



TRICHOBEZOAR – CAUSE FOR SMALL INTESTINE OBSTRUCTION – A CASE REPORT

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ABSTRACT

Patients with mechanical small-bowel obstructions usually present with abdominal pain, vomiting, absolute constipation and varying degrees of abdominal distention. Causes can be classified as benign or malignant, or as extra- or intraluminal. A bezoar occurs most commonly in patients with impaired gastrointestinal motility. In edentulous older patients with abnormal food habits, it can also be an intestinal concretion that fails to pass along the alimentary canal. Small bowel trichobezoar are rare and almost always obstructive. In a normal stomach, hair fibers that cannot pass through the pylorus undergo hydrolysis within the stomach, which softens them enough to go through the small bowel. We present an unusual case of small intestinal obstruction caused by a trichobezoar in a patient who had neither a history of gastric surgery nor of intestinal pathology.

KEYWORDS

Case Report, Trichobezoar, Small Bowel Obstruction

INTRODUCTION

Trichobezoar are a concretion of poorly digested hair fibers that are found in the alimentary tract. In a normal stomach, hair that cannot pass through the pylorus undergo hydrolysis within the stomach, which softens them enough to go through the small bowel. In patients who have undergone gastric surgery, however, gastric motility is disturbed and gastric acidity decreased, and the stomach may empty rapidly with an abnormally found in the stomach, bezoars may pass increased possibility of bezoar formation. through the small bowel. Primary small bowel bezoar is very rare and normally forms in patients with an underlying small bowel disease like diverticulum, stricture or tumor. Trichobezoar can also develop secondarily if there are areas of sufficient stagnation within a dilated bowel segment. This may occur in patients with strictures caused by Crohn's disease, tuberculosis or previous surgery, or in patients with small bowel diverticula. In such cases, bile constituents or calcium salts contribute to bezoar development [3]. We present an unusual case of small intestinal obstruction caused by trichobezoar although the patient had neither a history of gastric surgery nor of intestinal pathology.

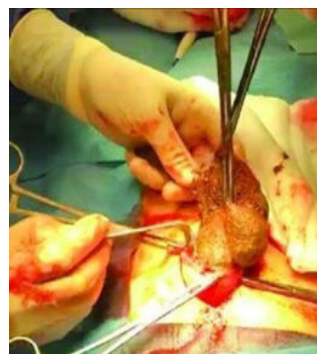
In this case, swallowed foreign bodies may have been involved although a foreign body that has passed the pylorus is usually able to pass through the remainder of the small bowel without difficulty, unless the small bowel is already compromised by postoperative adhesions. The terminal ileum is the narrowest part of the small bowel, and peristalsis may be weaker here than in more proximal segments. The intramural width of the small bowel may be measured by taking plain abdominal radiographs of a gas-filled lumen. An intramural width of 3 cm is considered abnormal and may indicate obstruction or ileus. Certain radiologic investigations can be used to confirm the diagnosis and severity of a small-bowel obstruction, but not its etiology. Others are aimed at determining the cause of small-bowel obstructions [4]. Conventional plain radiography is the investigation of choice for patients with suspected small-bowel obstructions, and this method should always be performed first [4]. A bowel larger than 3 cm in diameter is often associated with obstruction. Gas and fluid is usually present in the distended small bowel loops, and gas and fluid levels may be present at the same or different levels in the abdominal cavity [4].



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Case Study

A 70-year-old Mohammad Ali Shah was referred to our center for further management of intestinal obstruction. He presented with a history of a few hours of epigastric discomfort associated with vomiting and abdominal distension. His bowel habit was mildly altered but there was no history of rectally passing blood. He denied any loss of weight or appetite. Medically he was being treated for hypertension and congestive cardiac failure. His past surgical history consisted of cardiac catheterization and angiography 1 year before presentation. His vital signs upon admission were stable with blood pressure at 140/90 mmHg and a heart rate of 100 beats/minute. His abdomen was tender but slightly distended. Bowel sound was sluggish and rectal examination revealed an empty rectum with no palpable mass. His hernia orifices were normal and he was also edentulous.



https://www.researchgate.net/figure/Ileotomy-for-extraction-of-the-eggplant_fig4_40900438

His electrocardiogram showed evidence of old ischemic changes. His blood investigation results were unremarkable. A clinical diagnosis of intestinal obstruction was then made based on his radiological findings. An exploratory laparotomy was subsequently performed on the patient, which yielded findings of a hard intraluminal body obstructing the terminal ileum (Figure 3). The operation confirmed suspicion of a bezoar measuring 5 × 3 cm, which was found at a distance of 10 cm from the ileocecal junction exteriorized through ileotomy. His jejunum and ileum were dilated and hypertrophied but no jejunal or ileal mass or polyps were found.

The pathology report of the operative specimen was hair matter. The postoperative period was uneventful, during which the patient was started on nourishing fluid and a soft diet. He was discharged 4 days later. After 1 week he was found to be well during follow-up.

DISCUSSION

Small bowel obstructions account for 20% of hospital admissions. Common causes are adhesions, strangulated hernia, malignancy,

volvulus and inflammatory bowel disease. Trichobezoar are rare, accounting for only 0.4 to 4% of all cases of intestinal obstruction. No particular age or sex prevalence has been observed. There are four types of bezoars - phytobezoars, trichobezoars, pharmaco bezoars and lacto bezoars. Phyto bezoar the most common, and are composed of vegetable matter (celery, pumpkin, grape skin, prune and persimmons) and contain a large amount of non-digestible fib (cellulose, hemicellulose, lignin and fruit tannins). On the other hand, trichobezoars are gastric concretion of hair fibers which usually presents in patients with a history of psychiatric predisposition and in children with mental retardation. Meanwhile, pharmaco bezoars consist of medication bezoars, such as cholestyramine, kayexalate resin, and antacids, which adhere when in bulk. Lastly lacto bezoars are milk curd secondary to infant formula, described in low birth weight neonates fed on highly concentrated formula within their first week of life [6]. Primary small bowel bezoars almost always present as intestinal obstructions. They usually become impacted in the narrowest portion of the small bowel, the most common site being the terminal ileum, as was found in our patient, followed by the jejunum. It is interesting to note that more than half of reported cases of patients with trichobezoar had a history of gastric surgery [8]. Our patient gave no history of gastrointestinal-related surgery.

A plain radiograph typically shows a classic obstructive pattern. Occasionally we may be able to see the outline of a bezoar, which is actually difficult to differentiate from abscess or feces within the colon. Ultrasound has been used to detect bezoar. A bezoar appears as a hyperechoic arc-like surface with acoustic shadowing on ultrasound; however this feature may cause difficulty in differentiating bezoar from gall-stones, which have similar ultrasound characteristics.

CONCLUSIONS

We present an uncommon case of small bowel obstruction caused by a secondary trichobezoar that passed the pylorus without digestion.

Small bowel bezoars are treated surgically. It is mandatory to explore the whole gastrointestinal tract in order to avoid synchronous bezoar and the recurrence of intestinal obstruction due to a retained bezoar. Other treatment options include enzymatic breakdown and endoscopic fragmentation for a gastric bezoar [1,5].

Recurrence is common unless the underlying predisposing condition is corrected. Prevention includes avoidance of eating hair, introduction of prophylactic medication to improve gastric emptying and psychological or psychiatric follow-up in patients with psychiatric disease. In difficult, recurrent cases, periodic endoscopy with repeated mechanical disruption is necessary.

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