

Solitary Bezoar in Ileum Causing Intestinal Obstruction: A Rare Case Report in a Child

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Case Report

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Abstract: Gastrointestinal bezoars are conglomerates that may be made up of undigested vegetables fibers, persimmons or hairs and rarely cause mechanical intestinal obstruction. Occasionally, they may migrate distally and cause obstruction of small bowel. Bezoar formation mainly occurs in patients with predisposing factors like altered gastrointestinal anatomy due previous surgery or impaired gastric motility. The presence of isolated bezoar in the small bowel without synchronous existence of primary gastric bezoar or any apparent predisposing factors for bezoar formation remains an exceedingly a rare presentation.

Keywords: Isolated bezoar, Small intestinal obstruction, Enterotomy.

INTRODUCTION

A bezoar is a concretion of material ingested over time in the lumen of the digestive tract. It is usually formed in the stomach. The mass, or part of it, may pass into the small intestine and then become impacted [1]. Bezoars have been classified into four types based on their composition: phytobezoar (vegetable), trichobezoar (hair), lactobezoar (milk curd), and miscellaneous (medications, tissue paper, shellac, tar, sand, and fungus) [2].

Typically, bezoars are ingested and primarily conglomerate in the stomach over time. Occasionally, they may migrate distally and cause obstruction of small bowel. Occurrence of isolated bezoar in the small bowel without synchronous existence of primary gastric bezoar or any apparent predisposing factors for bezoar formation has been barely reported and remains exceedingly a rare presentation.

We hereby, report a case of isolated ileal bezoar causing acute small bowel obstruction in a healthy teenager girl [3]. This case report is, principally, aimed at documenting an extraordinary etiology of small bowel obstruction in this age group and concurrently alerts clinicians that bezoars form an essential part of the differential diagnosis when evaluating patients with small bowel obstruction.

CASE REPORT

We present the case of a girl F. A., 12 years' old, coming from remote mountainous area. She had a history of two weeks of colicky abdominal pain, nausea, vomiting, decreased oral intake, changes in bowel movements. At admission in the hospital she presented altered general state, puffed eyes, pale teguments, bilious vomiting, and constipation. The distended abdomen was diffusely sensitive to palpation, with no sign of peritoneal irritation. Abdominal

auscultation revealed static intestinal sounds (borborygmi). Digital rectal examination revealed empty rectal ampulla, without presence of any pathological material on the hand gloves. Next day she presented signs of peritoneal irritation in the left abdomen. The blood count showed a marked leucocytosis, high number of thrombocytes, high acute phase reactants, increased level of urea, and signs of acute dehydration with hyponatremia. Abdominal X-ray showed multiple air-fluid levels with calcified mass in the right lower abdomen without presence of air under the diaphragm, while the ultrasound examination was negative for any abnormality. The CT scan showed marked dilatation of the jejunum with fluid retention and possibly a large calcified bezoar (6×4×4 cm) causing obstruction of the ileum with suspected small caliber of the ileum distal to the lesion (Figure-1). A positive diagnosis of intestinal obstruction was established based on the previous examinations.



Fig-1: Abdominal X-ray film shows the calcified mass in the right pelvis CT shows an ovoid, hyperdense calcified lesion (6×4×4 cm) in the ileum lumen

Preoperative care consisted in gastric decompression using nose-gastric tube, parenteral nutrition, antibiotics and infusion with electrolytes. Surgery –consisted of the following steps: median abdominal incision; abdominal cavity exploration-

revealed significantly distended proximal ileal loops with an impacted palpable intraluminal hard mass which was well circumscribed and situated at about 25 cm from the ileocecal junction, small bowel distal to the mass was collapsed.



Fig-2: Enterotomy extraction of bezoar

Enterotomy was performed and a darkish unclean foul smelling bezoar was found. The ileal bezoar measured 6×4×4 cm, was completely delivered out with minimal difficulties (Figures-2). There were no synchronous existence of primary bezoars noted in the stomach, duodenum or proximal jejunum. Lavage of the abdominal cavity using NaCl 0.9%; double drainage of the abdominal cavity, suture of the abdominal wall. The postoperative care consisted of antibiotics, solution of parenteral nutrition (glucosis, aminoacids), electrolytes, antalgic drugs.

DISCUSSION

Our reported patient had no obvious predisposing factors which lead to small bowel bezoar formation and subsequently bowel obstruction. Bezoar formation in rather healthy subjects has been previously reported though still remains an extremely infrequent clinical entity. The term Bezoar comes from the Arabic "badzehr" or from the Persian "panzer" both meaning counterpoison or antidote [4]. Causes of bezoar include the presence of indigestible material in the lumen, gastric dysmotility (including previous surgery like

vagotomy and partial gastrectomy etc.) and certain other substances that encourage stickiness and concretion formation [5].

Bezoars originate in any part of intestine mostly in the stomach probably related to high fat diet causing non-specific symptoms like epigastric pain, dyspepsia and post-prandial fullness [6]. They may also present with gastrointestinal bleeding (6%) and intestinal obstruction or perforation (10%) [7]. Rarely the bezoars may extend in to the small intestine as a tail (Rapunzel syndrome) or may get broken lodging in the intestine to cause intestinal obstruction, ulceration, bleeding and perforation. Small intestinal bezoars have also been reported after truncal vagotomy and with compression of the duodenum by the superior mesenteric artery. The most common clinical features comprises abdominal pains, poor appetite, vomiting, weight loss and anemia. The most frequent site of obstruction is at the level of the gastric outlet or duodenum. Obstruction of distal parts of the small bowel or large bowel remains a rarity occurrence. Features suggestive of psychiatric ailment and other

chronic disease like diabetes mellitus or hyperthyroidism may as well be encountered [8].

The diagnosis of bezoar as an underlying aetiology of gastrointestinal obstruction has always been arduous. In most instances, a definitive diagnosis has been made during surgery. Usually apart from hematological and biochemical work up, a battery of radiological investigations have been recommended for detection of bezoars. These include the following; plain abdominal X-ray, barium studies, ultrasonography, and computed tomography (CT) scan. A CT scan is very useful diagnostic tool in assessing patients with bezoars, it clearly delineate the site, size and nature of a bezoar. Characteristically, bezoar is revealed as a well-defined intraluminal mass with mottled gas on CT scan. Abdominal ultrasonography is another reliable modality in the diagnosis of gastrointestinal bezoars. Characteristically, sonographic visualization of an intraluminal mass with a hyper echoic arc-like surface and a marked acoustic shadow is greatly indicative of a bezoar. Unlike the latter imaging modalities, plain abdominal X-ray mostly show features of bowel obstruction and occasionally depict an opaque intraluminal soft tissue air-containing mass which may be highly suggestive of bezoar. Endoscopy could be utilized for both diagnostic and therapeutic purposes. Endoscopic examination allows visualization of both gastric and small bowel bezoars and where possible bezoar may be retrieved endoscopically [9]. Often treatment of bezoars entails a wide range of options contingent upon the size, site, and nature of the bezoar. However, retrieval of bezoar remains the core and primary treatment goal. In some cases surgical removal by gastrostomy or enterotomy is adequate but in others segmental bowel resection may be warranted due to bowel necrosis or denuded serosa [10].

CONCLUSION

Small bowel obstruction resulting from solitary bezoar formation without synchronous existence of primary gastric bezoar or any apparent predisposing factor remains an exceedingly rare presentation. Due to its rarity usually pose a significant diagnostic challenge and may subsequently lead to

treatment delay and dreadful ramifications. Therefore, good clinical acumen, high index of suspicion, early detection of bezoar and prompt intervention are central in reducing morbidity and mortality.

REFERENCES

1. Tseng CH, Chen CC, Chang WH. Small intestinal obstruction caused by a bezoar in an elderly patient. *International Journal of Gerontology*. 2010 Sep 1;4(3):154-6.
2. Andrus CH, Ponsky JL. Bezoars: classification, pathophysiology, and treatment. *American Journal of Gastroenterology*. 1988 May 1;83(5).
3. Shah D, Desai AB. Rare disease: Isolated ileal bezoar causing small bowel obstruction. *BMJ case reports*. 2012.
4. Sharma RD, Kotwal S, Chintamani, Bhatnagar D. Trichobezoar obstructing the terminal ileum. *Tropical doctor*. 2002 Apr;32(2):99-100.
5. Erzurumlu K, Malazgirt Z, Bektas A, Dervisoglu A, Polat C, Senyurek G, Yetim I, Ozkan K. Gastrointestinal bezoars: a retrospective analysis of 34 cases. *World journal of gastroenterology: WJG*. 2005 Mar 28;11(12):1813.
6. Huang LC, Lin HH, Huang SC, Hu CT, Liu TT, Chen CL, Chang YJ, Chong PN. Gastrointestinal bezoar: clinical study of 15 years experience from a medical center in eastern Taiwan. *Tzu Chi Med J*. 2005 Feb 1;17:83-6.
7. Ersoy YE, Ayan F, Ayan F, Ersan Y. Gastrointestinal bezoars: thirty-five years experience. *Acta Chirurgica Belgica*. 2009 Jan 1;109(2):198-203.
8. Gonuguntla V, Joshi DD. Rapunzel syndrome: a comprehensive review of an unusual case of trichobezoar. *Clinical medicine & research*. 2009 Sep 1;7(3):99-102.
9. Ho TW, Koh DC. Small-bowel obstruction secondary to bezoar impaction: a diagnostic dilemma. *World journal of surgery*. 2007 May 1;31(5):1073-9.
10. Dervisoglu A, Condilis N, Liveranou S, Pinis S. A causal factor and treatment of obstructive ileus in 369 patients. *Annali italiani di chirurgia*. 2005;76(5):477.