

# Prolonged Retention of an Ingested Foreign Body: A Case Report

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## Abstract

Ingested foreign bodies that do not impact in the esophagus often pose little threat to the patient, frequently passing during a period of expectant management. Dull or blunt objects that are retained in the upper gastrointestinal tract may require intervention. Reported is a unique case of foreign body retention of 12 years duration resulting in protracted symptoms, which were alleviated by endoscopic intervention. This case also illustrates the benefit of endoscopic evaluation and possible intervention when the symptomatic patient reports foreign body ingestion, no matter how distant in time.

## Introduction

Upper gastrointestinal foreign bodies in adults can generally be divided into food boluses, commonly impacted in the esophagus, and non-food foreign objects. Of the later, some are ingested with intent, generally in patients with significant psychiatric disorders or those that are incarcerated. A variety of non-food foreign bodies can be accidentally ingested. Coins that do not lodge in the esophagus will generally pass without intervention and are of little clinical consequence.<sup>1</sup> Reported is a rare case of prolonged retention of a non-food upper gastrointestinal foreign body, which was symptomatic, and consequent endoscopic intervention which alleviated the patient's symptoms.

## Case Report

A 55 year old Caucasian female presented with epigastric abdominal pain. She reported a dull, nagging epigastric ache of 12 years duration dating to the ingestion of a quarter. The quarter was accidentally ingested while playing the drinking game "Quarters" with a friend and was never noted by the patient to pass in the stool. She also reported pyrosis and occasional regurgitation well controlled with esomeprazole. There had been no nausea or vomiting, and no gross gastrointestinal bleeding. She denied use of non-steroidal anti-inflammatory agents. Past history was notable for hypertension, hypothyroidism and hypercholesterolemia. She had been under the care of a psychiatrist for bipolar disorder, anxiety and post-traumatic stress disorder but had been employed and living independently for years. Surgical history included cholecystectomy and an unspecified gastrointestinal bypass at eight days of age. No other records were available to characterize the bypass procedure further. Examination was unremarkable, including a soft, non-tender abdomen with a midline upper abdominal surgical scar. Review of available records revealed no pertinent abdominal imaging.

At upper endoscopy the esophagus was normal. Surgical changes were identified in the stomach with a gastroenterostomy that was patent and appeared to have both afferent and efferent limbs without obstruction (Figure 1). Adjacent to the gastroenterostomy, the pylorus could be intubated but the duodenum ended blindly at approximately the apex of the bulb. Mucosal villi indicated that this blind ending pouch was indeed small bowel and not a diverticulum. Within the blind ending bulb was a quarter (Figure 2) which was captured in a retrieval basket and removed as a

unit with the endoscope. No evidence of mucosal injury was present. At follow-up the patient reported complete resolution of her epigastric pain. No intervention other than foreign body removal was undertaken in the interim.

**Figure 1**



**Figure 2**



## Discussion

Non-food ingested foreign bodies are seen in adults, and generally are of little clinical consequence. If the object does not impact in the esophagus, most will pass without consequence within a period of days. Foreign objects that have sharp edges or are pointed, magnets, and disc batteries all pose enough of a threat to the patient to warrant endoscopic removal.<sup>1,2,3</sup> Objects that may lacerate the esophagus are generally removed with the point or sharp edge oriented in a trailing fashion or employing devices to protect the esophagus and pharynx, such as hoods mounted over the end of the endoscope or an overtube. Button batteries may leak and can result in caustic injury leading to perforation if allowed to remain in the gastrointestinal tract.<sup>2,3</sup> Large or long objects may be unable to negotiate the duodenal C loop and impact there. Endotracheal intubation should precede endoscopic removal of such objects to reduce the risk of the foreign body either occluding the airway or being aspirated. The majority of coins ingested, however, are of little threat once they clear the esophagus.

In the patient presented, the endoscopic anatomy is suggestive of duodenal atresia requiring surgical gastroenterostomy as an infant.<sup>4</sup> Intestinal obstruction in a neonate is frequently due to intestinal atresia. Management often involves surgical duodenoduodenostomy or duodenojejunostomy,<sup>4,5</sup> and some centers are now successfully approaching this problem with laparoscopy.<sup>6,7</sup> Both the presence of the surgical anastomosis and the blind ending duodenal bulb likely contributed to retention of the coin.

The presence of symptoms after ingestion of a foreign body provided indication for endoscopic evaluation and removal of the object. Current guidelines recommend management decisions based on the history, including the object ingested, and symptoms. While the European Society of Gastrointestinal Endoscopy recommends endoscopic removal of objects from the stomach after 72 hours,<sup>3</sup> the American Society of Gastrointestinal Endoscopy guidelines allow for expectant management for up to four weeks.<sup>2</sup>

Ingested foreign bodies are not uncommon with an annual incidence in the United States of 1500 cases.<sup>1</sup> Endoscopic intervention becomes necessary in 10-20% of ingested foreign bodies, while less than 1% require surgical removal.<sup>1</sup> Intentional ingestion, however, may carry a greater morbidity and more frequently result in surgery. Mortality following foreign body ingestion is rare.<sup>2</sup> Retention of a foreign body often occurs at a point of narrowing or obstruction as was true in the patient presented. Current practice guidelines recommend conservative management of small-to-medium blunt objects in the stomach, as the majority will pass. Endoscopic removal is indicated if the patient is symptomatic or if the object fails to pass.

The patient reported here is unique in both the duration of retention of a foreign body in upper gastrointestinal tract (12 years) and the prolonged duration of symptoms. Endoscopic therapy provided a simple remedy alleviating her symptoms entirely. An increased level of clinical suspicion is warranted even if the reported ingestion occurred in the distant past.

## References

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