

Kehr Sign With Gastric Bezoar: A Rare Case Report

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Abstract

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 orphytoezoar (swallowing of vegetable fibres). A 85 years old man presented to the internal medicine department with features of gastrointestinal bleeding. Laparotomy and gastrotomy revealed a bezoar in the stomach. He was managed by gastrotomy of the stomach, apendectomy and splenectomy.

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 in to the jejunum as a tail (Rupenzel syndrome) (4,5,6). Kehr sign was present in our case due to irritation of the diaphragm and the phrenic nerve. Kehr sign (referred pain in the left shoulder and proximal one third of the left arm as a result of free blood in the abdomen, irritating the diaphragm and the phrenic nerve)

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). 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 REPORT

A 82 years old man was admitted in the internal medicine department with gastrointestinal bleeding, left shoulder pain, distension, nausea, vomiting and constipation. There was history of shunt operation, hypertension cerebrovascular disease.

In the physical examination, the abdomen was tense tender and distended with peritoneal signs. He has marked leucocytosis (Total count 15500/cmm). 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 and minimal free fluid in the peritoneal cavity. Preoperative upper gastrointestinal endoscopic studies did not reveal any bezoar in the stomach.

Patient was taken up for laparotomy through an upper midline incision, which revealed an indentable palpable gastric mass measuring 15 x 25 x 30 cm in diameters. Gastrotomy was performed and the bezoar was removed (figure1). There was no bezoar in the duodenum, jejunum and ileum. Apendectomy and splenectomy were also performed. 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 1

Figure 1: Appearance of gastric bezoar.



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, neutralizing 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). 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⁾.

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⁽¹³⁾. DeBakey and Ochsner reported an operative mortality of 10.4%⁽¹⁴⁾. Nelson reported nonoperative management of bezoar with papain therapy⁽¹⁵⁾. 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.

In conclusion, since the patient present Kehr sign, gastric bezoar should be considered.

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