

Six months silent: A rare case of delayed duodenal perforation and pancreatitis following intentional foreign body ingestion

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Abstract

Foreign body ingestion is usually self-limited, with most objects passing spontaneously without complications. Rarely, however, retained foreign bodies may cause severe and delayed sequelae. We report the case of a 56-year-old incarcerated man who developed duodenal perforation, an enterocutaneous fistula, and secondary pancreatitis six months after intentional ingestion of a plastic spork. Imaging demonstrated a foreign body penetrating the second portion of the duodenum and extending into the abdominal wall. Definitive surgical management was delayed because of psychiatric illness and repeated refusal of care. After eventual consent was obtained, the patient underwent exploratory laparotomy with foreign body removal, duodenal repair, pyloric exclusion, and gastrointestinal diversion. Despite postoperative complications, he recovered with multidisciplinary management. This case highlights the potential for delayed, life-threatening complications from retained foreign bodies and underscores the ethical and clinical challenges encountered in patients with psychiatric comorbidities.

Keywords: foreign body ingestion, duodenal perforation, enterocutaneous fistula, pancreatitis, pyloric exclusion, case report, psychiatric comorbidity

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Informed Consent

Written informed consent was obtained from the patient for publication of this case report and the accompanying images. At the time consent was obtained, the patient had been evaluated by the psychiatric team and was deemed to have decision-making capacity.

Conflict of Interest

No conflict of interest was declared by the authors.

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Introduction

Foreign body ingestion is a common clinical problem, particularly among pediatric, incarcerated, and psychiatric populations. Most ingested foreign bodies pass spontaneously, approximately 10-20% require endoscopic retrieval, and fewer than 1% require surgical intervention because of complications such as perforation, obstruction, or hemorrhage [1-4]. Perforation, when it occurs, is most often associated with long or sharp-pointed objects and usually presents shortly after ingestion [1, 4, 5]. Delayed perforation caused by a blunt foreign body is exceptionally rare. We present a case of intentional ingestion of a plastic spork that resulted in delayed duodenal perforation, enterocutaneous fistula formation, and secondary pancreatitis six months after ingestion, highlighting the diagnostic, surgical, and ethical complexities of management.

Case presentation

A 56-year-old incarcerated man with a medical history of hepatitis C, hypertension, lymphoma, and significant psychiatric illness presented with right upper quadrant and right flank pain four months after intentionally ingesting a plastic spork. Initial computed tomography (CT) demonstrated a foreign body traversing the second portion of the duodenum and extending into the right flank soft tissues, with localized inflammation and abscess formation consistent with an enterocutaneous fistula (Figure 1). The patient was treated with intravenous antibiotics; however, he declined definitive intervention and was discharged against medical advice.

Figure 1. CT image showing the spork extending from the duodenum to the right flank (arrow).



Over the subsequent two months, the patient was readmitted twice with worsening symptoms. During the second admission, the foreign body was visibly protruding through the right abdominal wall, with purulent drainage and surrounding erythema (Figure 2). During the third admission, he developed signs of peritonitis and laboratory evidence of pancreatitis, with lipase levels greater than 4000 U/L. Repeat imaging confirmed persistent duodenal perforation with inflammatory changes involving the pancreas.

After psychiatric evaluation confirmed decision-making capacity, the patient consented to surgery. Exploratory laparotomy revealed the plastic spork penetrating the second portion of the duodenum (Figure 3), in close proximity to the pancreas and inferior vena cava. Mobilization was achieved using Kocher and Cattell-Braasch maneuvers. The foreign body was dissected free and removed in segments. A 5.5-cm duodenal perforation was repaired with interrupted Lembert sutures and reinforced with a falciform ligament patch. Given the high risk of leak, pyloric exclusion was performed, along with gastrojejunostomy and jejunajejunostomy for diversion.

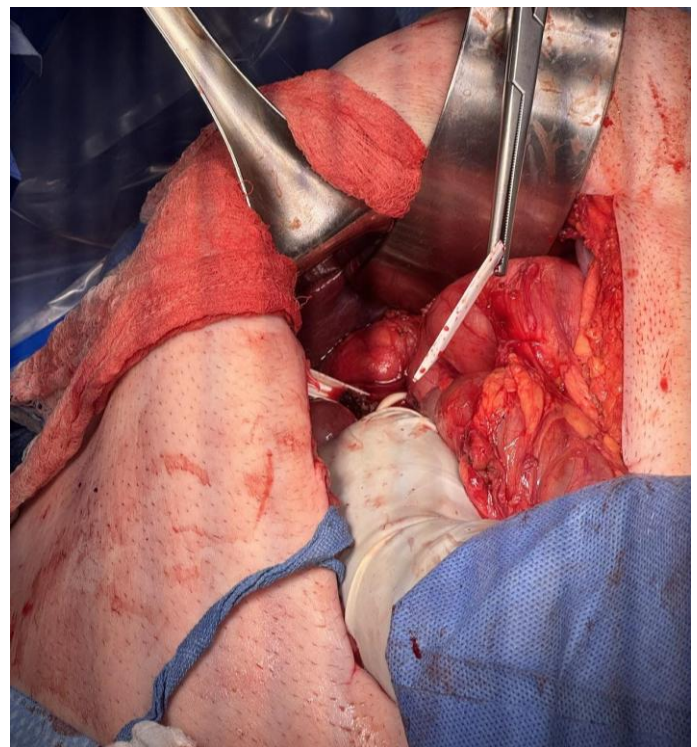
Postoperatively, the patient remained hemodynamically stable despite self-removal of the nasogastric tube on postoperative day 1. On postoperative day 4, bilious output was

noted from the Jackson-Pratt drain and was successfully managed with octreotide. Bowel function returned on postoperative day 4, and the patient was discharged in stable condition on postoperative day 11 with appropriate psychiatric follow-up.

Figure 2. Spork protruding from the patient's abdomen.



Figure 3. Exploratory laparotomy showing the spork perforating the second portion of the duodenum.



Discussion

This case represents a rare example of delayed duodenal perforation and secondary pancreatitis caused by a blunt plastic

foreign body. The duodenum is particularly vulnerable to complications from foreign bodies because of its fixed retroperitoneal position, C-loop anatomy, and proximity to the pancreas [1, 4]. Clinically, both the site and duration of impaction influence presentation and associated complications. Yoo et al. [6] reported that age, sharp foreign bodies, esophageal location, and longer impaction duration were associated with adverse events after upper gastrointestinal foreign body ingestion. Although perforation is more commonly associated with sharp objects and earlier presentation, blunt objects retained for extended periods may still cause progressive tissue injury [2, 6]. Because blunt foreign body ingestion may initially be asymptomatic, evaluation and treatment may be delayed, increasing the risk of complications.

Secondary pancreatitis due to foreign body migration or local inflammatory extension is an uncommon complication after foreign body ingestion. Reported pancreatic complications have most often involved sharp foreign bodies, including toothpicks, fish bones, and needles [7-9]. In patients presenting with abdominal pain and unexplained pancreatitis, retained foreign body ingestion should be considered, particularly in high-risk populations. This case also illustrates the challenges posed by psychiatric comorbidity and refusal of care, emphasizing the importance of multidisciplinary collaboration involving surgery, psychiatry, ethics, and correctional health services.

Conclusion

This case highlights the potential for severe, delayed complications after retained foreign body ingestion, even months after the initial event. Early recognition and intervention are particularly important in patients with psychiatric comorbidities who may decline care. Management requires a multidisciplinary approach involving surgery, psychiatry, gastroenterology, and ethics. Despite substantial delays, definitive surgical intervention ultimately resulted in a favorable outcome.

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