

Embedded Fishhook in the Gastric Cardia: Novel Removal Utilizing Electrocautery Needle-Knife Dissection

Jason Colizzo, MD¹, Jonathan Keshishian, MD², and Patrick Brady, MD, FACP²

¹University of South Florida Morsani College of Medicine, Department of Internal Medicine, Tampa, FL

²University of South Florida Morsani College of Medicine, Department of Internal Medicine, Division of Gastroenterology, Tampa, FL

Abstract

Foreign body ingestions often consist of benign objects that will readily pass through the gastrointestinal tract (GI) without necessitating further intervention. While several retrieval devices and techniques are available to the endoscopist, we present a novel method of implementing a needle-knife sphincterotome in the removal of an ingested fishhook embedded in the gastric cardia of a 36-year-old man with underlying schizophrenia. The hook was successfully dissected from the gastric submucosa after several unsuccessful attempts at manual extraction with forceps. To our knowledge, our case represents one in only a handful of other reports of the successful removal of ingested foreign bodies utilizing this method.

Introduction

Foreign body ingestion is a relatively common occurrence. For most cases, a conservative approach will often be the preferred course of management. For approximately 10–20% of cases, endoscopy will be required.¹ In such cases, removal of the object is necessary to avoid prolonged mucosal damage, perforation, obstruction, and other potential complications.² These complications can occur in as many as 35% of cases involving sharp pointed objects, and will sometimes necessitate surgical intervention.² While there are several devices available to aid in the removal of such objects, we present a case incorporating the novel use of a needle-knife sphincterotome to free a fishhook embedded within the gastric wall.

Case Report

A 36-year-old man with a history of paranoid schizophrenia and prior foreign body ingestions presented to our service with hematemesis shortly following the ingestion of two fishhooks. An abdominal x-ray revealed one hook in the stomach near the gastroesophageal junction and another near the terminal ileum, which subsequently passed without complication (Figure 1).

Esophagogastroduodenoscopy (EGD) was performed, revealing a fishhook with the barbed end firmly embedded in the gastric cardia. The hook was rotated using rat tooth forceps so that the barb protruded into the lumen (Figure 2). After failed attempts at manual extraction, a needle-knife sphincterotome was implemented to incise the overlying mucosa and submucosa to free the embedded segment of the hook (Figure 3). Bleeding at the dissection site was not adequately controlled with electrocautery provided by the sphincterotome. Hemostasis was ultimately achieved with the Gold Probe at 20 W. Estimated blood loss was 15–20 mL. The remainder of the stomach and duodenum were normal. The patient tolerated the procedure well and was eventually discharged home in stable condition.

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Correspondence: Jason Colizzo, MD, University of South Florida Morsani College of Medicine, Department of Internal Medicine, Tampa, FL 33612 (jcolizzo@health.usf.edu)

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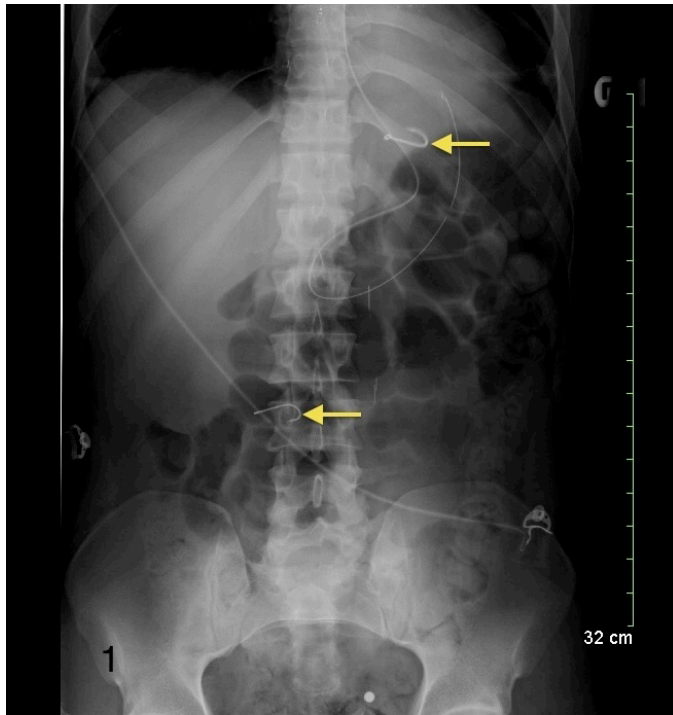


Figure 1. X-ray revealing one hook in the stomach near the gastroesophageal junction and another near the terminal ileum.

Discussion

There are numerous techniques available to the endoscopist in the management of foreign body ingestion. Some of the most widely accepted devices include snares, baskets, forceps, and other grasping devices.³ Approximately 80% of cases involving foreign body ingestion can be managed con-



Figure 2. Rat tooth forceps rotating the hook so that the barb protruded into the lumen.

servatively by allowing the object to pass naturally through the GI tract.³ The remainder of cases can be successfully managed endoscopically with only a minority (<1%) requiring surgery.³ For our patient, the object was firmly embedded within the gastric submucosa, which precluded extraction with more conventional methods.

The use of a needle-knife sphincterotome allowed for successful dissection of a foreign object that would have otherwise likely required surgical intervention. While the overlying mucosal and submucosal layers were easily dissected utilizing this technique, future cases of similarly embedded objects may benefit from evaluation with endoscopic ultrasonography to first establish depth of penetration. The use of submucosal injection may also add to patient safety and minimize potential complications such as perforation.

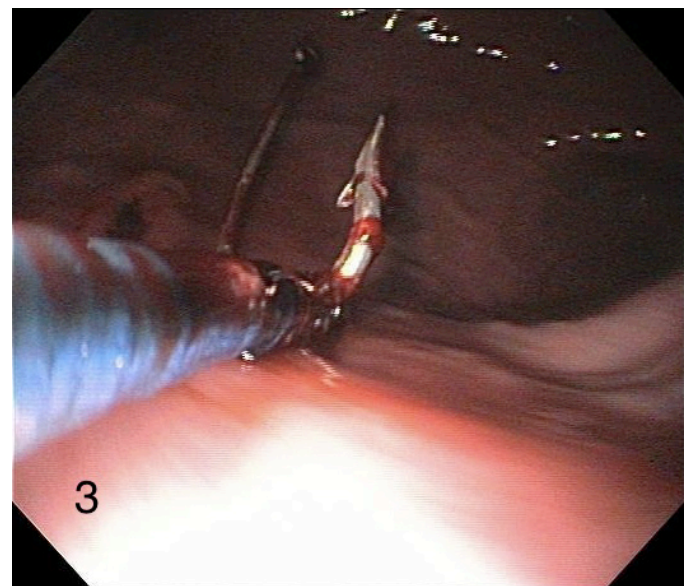


Figure 3. Needle-knife sphincterotome incising the overlying mucosa and submucosa to free the embedded segment of the hook.

Disclosures

Author contributions: J. Colizzo and J. Keshishian contributed to article content. P. Brady is the guarantor of the article.

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