RESEARCH PAPER

When Mud Turns Fatal: A Rare Case of Geophagia-Induced Bezoar Presenting as Silent Obstruction and Colonic Perforation

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ABSTRACT

Bezoars are uncommon intraluminal masses formed by indigestible materials, with mud bezoars being an exceedingly rare entity associated with geophagia. We report a case of a 36-year-old female presenting with acute abdomen and septic shock, found to have descending colon perforation secondary to impacted mud bezoar. Emergency exploratory laparotomy revealed fecal peritonitis with multiple mud pellets extending from ileum to sigmoid colon. The postoperative course was complicated by septic shock and metabolic acidosis requiring intensive care support, including vasopressors and sustained low-efficiency dialysis (SLED). The patient subsequently recovered and was discharged in stable condition. This case highlights the importance of early recognition, prompt surgical intervention, and multidisciplinary management including psychiatric evaluation.

Keywords: Bezoar, Geophagia, Mud bezoar, Colonic perforation, Septic shock, Case report

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Introduction

Bezoars are conglomerates of indigestible material accumulating within the gastrointestinal tract. Based on composition, they are classified into phytobezoars, trichobezoars, pharmacobezoars, and rare forms such as lithobezoars or mud bezoars.

Geophagia, a form of pica characterized by ingestion of soil or clay, is an uncommon but recognized cause of bezoar formation. Complications include intestinal obstruction, ischemia, and rarely perforation. Mud bezoar causing colonic perforation and fecal peritonitis is extremely rare and scarcely reported in the literature.

Case Presentation

A 36-year-old female presented with abdominal pain for 1 day, associated with vomiting (4 episodes, non-bilious, containing food particles) and constipation with no passage of stool for 1 day. The pain was sudden in onset, gradually progressive, and moderate to severe in intensity. There was no history of fever or trauma.

She was a known case of hypothyroidism but was not on regular treatment and reported taking Ayurvedic medication. She had a significant history of geophagia (habitual ingestion of mud). There were no other comorbidities such as diabetes mellitus or hypertension. Family history was non-contributory.

Examination

On presentation, the patient was ill-looking and in shock:

- Blood pressure: 80/50 mmHg
- Pulse rate: 116 beats/min
- SpO_2: 97% on room air

She required vasopressor support with noradrenaline.
Per abdominal examination revealed a tense abdomen with diffuse tenderness, guarding, and rigidity. Bowel sounds were absent.
Per rectal examination showed lax anal tone, roomy rectum, and absence of fecal staining.

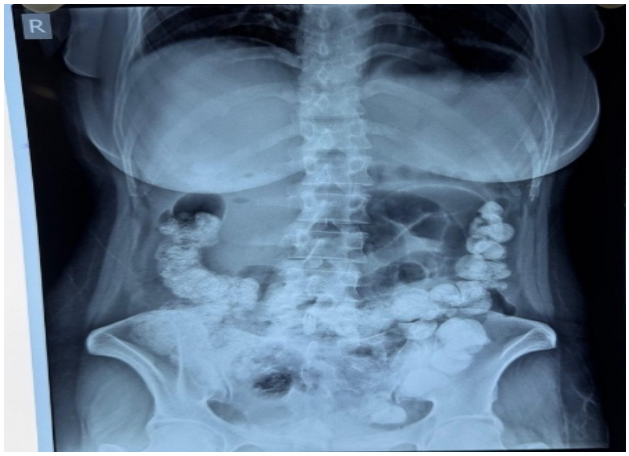
Investigations

Ultrasonography (outside): Gaseous distended bowel loops with absent peristalsis, suggestive of subacute intestinal obstruction

X-ray erect abdomen: Dilated bowel loops with radio-opacities in large bowel and free air under diaphragm

CT abdomen (plain):

- Free intraperitoneal air (perihepatic and anterior abdomen)
- Extramural air speck near D1 (suggestive of duodenal perforation)
- Minimal free fluid in perihepatic, perisplenic, and pelvic regions
- Bilateral basal pleural effusion with subsegmental atelectasis



Management

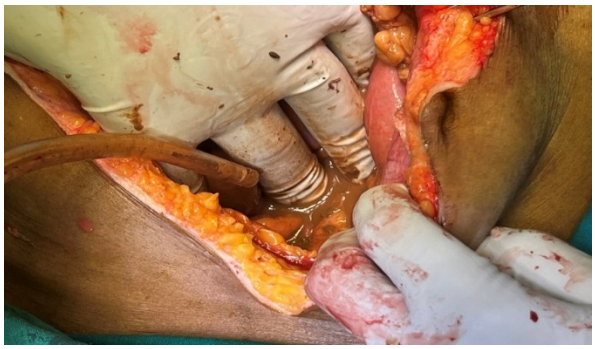
The patient was resuscitated with intravenous fluids, broad-spectrum antibiotics, and vasopressor support. In view of suspected hollow viscus perforation with peritonitis, she was taken up for emergency exploratory laparotomy.

Intraoperative Findings

- Descending colon perforation caused by a hard mud pellet
- Extensive fecal peritonitis
- Multiple impacted mud pellets (bezoar) extending from ileum to sigmoid colon
- Gross peritoneal contamination with fecal matter

Procedure Performed

- Exploratory laparotomy
- Removal of mud bezoar
- Loop colostomy



Postoperative Course

The postoperative period was complicated. The patient was not extubated immediately in view of persistent metabolic acidosis and septic shock. She was managed in the intensive care unit with ventilatory support, vasopressors (inotropes), and escalation to higher antibiotics. In view of oliguria and ongoing metabolic acidosis, she underwent sustained low-efficiency dialysis (SLED). Gradual clinical improvement was noted, and the patient was successfully extubated on postoperative day 2. She continued to improve clinically with supportive care and was hemodynamically stable. The patient made a satisfactory recovery and was discharged on postoperative day 11. A psychiatric evaluation was obtained during the hospital stay, and counseling was initiated for geophagia (pica) to prevent recurrence.

Discussion

Bezoars are rare causes of intestinal obstruction, with mud bezoars representing an unusual subtype associated with geophagia. The ingestion of soil leads to accumulation of indigestible material within the bowel, forming hard concretions. Chronic impaction increases intraluminal pressure, resulting in compromised blood supply, ischemia, and eventual perforation—commonly along the antimesenteric border. While small bowel involvement is more common, colonic perforation due to mud bezoar is exceedingly rare. Preoperative diagnosis is often difficult, as imaging findings are nonspecific. However, the presence of radio-opacities within the bowel in a patient with geophagia may provide an important diagnostic clue. Management depends on the clinical scenario. Complicated cases presenting with obstruction or perforation require emergency surgical intervention. In cases of fecal peritonitis, surgery is only the initial step; aggressive postoperative critical care, including organ support such as dialysis, plays a crucial role in survival. Equally important is the management of the underlying behavioral disorder. Geophagia is often associated with nutritional deficiencies or psychiatric conditions. Psychiatric evaluation and counseling are essential to prevent recurrence and improve long-term outcomes.

Conclusion

Mud bezoar is a rare but significant cause of intestinal obstruction and perforation. A high index of suspicion is required in patients with a history of geophagia. Early diagnosis, prompt surgical management, and intensive postoperative care are vital for survival. Addressing the underlying pica through psychiatric intervention is essential to prevent recurrence.

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