Rare disease

Lithobezoar – an unusual cause of dyspepsia

Bashir Tijjani,¹ Ibrahim Masoodi,¹ Hamidullah Wani,¹ Adel Nazmi Alqutub,¹ M Khaldoun Marwa²¹Department of Gastroenterology, King Fahad Medical City, Riyadh, Saudi Arabia;²Department of Psychiatry, King Fahad Medical City, Riyadh, Saudi Arabia**Correspondence to** Dr Ibrahim Masoodi, ibrahimmasoodi@yahoo.co.in**Summary**

Bezoar is the accumulation of exogenous undigested materials in the gastrointestinal tract. Various names have been used to describe bezoars based on the accumulated material. Commonly seen types are phytobezoar (composed of vegetable matter and seeds of fruits), tricobezoar (hair) lactobezoar (milk cuds). Lithobezoar (composed of stones and rocks) is uncommon and only limited reports are available in the English literature. The authors report a case of gastrointestinal lithobezoar presenting with ulcer-like abdominal pain. Some of the stones were removed endoscopically and some got expelled out after the use of promotility drugs. Invariably, there are predisposing factors for such behaviour. This case emphasises a meticulous psychiatric evaluation in a given patient, in order to prevent recurrence of symptoms.

BACKGROUND

Lithobezoar is an uncommon cause of dyspepsia.

CASE PRESENTATION

A 20-year-old secondary school male student presented with history of recurrent upper abdominal pain of 2 months duration. Patient described pain as being burning in nature, occasionally colicky but he never had constipation, obstipation or abdominal distension. The pain was aggravated by hunger, but not particularly relieved by food. There was occasional vomiting but no haematemesis or diarrhoea. He had sought medical advice repeatedly at peripheral hospitals and was placed on omeprazole and hyoscine butyl bromide with only transient relief of symptoms. On examination, he was not in distress and had no depressive looks. Patient's systemic examination was unremarkable. Laboratory investigations including amylase and lipase were all normal. Abdominal ultrasound revealed normal pancreas, liver and gall bladder. Plain abdominal x-ray showed opaque shadows in the region of the stomach and intestine (figure 1). Upper gastrointestinal endoscopy was done, which revealed numerous smooth shiny beachside stones of about 2 × 3 cm in diameter in the gastric body (figure 2). There were no erosions or ulcerations in the stomach and pylorus was patent. The gastric stones were removed endoscopically with Roth net (figure 3) and he was given laxatives and tablet domperidone 10 mg three times daily. Repeat abdominal x-ray 1 week later revealed no more intestinal opacities. He had complete relief of symptoms. On repeated questioning, he admitted to ingestion of beachside stones and passage of stones in stool in the previous year. Father, under whose care the boy has been since childhood was completely oblivious of his repeated ingestion of stones. Psychiatric assessment did not reveal any major psychiatric disorder. Initially, he denied any precipitating factor but recently (9 months after the ingestion of stones) in a detailed interview by our psychiatrist, he stated that the circumstances of the last event was because he went

through some academic difficulties leading to a hard discussion in the family. He could not tolerate it, then he went lonely and swallowed few stones. He did not mean to kill himself and had no suicidal ideation or intentions. He intended to release his stress and to seek family attention. He denied any major mood changes before that event, nor sleep or appetite problem. He denied any binge eating nor tendencies to eat non-nutritional materials currently or even during his childhood. There was no psychotic experiences (no hallucinations, no delusion and no bizarre behaviour). According to the family, the patient is nice and intelligent person but showed transient low scores at university with no prior psychiatric or suicidal behaviour. He had normal childhood, physically and mentally. His mental state revealed reasonably communicative young man and no psychopathology could be detected. Our psychiatrist concluded that as a result of all the above history and mental state examination, this patient has no major psychiatric abnormalities and what happened can be explained as an impulsive act and did not fit any major psychiatric disorders (according to ICD-10). Patient is asymptomatic and denied taking any stones for last 9 months now.

INVESTIGATIONS

- ▶ X-ray abdomen
- ▶ Endoscopic examination
- ▶ Ultrasound examination.

DIFFERENTIAL DIAGNOSIS

- ▶ Non-ulcer dyspepsia.

TREATMENT

- ▶ Removal of some stones by endoscopy
- ▶ Use of laxatives to remove stones.

OUTCOME AND FOLLOW-UP

Patient improved.

Figure 1 X-ray abdomen showing lithobezoar.

DISCUSSION

Bezoar is the accumulation of exogenous undigested materials in the gastrointestinal tract. Lithobezoar is quite uncommon and to the best of our knowledge very few cases have been reported in the English literature.¹⁻⁷ The commonest predisposing factors to formation of bezoar are psychological disorders, mental retardation, iron deficiency anaemia (pica) and previous gastrointestinal surgery. Although the index case had no major psychiatric illness or mental retardation, but stress obviously led to this behaviour. It is imperative to rule out any psychiatric illness or stress in a given patient by a meticulous psychiatric evaluation in order to prevent recurrence. Initially our patient and his father denied any prior psychological illness or stress. It was only by repeated psychiatric evaluation, he admitted stress being the predisposing factor for his behaviour nearly 9 months after the episode. He has not repeated the practice and is symptom free now.

Bezoars can be found in any part of the gastrointestinal system, the stomach is the most common site. In the index case, some of the stones had passed into the intestine but significant accumulation of stones were in the stomach. This was probably responsible for his dyspeptic symptoms. The fact that he had been ingesting the stones intermittently for about 1 year and developed symptoms only 2

months before presenting to us might be related to delayed transit time and gastric emptying, resulting in accumulation of the stones in the stomach. We did not, however, perform gastric motility studies to confirm this. It is quite possible that the stones in the stomach, due to large size, were unable to pass through pylorus. Gastric bezoars can be asymptomatic or present with abdominal pain, vomiting and sometimes, gastric outlet obstruction. Presentation with peptic ulcer-like pain as in our patient is uncommon, however there has been a report of candida ball bezoar presenting as a non-healing gastric ulcer which responded to fluconazole treatment.⁸ Contrary to gastric bezoars, intestinal bezoars commonly presents with abdominal pain, chronic constipation and intestinal obstruction.³⁻⁷

While other forms of bezoars can be managed by chemical dissolution, lithobezoars have to be managed by manual, endoscopic or surgical removal, as the rock or stone ingested is usually not amenable to dissolution.^{4 9-11} We utilised Roth net endoscopically to remove these stones in the stomach of our patient and gave him tablet domperidone and laxatives to aid expulsion of the intestinal stones via faeces and his symptoms abated. The ease of removal of the stones endoscopically is partly due to the fact that the stones were very smooth and not too large to be pulled out sequentially with Roth net. The expulsion of remaining

Figure 2 Endoscopic picture of lithobezoar.

stones from the intestine, following use of domperidone, a promotility drug, also presupposes that impaired gastrointestinal motility, as postulated above, might have played a role in the development of symptoms.

We conclude that gastrointestinal bezoars should be considered in the evaluation of patients presenting with ulcer-like dyspepsia not responsive to conventional therapy and good psychiatric evaluation should be done in these patients to avoid recurrence of symptoms after endoscopic management.

Learning points

- ▶ Unusual cause of dyspepsia should be kept in mind, when patient does not respond to conventional treatment.
- ▶ Underlying psychiatric illness or stress must be evaluated, even though patient and attendant denies in a given case of lithobezoar.

Figure 3 Stone removed from stomach.

Competing interests None.

Patient consent Obtained.

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