

Rare Cause of Small Bowel Obstruction: Multiple Phytobezoars

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Dear Editor,

A 65-year-old male patient with abdominal pain, vomiting, and constipation for two days was admitted to the emergency unit. He had hypertension for ten years and an anamnesis of recurrent ileus. Additionally, he had two abdominal surgeries because of duodenal ulcer 30 years ago and fecaloid plug impaction because of ileus 3 years ago. There was abdominal distension without defense and rebound tenderness. His laboratory examination revealed slight leukocytosis with 13.4 $\mu\text{l/ml}$ along with an increase in the levels of GGT (217 U/l), ALP (263 U/l), lipase (58 U/l), and CRP (34.5 g/l). He was clinically diagnosed with ileus and redirected to the radiology department for abdominal computed tomography (CT) examination. CT scans showed a well-defined, lobulated nodular intestinal lesion including millimetric air densities and intestinal content impaction at the pelvic entrance accompanied by diffuse intestinal wall thickening and mesenteric heterogeneity (Figure 1). Additionally, there was diffuse intestinal dilatation at the proximal part of small intestines. The site of this impaction was defined as the transition zone. There were also two similar nodular lesions in the fundus and antrum of the stomach (Figure 2). As the patient had duodenal ulcer surgery and anamnesis of recurrent ileus, these contents were diagnosed as phytobezoars. In follow-up visits, the patient's clinical symptoms and laboratory findings deteriorated and he was redirected to surgery. Enterotomy-gastrotomy along with phytobezoar resection surgery was administered on the patient (Figure 3). Macroscopic pathology evaluation detected three operation materials, which were green, colored, and spongiform consistent with the fissionable pattern. Microscopic evaluation revealed a homogeneous spongiform image. The histopathology results detected the operation materials as food-originated materials.

Phytobezoars are the accumulation of undigested or poorly digested fibers of fruits and vegetables in the gastrointestinal system (1). Their occurrence is common in patients with a history of gastric ulcer or gastric resection surgeries (2). Additionally, high-fiber diet digestion; other diseases and factors such as renal failure, diabetes mellitus, postoperative adhesions, Gullian-Barré syndrome, myotonic dystrophy, and hypothyroidism; dental diseases, which causes insufficient chewing problems; and drugs, which slow the gastrointestinal motility, may result in the formation of phytobezoars (3, 4). A study has also reported the formation of idiopathic phytobezoars (4).

Mechanical small bowel obstruction commonly occurs in patients with phytobezoars. Because the diameters of the intestinal lumens are narrowed, proximal ileal segments and jejunum are the frequent transition zones of mechanical obstructions (2).

Endoscopic methods along with open or laparoscopic surgeries are the treatment options for this disease (5). Surgery is preferred after the failure of endoscopic treatment (5). Laparoscopic surgery requires optimal preoperative radiological evaluation and technical experience (5). Although laparoscopic surgery is more frequently performed, open surgery is still the most common treatment method (5). Enterotomy is administered in patients who had bezoar in the proximal parts of gastrointestinal tract (5).

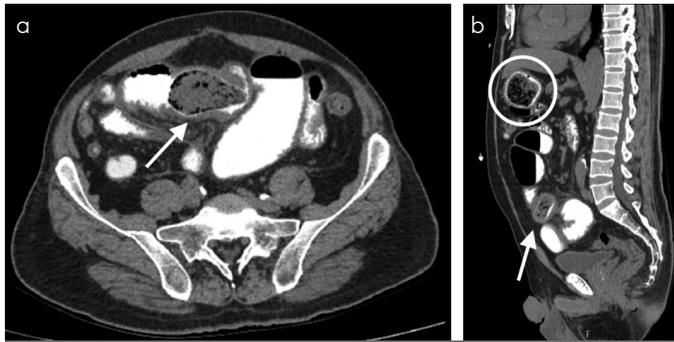


FIGURE 1. a, b. a. Axial b. Sagittal CT examinations with oral positive contrast material show a well-defined, lobulated nodular intestinal lesion including millimetric air densities compatible with phytobezoars and intestinal content impaction at the proximal part of small intestines accompanied by diffuse intestinal wall thickening and mesenteric heterogeneity (Arrow). The site of this impaction was defined as the transition zone of mechanical intestinal obstruction. Additionally, similar nodular density is observed in the stomach lumen (Circle)



FIGURE 2. Axial CT image with oral positive contrast material shows two phytobezoars filling the defects at the fundus and antrum of the stomach

In conclusion, phytobezoars must be considered in the diagnosis of patients especially with gastric surgery for peptic ulcer and anamnesis of recurrent mechanical intestinal obstruction. CT provides an optimal evaluation of the location of phytobezoars and assists in planning and choosing the surgical method.



FIGURE 3. Surgical procedures compatible with enterotomy and gastrotomy. Three resected and different phytobezoars are seen

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