

CLINICAL VIGNETTE

Curious Case of a Carrot Bezoar

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Introduction

The origin of the word “bezoar” is from the Persian word “pad-zahr” which translates to “antidote”. A bezoar was once believed to have medicinal or mystical properties that could cure and protect against poisons. However, bezoar currently is an accumulation of indigestible material that forms a mass in the GI tract. The following patient has a bezoar variant, a phytobezoar, made up of indigested plant material.

Patient

A 75-year-old male presents to the ER with 12 hours of abdominal pain associated with intractable nausea and vomiting. Symptoms began suddenly. Patient described cramping pain, mostly in lower quadrants, that was non-radiating. He endorsed constant discomfort with intermittent increasing intensity causing him to have bouts of non-bloody emesis. Past medical history includes lumbar radiculopathy, OSA, GERD with Barrett’s Esophagus, hypertension, and BPH. He had no prior abdominal surgery. There were no recent changes to his diet, other than eating “raw carrots” the night prior.

On arrival he was afebrile with normal vital signs. He was in mild discomfort, with a distended and tympanitic abdomen. Bowel sounds were hypoactive and there was increased tenderness to palpation of RLQ without rebound. Normal labs included CBC, BMP, LFT’s, amylase and lipase. General surgery was consulted and the patient remained NPO. A nasogastric tube was placed for gastric decompression. CT of abdomen and pelvis showed a dilated small bowel with a focal transition point at the right lower quadrant (RLQ) consistent with a high-grade small bowel obstruction (SBO).

Laparoscopic surgery was performed. The surgeon noted a firm mass at the ileocecal valve. He attempted propulsion of the bezoar into the large intestine, without success. Surgery converted to laparotomy and the surgeon was able to manipulate the bezoar past the ileocecal valve into the large intestine. The patient tolerated surgery without complication. Diet was advanced on post-operative day (POD) 1 which was tolerated without abdominal pain. He subsequently passed flatus and diet was advanced further without problems. He was discharged 3 days after surgery, tolerating regular diet without abdominal pain, nausea, or vomiting. He was anxious to be discharged despite not having a bowel movement. He was discharged with strict return precautions.

Discussion

Bezoars can be classified based on the underlying material. The more common types are phytobezoar (undigested plant material), trichobezoar (undigested hair), and pharmacobezoar (undigested medications). Other materials such as paper and styrofoam may also form into bezoars. Bezoars are rare and may be only diagnosed on routine EGD. Risk factors include insufficient mastication, prior gastric or intestinal surgery (such as vagotomy or pyloroplasty), gastroparesis, medications that alter the gastric motility (opiates, anticholinergics), and underlying psychiatric conditions (trichotillomania).

Common symptoms include abdominal pain, nausea, emesis, and early satiety.¹ Although rare, complications such as gastrointestinal bleeding (6%), intestinal obstruction or intestinal perforation (10%) may occur.² The physical exam is often unremarkable except for abdominal pain on palpation, and in cases of a very large bezoar, a palpable abdominal mass.

Common diagnostic imaging includes abdominal radiographs (with or without barium), or abdominal CT scan that shows a mass or filling defect.³ In addition to imaging, upper endoscopy can also establish the diagnosis and allows for tissue sampling that can determine the bezoar composition. However, in the setting of obstruction (such as our patient), severe intestinal bleeding or perforation, immediate surgical intervention is warranted.

When bezoars can be managed non-surgically, providers should consider the degree of symptoms as well as the composition of the bezoar. Phytobezoars can often be managed medically by chemically breaking down proteins with cellulase and papain. Interestingly, multiple case reports show successful treatment after drinking carbonated soda, such as Coca-Cola™.⁴ With trichobezoars chemical degradation is not an option. These require endoscopic intervention. Lastly, in a pharmacobezoar, decontamination may be needed if the ingested medication is considered toxic.⁵ Any bezoar that is impervious to chemical breakdown or endoscopic retrieval, will require surgical management.

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