



## Case Report

# Pseudo bezoar in an elderly man

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## ABSTRACT

Indigestible intra-gastric foreign bodies are encountered in the mentally deranged, transporters of illicit drugs or those desiring weight control. They are often complicated by obstruction, migration, or perforation. Pseudobezoars are indigestible objects introduced intentionally into the digestive system. They may be indicated in bariatric practice for control of obesity. We present an 87-year-old man managed for a 2-year history of burning epigastric pain, aggravated by lying down and relieved by antacids. He had associated reflux symptoms for which he adopted lifestyle modifications. He had an upper gastrointestinal endoscopy which showed a stone attached to the anterior wall of the body of the stomach with associated pseudo-pouch formation. Mucosal overgrowth on the stone could be noted. Attempts at endoscopic retrieval failed as the stone could not be dis-impacted from its lodgement in a mucosal pouch. He had a laparotomy and gastrotomy for retrieval. A piece of stone, identified as granite, which measured 2 × 2 × 2.5 cm was retrieved from the stomach with accompanying formation of the mucosal pouch. Mucosal response, which may include overgrowth, could be an initial step in the migration of intra-gastric foreign bodies.

**Keywords:** Intra-gastric foreign body, Endoscopy, Mucosal reaction

## INTRODUCTION

Several intra-gastric foreign bodies have been reported in the literature. They are commonly found in mentally deranged people, transporters of illicit drugs, or those who desire weight control. Pseudobezoars are indigestible objects introduced intentionally into the digestive system. They are often introduced for control of obesity in medical scenarios. We report a case of pseudobezoar resulting from the ingestion of a lump of stone for fetish reasons. This case is peculiar because the attendant peptic symptoms were misdiagnosed as peptic ulcer disease for several years. We also present our management challenges leading to the abandonment of endoscopic retrieval.

## CASE REPORT

An 87-year-old man presented to us with a 2-year history of epigastric pain. He is a retired military man who has been having complaints of nonspecific upper abdominal discomfort described as a burning pain. Pain was intermittent, aggravated by lying down, and relieved by ingestion of over-the-counter antacids. He had associated reflux symptoms for which he had adopted lifestyle modifications to reduce the occurrence of reflux during sleep. He had no history of treatment for mental and behavioral illness. Furthermore, no complaints relating to his mood,

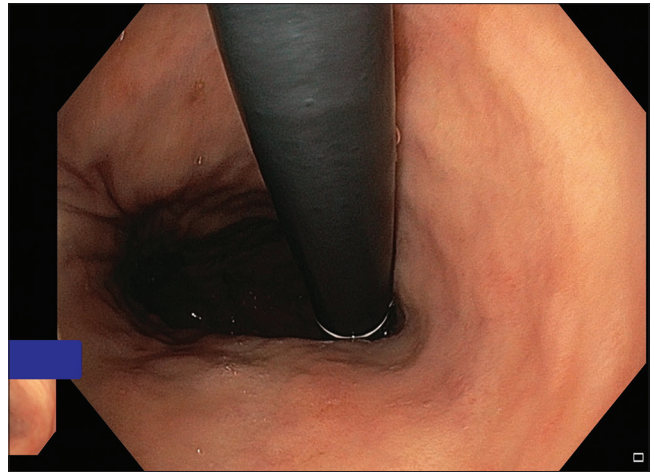
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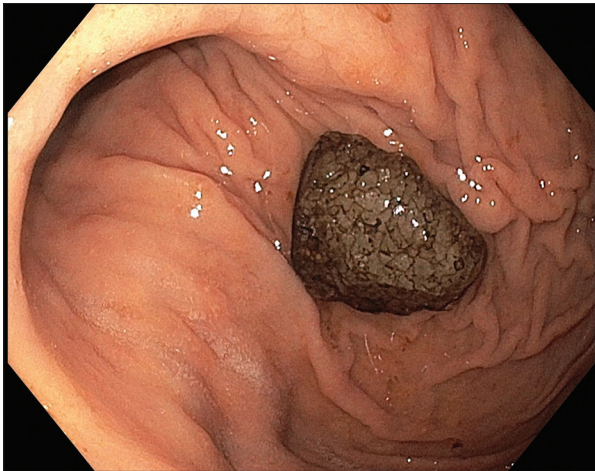
thoughts, experiences, and behavior. He had no history of stone formation in the urinary or biliary system. He had a history of bladder outlet obstruction secondary to benign prostatic hyperplasia. Physical examination elicited vague tenderness in the epigastric region. However, there was no evidence of peritonitis.

He had not had upper gastrointestinal endoscopy done prior to present admission. For his complaints of epigastric pain and reflux symptoms, he had an upper gastrointestinal endoscopy which showed a concretion attached to the anterior wall of the body of the stomach [Figure 1]. The stone was fixed and could not be moved by scope. A close-up view showed mucosal overgrowth on the stone creating a mucosal pouch [Figure 2]. Attempts to dislodge the stone from the mucosal pouch, using a water jet and by probing with the endoscope, were not successful. Attempts at endoscopic retrieval were abandoned because of the risk of perforation as the stone could not be easily dis-impacted from its mucosal pouch. A retroflexed endoscopic view of the cardia [Figure 3] showed an incompetent lower oesophageal sphincter with

a Grade IV gastroesophageal flap valve. Competence in laparoscopic intervention was not available in the firm. Hence, patient had a laparotomy and gastrotomy. The



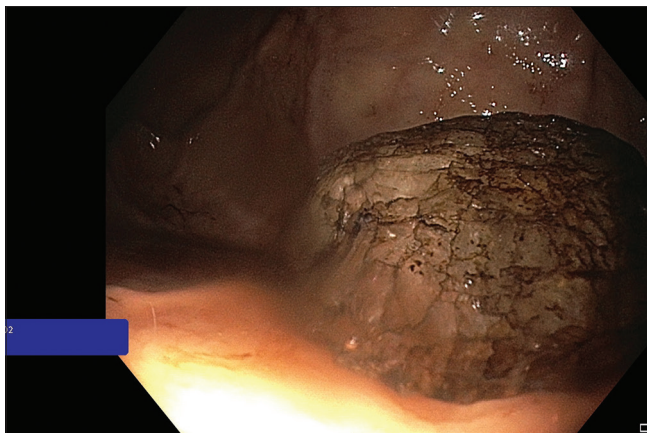
**Figure 3:** A retroflexed view of the gastro-esophageal junction.



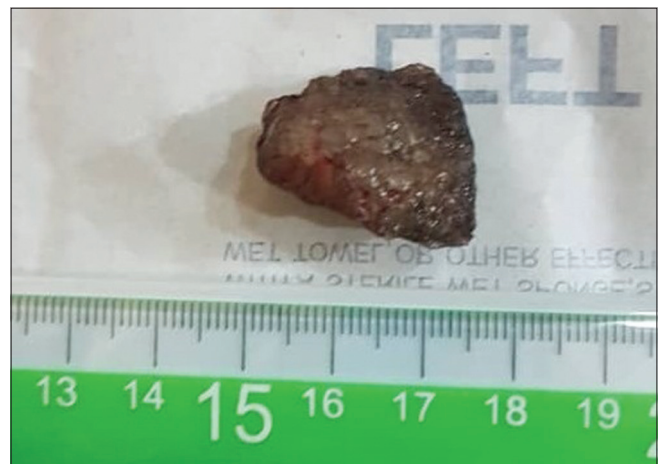
**Figure 1:** Intra-gastric foreign body.



**Figure 4:** Extraction of foreign body.



**Figure 2:** Formation of mucosal pouch.



**Figure 5:** Dimension of the foreign body.

intra-operative finding was a stone that was  $2 \times 2 \times 2.5$  cm [Figures 4 and 5]. This stone was attached to the anterior wall of the stomach with mucosa growing unto the stone forming a mucosal pouch. The gastrotomy was repaired in two layers. In addition, he had a partial fundoplication for control of his gastro-oesophageal reflux disease. Post-operative recovery was uneventful. On recovery from surgery, the intra-operative findings were discussed with the patient who then admitted to deliberately swallowing the stone over 10 years ago, for fetish fortification in wartimes.

The patient is alive and satisfied with the outcome of his surgery. He has been followed up in the outpatient clinic for 2 months. He has relief from the epigastric pains and the reflux symptoms. Physical examination during his follow-up visits did not reveal any epigastric tenderness.

## DISCUSSION

Intracorporal foreign bodies could result from ingestion, implants, or spontaneous concretion. Several intra alimentary foreign bodies have been reported in the literature.<sup>[1-7]</sup> They are commonly found in people who are mentally deranged, practice illegal transport of illicit drugs or desire weight control. Upper gastrointestinal foreign bodies, in particular, are often sequel to ingestion in children or patients with mental or behavioral illness. These rarely require surgical intervention. However, in about 20% of patients, ingested foreign bodies warrant retrieval to avoid the occurrence of complications.<sup>[4]</sup>

Current guidelines on this subject<sup>[8,9]</sup> are based on low level of evidence which includes results from large series, reports from recognized experts, and few randomized trials.<sup>[9]</sup> This is due to a dearth of data from well-designed prospective trials.<sup>[9,10]</sup> On making a diagnosis of foreign body ingestion, the managing physician has to decide on the need for intervention and the required urgency.

Factors that influence management of ingested foreign bodies include the clinical condition of the patient; the size, shape, and anatomic location of the ingested material. Bulky organic foreign bodies which can be broken down into smaller pieces, within the gut, may be removed in piecemeal. Foreign bodies with risk of perforation warrant urgent intervention. Although oesophagogastroduodenoscopy (OGD) remains the goal standard for retrieval of ingested foreign bodies, caution should be taken during endoscopic removal of foreign bodies with sharp edges to avoid longitudinal tear of the esophagus. Adjuncts to endoscopic retrieval of sharp objects include the use of over-tubes, transparent cap, and latex rubber hood.<sup>8</sup> In this patient, a cold polypectomy snare was used to attempt retrieval, but because the base was not pedunculated and a lateral traction did not displace the object, we abandoned the procedure and opted for open retrieval.

Pseudobezoars are indigestible objects introduced intentionally into the digestive system. They are often introduced for control of obesity in medical scenarios. We report a case of pseudobezoar resulting from the ingestion of a lump of stone for fetish reasons. This case is peculiar because the attendant peptic symptoms were misdiagnosed as peptic ulcer disease for several years. This misdiagnosis continued until the patient was referred for OGD where a gastrolith was visualized. Attempts to retrieve the foreign body endoscopically failed because it was firmly attached to a mucosal pouch on the anterior wall of the stomach. Consent for laparotomy, retrieval, and anti-reflux procedure was obtained and we proceeded with open retrieval.

Earlier reports of prolonged intragastric foreign bodies report alteration of the foreign body with exposure to gastric acids and bile salts<sup>[1,3]</sup> however, here we noted the formation of the mucosal pouch in response to prolonged intra-gastric foreign body. We argue that mucosal reaction which could include mucosal irritation or pouch formation could be the initial step in the series of events leading to perforation or migration of foreign bodies. Hence migration of gut foreign bodies may not result from denudation of the viscera but an active extrusion process. This could explain instances of migration in the absence of clinical perforation.

The stone was identified as granite, chemical analysis of the stone could not be done. We believe that the mucosal pouching could have been the initial process of possible perforation and extrusion of the stone as it could not progress downstream. We recommend attempts at endoscopic retrieval of foreign body however if the foreign body is sharp or has rough surfaces that may be attached to the gut wall, risks of perforation should be considered.

## CONCLUSION

Intra-gastric foreign bodies could result from several reasons. Development of gastric mucosal pouch in response to intragastric foreign bodies could be the initial step to perforation and migration.

### Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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