gastrointestinal tract due to a foreign body: it may lie in the bowel lumen close to or at the site of perforation; it may pass through the site of perforation and lie free in the peritoneal cavity or migrate into adjacent or distant organs; or it may fall back into the bowel lumen and migrate distally to perforate again or pass out uneventfully [4]. Foreign body perforations of the stomach, duodenum, or large intestine tend to present with a longer, more innocuous clinical picture than perforations of the jejunum or ileum [5].

Many ''at risk'' of foreign body ingestion groups have been described, including prison inmates, psychiatric patients, alcoholics, children, selected professions (carpenters and dressmakers), and people who wear dentures [6].

CASE REPORT

A 30-year-old male with history of depression and cocaine use presented to the emergency department with a 12-hour clinical picture of severe chest and epigastric pain, previous vomiting and recent loss of consciousness. A thoracic X-ray study revealed a 15-cm-long metallic object located in the esophagus and two

more apparently located in the stomach. The patient underwent an emergent laparotomy with the diagnosis of acute abdomen. At laparotomy, approximately 1000 cc of widely dispersed intestinal fluid was removed, finding a gastric anterior wall perforation. A transverse incision was made to the stomach (gastrotomy) at the perforation site, removing 4 metallic soup spoons; then, it was closed primarily with Connell and Lembert sutures. The outcome was uneventful, and the patient was discharged from the hospital on the fifth postoperative day, with psychiatric follow-up.

Figure 1: Thoracic X-ray study showing the metallic spoons located in the esophagus and stomach

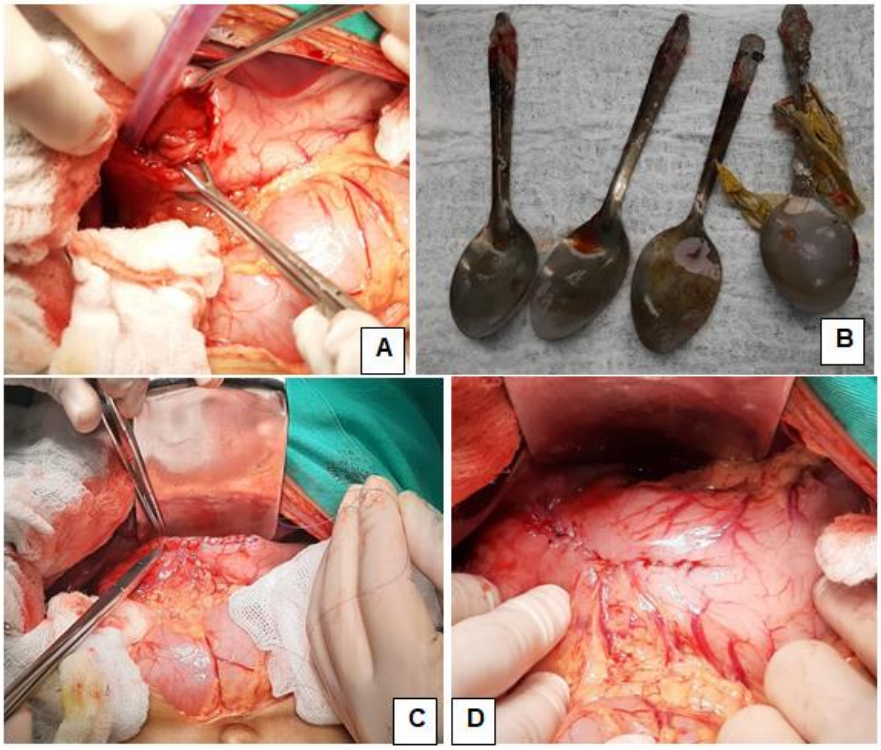

Figure 2: Gastrotomy, spoon removal and primary gastric closure; A: gastrotomy in the gastric anterior wall at perforation site. B: extraction of foreign bodies. C: Connell suture for primary closure of the gastrotomy with absorbable monofilament. D: Lembert suture and final result

DISCUSSION

Although the most common are dietary foreign bodies [4], other objects may also appear, like in this case: metallic spoons.

The literature mentions that the diagnosis of gastrointestinal tract perforation related to an ingested foreign body is usually not established prospectively without cross-sectional imaging [7]. In contrast with this case, where an X-ray was sufficient to identify the cause. Besides from the actual foreign body image itself, free air, localized pneumatosis, adjacent inflammatory changes, bowel obstruction, and other complications may be seen with imaging techniques [8].

Affected patients are commonly neurologically compromised, elderly or alcoholics, however, gastrointestinal tract foreign bodies may be seen in otherwise healthy adults. This case presented in a young male with history of depression and cocaine use, which can easily relate to the found foreign bodies. Also, it is important to mention that after resolution of the surgical emergency, psychiatric accompaniment needs to be warranted to prevent further episodes.

Generally, there may be an important lag time between ingestion and symptom development, and sometimes contrast media may obscure non-metallic foreign bodies, like fishbones [9]; on the other hand, gastrointestinal tract foreign bodies may be seen on imaging (i.e., computed tomography), but the diagnosis is not suspected clinically. In this case, symptoms and image findings were correspondingly accurate.

In contrast with accidentally ingested foreign bodies, swallowing intentionally might help them to pass through the esophagus, anyways, it has been reported that foreign bodies are longer and sharper in patients with intentional ingestion, making it more difficult for those to pass through the pylorus [10]. Similarly, to the presented case. Also, the patients who intentionally ingest these objects tend to have longer time to present, allowing a longer transit from the esophagus into the stomach.

The duration of foreign bodies in the upper gastrointestinal tract has also been reported to be different between the patients with intentional ingestion versus those with accidental. Many studies have shown that as the time after ingestion increased, the rate of successful foreign body removal by endoscopy decreased; and these long delays between ingestion to intervention might account for the relatively high rates of surgery, perforation, and mortality [5, 11]. However, it needs to be noted that sometimes, regardless the time of presentation for intervention, foreign bodies may be too large to be considered endoscopically removable and a surgical approach may be preferred as in this case.

CONCLUSIONS

Intentional ingestion of foreign large metallic bodies is infrequent but not uncommon. Diagnosis should be suspected primarily in patients with history of psychiatric disorders or substance use. Clinical manifestations may vary according to the site of the gastrointestinal tract perforation. A surgical approach may be the best option due to a large size of the objects, time of clinical presentation and risk of subsequent complications.

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