Diospyrobezoar in Jejunum Causing Intestinal Obstruction: A Rare Case Report

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SUMMARY
Bezoars present as a mass in any part of intestine usually in the stomach. Presentation could be in the form of trichophagy followed by trichobezoar (swallowing of hair leading to formation of bezoar) and orphytobezoar (swallowing of vegetable fibres). A 36 years old housewife presented to the surgical emergency department with features of acute intestinal obstruction. A detailed history taking and physical examination were made. In the preoperative period the patient gave a history of eating persimmon. Following an abdominal ultrasonography, she undergone laparotomy with the suspicion of bezoar and enterotomy revealed a diospyrobezoar in the jejunum. She was managed by a single enterotomy of the jejunum. Presence of diospyrobezoar is rare and an intestinal bezoar in the absence of parent bezoar in the stomach is still rarer.

Key Words: Diospyrobezoar, jejunum, intestinal obstruction, persimmon

İntestinal Obstruksiyona Neden Olan Jejunumda Diospirobezoar: Nadir bir Olgu

ÖZET
Bezoar sıklıkla mide olmak üzere gastrointestinal sistemin herhangi bir yerinde kitle olarak oluşabilir. Trikobezoar (saçların yutulması ile bezoar oluşumu) ve orfitobezoar (sebze liflerinin yutulması ile bezoar oluşumu) şeklinde olurlar. 36 yaşında bir ev hanımı hasta acil servise akut intestinal tıkanıklık bulguları ile başvurdu. Detaylı hikaye ve fizik muayene yapıldı. Preoperatif periyotta hastadan hurma yeme hikayesi alındı. Abdominal ultrasonu takiben hastaya bezoar şüphesi ile laparatomi yapıldı. Enterotomi ile jejunumdaki bezoar dışarı alındı. Diospirobezoar varlığı nadirdir ve intestinal bezoar midedeki bezoar yokluğunda daha nadirdir.

Anahtar Sözcükler: Diospirobezoar, jejunum, intestinal tıkanıklık, hurma

INTRODUCTION

Bezoars are retained concretions of animal or vegetable material in the gastrointestinal tract. They consist of swallowed foreign materials or indigestible organic matter and form a mass in gastrointestinal tract. Most bezoars reside in the stomach, but they may be encountered elsewhere. Previous gastric surgery, which has resulted in impaired gastric emptying and/or decreased acid production, is usually the cause of bezoars. Phytobezoars are more common, while trichobezoars are rare (1). Trichobezoars are formed by swallowed hair, they are rare, and occur often in patients with some psychiatric ailment (2,3,4). They usually present with signs and symptoms due to a mass in the stomach and may rarely extend into the jejunum as a tail (Rupenzel syndrome) (4,5,6). They may present with malabsorption, weight loss, abdominal pain, and signs of gastrointestinal obstruction or even perforation (7). Ultrasonography, Computerized Tomography, Endoscopy and Gastrografin swallow may aid in diagnosis. The treatment of bezoars can be either conservative or surgical (1). Isolated presentation in the jejunum is rare. Stomach bezoars if detected in time may be treated by endoscopic retrieval but if presentation is in the form of intestinal obstruction with or without perforation management is by a formal exploratory laparotomy (6,8,9,10).

CASE

A 36 years old woman was admitted in the emergency with acute abdominal pain, distension, nausea, vomiting and constipation. She admitted to another hospital with these symptoms and she misdiagnosed by CT and peptic ulcer diagnosis was made and she started to use anti ulcer treatment. She had no cough, no hematemesis and no melena. There was not any history of operation, chronic disorder and receiving psychiatric consultation. She gave a history of eating persimmon.

In the physical examination, the abdomen was tense tender and distended with peritoneal signs. Liver dullness was not obliterated and rectal examination revealed an empty and ballooned rectum.

She has marked leucocytosis (Total count 15.5K/uL). The blood chemistry was also deranged (hyponatremia and hypokalemia). X ray of the abdomen erect and supine showed multiple air fluid levels without any gas under the diaphragm. Ultrasound of the abdomen showed an intestinal mass of 35mm in diameter and minimal free fluid in the peritoneal cavity.

Patient was taken up for laparotomy through an upper midline incision, which revealed grossly dilated, and distended small bowel loops with an indentable bowel mass in the jejunum measuring 25 × 35 × 30 mm about 80 cm distal from the Treitz ligament. The mass could be palpated. Enterotomy was performed (figure 1) and the bezoar was removed (figure 2).

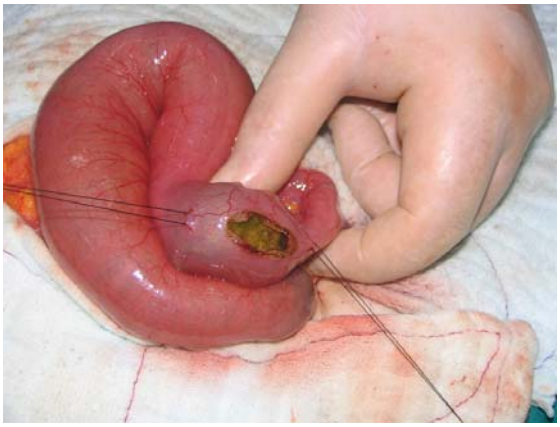

Figure 1. Enterotomy.

There was no bezoar in the stomach or duodenum and ileum. An erythemateus appearence and edema on the serosa of intestinal segment about 40 cm distal from the Treitz ligament was seen and thought as the first region obstructed (figure 3). After a thorough peritoneal lavage the abdomen was closed with drains in situ. The patient made a satisfactory postoperative recovery. She had not any similar episode of acute abdominal pain. Post-operative upper gastrointestinal endoscopic studies did not reveal any concomitant bezoar in the stomach.

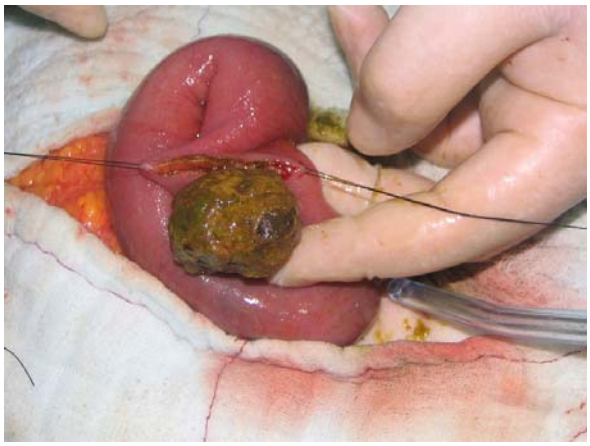

Figure 2. Removal of the jejunal bezoar.

Figure 3. An erythemateus appearence and edema on serosa was seen

DISCUSSION

The term Bezoar comes from the Arabic "badzehr" or from the Persian "panzer" both meaning counterpoison or antidote (2,4). Hindus used bezoars in the twelfth century BC for rejuvenating the old, neutrallizing snake venom and other poisons, treating vertigo, epilepsy, melancholia and even plague. A genuine bezoar was recognized by its failure to smoke when a red-hot needle was plunged into it (3,4,5,6) Causes of bezoar include the presence of indigestible material in the lumen, gastric dysmotility (including previous surgery like vagotomy and partial gastrectomy etc.) and

certain other substances that encourage stickiness and concretion formation. Around 420 cases of trichobezoar and a larger number of phytobezoars have been reported in the literature but many go unreported (2,8). They occur mainly in the young women who chew and swallow their hair (trichobezoar) or phytobezoar (vegetable fibres) or diospyrobezoar (persimmon fibres) or pharmacobezoar (tablets/semi liquid masses of drugs) (3,5,6,8,9,10). With time these are retained by mucus and become enmeshed, creating a mass in the shape of the stomach where they are usually found. Bezoars have been reported between the ages of 1 and 56 yrs, most presenting between the ages of 15–20 yrs and 90% are in females. Approximately 10% show psychiatric abnormalities or mental retardation (6).

Bezoars originate in any part of intestine mostly in the stomach probably related to high fat diet causing non-specific symptoms like epigastric pain, dyspepsia and post-prandial fullness (3,4,5). They may also present with gastrointestinal bleeding (6%) and intestinal obstruction or perforation (10%) (3,5,6). Kehr sign may present as a sign due to irritation of the diaphragm and the phrenic nevre for giant bezoars. (11) Rarely the bezoars may extend in to the small intestine as a tail (Rapunzel syndrome) or may get broken lodging in the intestine to cause intestinal obstruction, ulceration, bleeding and perforation. Small intestinal bezoars have also been reported after truncal vagotomy and with compression of the duodenum by the superior mesenteric artery (8). Schoeffl et al report four cases, seen within a period of 19 months in Laos, with intestinal obstruction caused by phytobezoars from jungle banana seeds (12).

The role of CT in evaluating patients with small bowel obstruction (SBO) has been extensively described in the current literature. Zissin et al present the CT findings of SBO due to a phytobezoar, afterwards surgically confirmed, in 5 men and 1 woman (aged 32-89 years) out of 95 patients diagnosed by CT as having SBO in a 44-month period (13).

Treatment of bezoar is removal of the mass by a single enterotomy or resection of the bowel if not viable (9,10). Duncan et al. recommended bezoar extraction by multiple enterotomies in the Rapunzel syndrome (14). DeBakey and Oschner reported an operative mortality of 10.4% (15). Nelson reported nonoperative management of persimmon bezoar with papain therapy (16). It is mandatory to do a thorough exploration of the rest of the small intestine and the stomach to look for retained bezoars. If they detected in the intestine, they may be milked down to the enterotomy site for retrieval through one opening or they may require multiple enterotomies.

It is rare for a persimmon to present in the jejunum without a concomitant parent bezoar in the stomach. The patient gave a contributory history and the presentation was essentially as a case of acute intestinal obstruction.

In conclusion, since history taking and physical examination are important, patients should undergone Ultrasonography by experienced radiologists. We thought that, in the direction of history taking and physical examination, USG is the fast, noninvasive and effective method in the diagnosis and the management of bezoars.

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