

# Proximal Ileal Perforation Secondary due to Phytobezoar in Elderly Patient

Hamza Khan, Muhammad Mashood, Waqas Ahmad, Muhammad Osama Iqbal

**Abstract**—Bezoar is the accumulation of partially digestible materials in the gastrointestinal tract. The most common among which is Phytobezoar. Which is the accumulation of indigestible food materials in gastrointestinal track and is one of the rare causes of small bowel obstruction. As per reports it is responsible for 0.4-4% of all small bowel obstructions and usually accumulates in the distal ileum due to its narrow caliber at the ileocolic junction. Such type of patients presented with nausea, vomiting, unable to pass stool or flatus, tender abdomen. One of the complications of all this sequelae is perforation which leads to peritonitis. We present a rare case of 84 years old male patient with proximal ileal perforation due to multiple impacted phytobezoar which was managed successfully.

**Index Terms**—Bezoar, Enterolith, Phytobezoar, Perforation, Proximal ileal Phytobezoar.

## I. INTRODUCTION

A bezoar is an intraluminal mass within the gastrointestinal tract (GIT), composed of tightly packed, partially digested or undigested materials like vegetable matter, fruit fibers, or hair. Bezoars account for 0.4% to 4% of cases of intestinal obstruction. They are classified based on their content, with types including trichobezoars (hair), phytobezoars (plant material), lactobezoars (milk curds), and polybezoars (multiple materials) [1]. Phytobezoars, in particular, consist of indigestible fibers from fruits and vegetables and are an uncommon cause of intestinal obstruction (0.4-4% of all gastrointestinal obstruction) [1,2]. This diagnosis should be considered in patients without a history of abdominal surgery or prior intestinal interventions [2,3].

The terminal ileum, being the narrowest segment of the small intestine, is the most frequent site for bezoar impaction, especially in elderly patients with altered gastrointestinal motility and atypical dietary habits. [4] For initial assessment of suspected intestinal obstruction, plain radiography (abdominal X-ray) is typically used.

However, in cases of suspected bezoars, contrast-enhanced computed tomography (CECT) is the preferred diagnostic modality, with a sensitivity and specificity of 90% and 57%, respectively [4]. Surgical management is generally recommended for bezoars, though many can be removed

endoscopically but standard modality is surgery with early diagnosis and intervention helping to reduce morbidity and mortality [5].

## II. CASE REPORT

This 84-year-old man was brought to the emergency department of Bacha Khan Medical Complex on 31<sup>st</sup> Aug, 2024 with the history of acute abdominal pain, fever, nausea, multiple episodes of vomiting. The patient hasn't passed stools from the last 04-05 days. On general physical examination the patient was tachycardia, pale looking, distressed, diaphoretic. Per abdominal examination revealed a mildly distended abdomen, on palpation abdomen was tense, tender with guarding and rigidity. Digital rectal examination findings were unremarkable with empty rectum.

Past history reveals that he has the same episodes of abdominal pain from the last 02 weeks symptomatic relief was obtained by painkillers at that time. He also suffers from abdominal tuberculosis 30 years back complete recovery was obtained at that time with treatment.

To investigate him further plain radiography and baseline investigations were ordered as shown in figure: 01 and table: 01 below. X-ray shows radiopaque shadow in the left lower abdomen with no air under diaphragm. The patient was admitted in the surgical unit as a case of acute abdomen as per history, examinations and laboratory findings and after all the necessary measures and anesthesia fitness. Exploratory laparotomy was performed on 5th Nov, 2024 with the findings as mentioned:

- 1.5 liter of dirty fluid in the abdomen.
- Gangrenous proximal ileum with perforation and bezoar of about 10.16 cm was impacted in that perforation.
- 04 other bezoars of variable size, largest of which was (5.08X3.81) cm.

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Fig. 01 Initial Plain X-ray of the patient showing radio-opaque shadows

Dirty fluid was drained, Gangrenous segment was resected, proximal phytobezoars were milked down and retrieved through the incision site, double barrel ileal stoma was brought out, abdominal wash was done with 05 liters of normal saline, hemostasis secured, drain placed in left pelvis, abdomen was closed in layers. The patient was shifted to ICU post operatively for 24hrs, and was discharged on 12 of November, 2024, with the instructions to be called for follow up after 15 days.



Fig. 02 Bezoar removed from the intestine

Table I: Lab reports showing increased TLC, Neutrophils and Creatinine level

Test Description	Level	Normal Range
Hemoglobin (gm/dl)	11.1	4-11
Hematocrit (%)	28.7	12-16
Mean corpuscular volume (ft)	76.9	76.4-102
Mean Corpuscular Hemoglobin (pg)	24.9	23-36
Mean Corpuscular Hemoglobin concentration (g/dl)	32.5	29-36
Platelets (10 <sup>9</sup> /L)	155	150-400
TLC (10 <sup>3</sup> /μ-L)	16.5	4-11
Neutrophils (%)	95	40-75
Creatinine (mg/dl)	1.6	0.7-1.4
Urea(mg/ml)	89	10-50

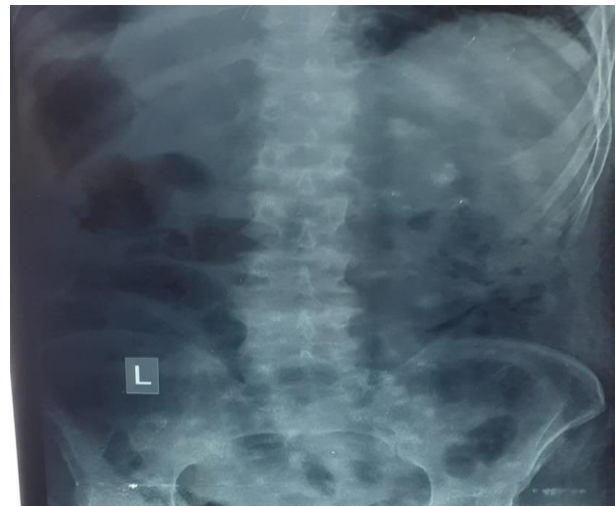


Fig. 03 Post-Op plain X-ray showing improvement in radio opaque shadow

### III. DISCUSSION

The present case highlights a rare and severe complication of intestinal perforation caused by numerous large enteroliths at the proximal ileum. This condition, though infrequent, validates the significant morbidity accompanying delayed diagnosis and treatment. Our patient’s clinical history spans decades, with recurrent episodes of colicky abdominal pain initially attributed to intestinal tuberculosis. Despite symptomatic relief with anti-tuberculosis treatment, the underlying pathology of enterolith formation remained undiagnosed until the patient presented with acute peritonitis. The clinical findings of guarding, rigidity, and rebound tenderness, coupled with imaging evidence of air under the diaphragm, necessitated an emergent exploratory laparotomy. Intraoperative findings of gangrenous bowel, multiple enteroliths, and dirty fluid confirm the catastrophic complications of undiagnosed intestinal stones. This case is consistent with the limited literature describing similar presentations. Shrestha et al. reported ileal perforation secondary to a single foreign body bezoar, highlighting the

importance of prompt imaging and surgical intervention. Their patient, a young female, underwent ileocolic resection and anastomosis, contrasting with our older patient, who required double-barrel stoma formation due to extensive gangrene [6].

Similarly, Shah et al. described an isolated ileal bezoar causing obstruction, emphasizing the rarity of primary small bowel bezoars in the absence of gastric bezoars or underlying anatomical abnormalities. In their case, imaging with CT accurately identified the bezoar, allowing for timely surgical management. This underscores the diagnostic value of advanced imaging techniques, which, if utilized earlier in our patient's course, might have prevented the severe complications observed [7]. Hiller et al. also documented a case of ileal perforation caused by a phytobezoar in an elderly patient with a history of intestinal tuberculosis. Their findings support the association between intestinal strictures from tuberculosis and bezoar formation, which likely contributed to our patient's pathology [8].

This case underscores the critical importance of considering enteroliths or bezoars in the differential diagnosis of patients with chronic, recurrent abdominal pain, especially those with a history of tuberculosis or other gastrointestinal diseases. While tuberculosis is a common cause of chronic symptoms in endemic regions, clinicians must remain vigilant for alternative diagnoses when symptoms persist despite standard treatment. Advanced imaging modalities, particularly CT, play a pivotal role in identifying gastrointestinal obstructions or complications like perforation and should be employed early in atypical presentations.

#### IV. CONCLUSION

In conclusion, this case highlights the need for comprehensive diagnostic evaluations in patients with prolonged and recurrent gastrointestinal symptoms. It reinforces the importance of surgical intervention as the cornerstone of management in complicated cases, while also emphasizing the value of early imaging and multidisciplinary care to optimize outcomes. Further research is warranted to improve diagnostic strategies and develop guidelines for managing similar cases to prevent delayed diagnosis and its associated complications.

#### V. COMPLIANCE WITH ETHICAL STANDARDS

##### A. Acknowledgments

I am thankful to Professor Dr Ishtiaq Ali, who helped me a lot in editing, giving me the ideas, feedback sessions and moral support. Lastly, I would remiss in not mentioning my other colleagues who generously provided me with their expertise and knowledge.

##### B. Disclosure Of Conflict Of Interest

Authors have no conflict of interest to declare.

##### C. Statement Of Ethical Approval

It is certified that the Research Title "Proximal Ileal Perforation due to Phytobezoar in Elderly Patient: Case Report" submitted by Dr Hamza khan s/o Abdul Rauf PG Surgery having RTMC NO. SGR-2023-312-14822 working in surgery unit at MTI-GKMC/BKMC Swabi has been

reviewed by Institutional Ethical Review Board and granted permission to publish the study having no Ethical Issue (Review Board: Office of the Chairman Ethical Review Board MTI-GKMC/BKMC Swabi; Approval No Verifiable ID No: IREB/GKMCS/02241211 ).

##### D. Statement Of Informed Consent

Informed written consent was taken from the attendant of the patient about the publication of this case report.

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