CLINICAL VIGNETTE

Small Bowel Obstruction Caused by Laxative Induced Bezoar

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Case Presentation

A 44-year-old man with a past medical history of hypertension, diabetes mellitus type 2 and hyperlipidemia, presents with 1-day of epigastric pain. The pain is crampy in quality, moderate intensity, and without radiation, without precipitating or relieving factors. There is no associated nausea, vomiting, fevers, or chills. He has history of chronic constipation and his last bowel movement was 2 days prior to presentation. He reports drinking kratom tea, daily for many years, which has a common side effect of constipation. Due to his chronic constipation, he takes large amounts of Metamucil, psyllium bulk laxative and an over the counter "colon cleanse" daily for several weeks. He has no history of abdominal surgeries. He was afebrile and normotensive. Physical exam noted a well appearing male, with mild epigastric tenderness without rebound or guarding. Admission labs including complete blood count, complete metabolic panel, and lipase were unremarkable. CT abdomen and pelvis with oral and IV contrast revealed a small bowel obstruction at the mid jejunum, with a focal transition point to a decompressed distal jejunum/ileum, without a focal obstructing lesion identified. General surgery was consulted. A nasogastric tube was placed for decompression, patient was made NPO and given intravenous fluids. Given minimal relief of pain despite pain medications, the patient was taken to the operating room for laparoscopic exploration. In the operating room, he was found to have a distended proximal bowel without any congenital adhesions or band adhesions noted. A transition point was found which was noted to have a firm vegetable like matter within the bowel. This was broken up and pushed forward. Further examination demonstrated no intraluminal lesions. Patient did well post operatively and was discharged home and instructed to follow up in clinic.

Discussion

Bezoars are indigestible masses trapped in the gastrointestinal tract and are classified depending on the material: phytobezoars (plant materials, most common cause), trichobezoars (hair), pharmacobezoars (medications), and lactobezoars (milk protein in milk-fed infants). Pharmacobezoars are an uncommon complication caused by conglomerations of medications or medication vehicles in the gastrointestinal tract. Bulk forming laxatives such as psyllium appear to contribute to the formation of pharmacobezoars because of their hygroscopic properties and bulk forming nature.[1]

Bezoars are believed to form as a complication of delayed gastric emptying.[1] Common predisposing risk factors in bezoar formation include previous gastric surgery, persimmon ingestion, mastication issues, diabetes mellitus, peptic ulcer disease, chronic gastritis, Crohn's disease, gastrointestinal carcinoma, dehydration, and hypothyroidism.[1,2]

Majority of bezoars are found in the stomach where they can cause gastric outlet obstruction, ulcerative lesions and subsequent bleeding. They are occasionally are found in the small intestine, either after being formed in the stomach and moving into the small intestine, or initially be forming in the small intestine where they can cause small bowel obstruction and ileus.[1] Bezoars constitute 0.8%-3.2% of all causes of acute small bowel obstruction.[3,4] Prevalence of bezoars is likely variable among geographic locations as phytobezoars which are the most common type reflected by food cultures.[1]

Bezoars can be asymptomatic or present with a variety of gastrointestinal symptoms.[1] In bezoar induced small bowel obstruction, abdominal pain is the most common symptom, followed by vomiting and nausea.[5] Other symptoms include loss of appetite and weight loss.[2]

CT scan can be useful in the diagnosis of bezoar induced small bowel obstruction, and they usually appear as round, oval, or tubular masses with clear boundaries, often displaying different densities with CT, with mottled gas densities inside the bezoar.[6]

Gastric bezoars can be treated with removal by endoscopy or laparoscopy/laparotomy. Gastric phytobezoars may be treated with dissolution by coca-cola.[1] For bezoar induced small bowel obstruction, large bezoar size and high CT values (Hounsfield units) may be indications for surgery. Surgery is necessary when nonsurgical treatment is ineffective.[6] The surgery of choice for small bowel obstruction due to bezoar is laparotomy, however laparoscopy has been used in small series of patients.[7] Surgical management of intestinal obstruction secondary to bezoars entails milking the object into the cecum or performing enterotomy for retrieval in difficult cases.[2]

Conclusion

Small bowel obstruction caused by a bezoar is uncommon. Risk factors include gastric motility disorders and consumption of certain medications such as bulk forming laxatives. Symptoms

of bezoar induced small bowel obstruction are often similar causes of small bowel obstruction. CT scan is helpful in the diagnosis and may help in determining if surgical intervention is necessary. Laparotomy is the treatment of choice, however, laparoscopy has been found to be effective as well.

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