Received: 2019.10.11
Accepted: 2019.10.31
Published: 2019.12.22

e-ISSN 1941-5923
© Am J Case Rep, 2019; 20: 1920-1922
DOI: 10.12659/AJCR.920621

An Unusual Mimic of Intermittent Bowel Obstruction

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
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Conflict of interest: None declared

Patient: Female, 42-year-old
Final Diagnosis: Phytobezoar
Symptoms: Abdominal pain
Medication: —
Clinical Procedure: Endoscopy
Specialty: Gastroenterology and Hepatology

Objective: Rare disease
Background: Indigestible foreign material in the bowel can develop into bezoars. Intestinal obstruction can occur secondary to these bezoars. Phytobezoars specifically refer to those which accumulate as a result of undigested plant or other food material.

Case Report: A 42-year-old woman presented to the Emergency Department with a several-month history of right-sided abdominal pain associated with bouts of vomiting. She had no other significant medical history. Labs and computed tomography were unrevealing. Gastroenterology was consulted and performed endoscopy. A foreign body resembling an undigested mini bell pepper was found near the terminal ileum. This was removed, and the patient later reported significant improvement in her symptoms.

Conclusions: Phytobezoars can lead to symptoms consistent with intestinal obstruction. The underlying pathology (e.g., masses, gastritis, adhesions, or dysmotility) can precipitate obstructions in the setting of bezoar formation. Surgical removal is often necessary for small-bowel obstructions secondary to bezoars, but in our case, fortunately, the foreign body was successfully removed during endoscopy.

MeSH Keywords: Bezoars • Endoscopy • Gastroenterology • Intestinal Pseudo-Obstruction

Full-text PDF: <https://www.amjcaserep.com/abstract/index/idArt/920621>

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Background

Indigestible foreign material in the bowel can develop into bezoars. Bezoars are defined as any foreign body or substance in the gastrointestinal tract that cannot be digested in the normal fashion, and subsequently may develop into hard masses, concretions, or other matted substances. Intestinal obstructions occasionally occur secondary to these bezoars. Phytobezoars specifically refer to those which accumulate as a result of undigested plant or other food material.

Case Report

A 42-year-old woman presented to the Emergency Department (ED) with a 4-month history of post-prandial right-sided abdominal discomfort. These episodes were often associated with bouts of emesis. She had recently noted streaks of blood in her stool. Her medical history was otherwise unremarkable, but she did report having 20 pounds of weight loss in the prior 4 months. Physical examination was significant for abdominal tenderness in the right upper and lower abdominal fields. The patient had no obvious abdominal distension or palpable masses. There was no reported use of anticoagulants.

Initial vitals were normal, without tachycardia, fever, or hypotension. These vitals remained stable during her ED course. Laboratory evaluation revealed a white blood cell count of $5.9 \times 10^9/L$, hemoglobin of 14.1 g/dL, normal liver function tests, and an unrevealing urinalysis.

Computed tomography (CT) of the abdomen and pelvis with contrast was performed. This revealed no evidence of bowel obstruction, masses, or other acute pathology. Specifically, there was no radiographic evidence of a foreign body at the ileocecal junction (Figure 1).

Figure 1. Computed tomography image of ileocecal junction (arrow), without evidence of a foreign body.

Figure 2. Endoscopic view of terminal ileum foreign body.

Figure 3. Endoscopic view of terminal ileum foreign body.

Gastroenterology was consulted, given the constellation of symptoms. Endoscopic evaluation was recommended urgently as an outpatient. The patient agreed to this plan, and she proceeded to the Gastroenterology Clinic for further testing 3 days later.

Upper gastrointestinal endoscopy revealed mild gastritis only. On lower gastrointestinal endoscopy, the patient was noted to have an obvious foreign body near the terminal ileum, resembling an undigested mini bell pepper (Figures 2, 3). This was removed with regular forceps. No other apparent pathology or cause for her abdominal symptoms was found. The remainder of the gastrointestinal tract was evaluated in the usual fashion. The patient's course was otherwise uncomplicated. She was discharged in good condition and reported tolerating an oral diet with minimal abdominal discomfort in the following days.

Discussion

Indigestible foreign material in the bowel can develop into bezoars. Overall rates of obstruction secondary to bezoars have

been reported to be between 0.4% and 4% [1]. Phytobezoars specifically refer to those which accumulate as a result of undigested plant or other food material. Persimmon fruit have been especially implicated. Cellulose, lignin, and tannins are the reported constituents in these food items that are difficult to digest [2]. As one may expect, underlying gastrointestinal pathology, such as previous surgery [3], adhesions, radiation, gastritis, or dysmotility, can precipitate an obstruction in the setting of bezoar formation. However, in rare instances (<1%), as in our patient, no underlying pathology or predisposition to obstruction is found other than the phytobezoar itself [4]. Although no radiographic evidence of obstruction was seen on computed tomography in our patient (Figure 1), her symptoms were intermittent and post-prandial in nature, suggestive of possible ball-valve type effect from the foreign body near the terminal ileum. Also, given the organic nature of the vegetable matter, we would not expect to be able to visualize such a phytobezoar on radiographic computed tomography.

Appropriate mastication, proper fluid consumption, and limiting ingestion of high-fiber foods can prevent phytobezoar formation. Endoscopic intervention is used to evaluate, treat, and remove most gastric bezoars. Surgical removal is generally needed for small-bowel obstructions secondary to bezoars [2,3], but fortunately, our patient's foreign body was removed during endoscopic evaluation of the bowel.

Conclusions

Clinicians should consider a foreign body or bezoar in the differential for unexplained intermittent bowel obstruction symptoms. Phytobezoars can occur from undigested plant or food material, and generally require endoscopic evaluation for diagnosis and potential treatment.

Conflicts of interest

None.

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