

Gastro-duodenal Phytobezoar causing Choleducho-duodenal Fistula-A Rare Case

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Abstract

Bezoars (BZ) are the most common foreign bodies of gastrointestinal tract. Clinical manifestations vary depending on the location and dimension of BZ from no symptoms to acute abdominal syndrome. Hereby we report the case of gastric bezoar which was perforating through first part of duodenum into common hepatic duct. There are no certain data about the therapy of choice of bezoars. The ultimate goal of the treatment of BZs is their removal and prevention of recurrence. Here gastrostomy was done and BZ was removed in piece meal.

Key Words: *Phytobezoar, fistula, common hepatic duct.*

Introduction

Bezoars are collections or concretions of indigestible foreign material that accumulate and coalesce in the gastrointestinal tract. The reported incidence was 0.4%.^[1] They are localized in stomach (44.11%), duodenum (2.94%), jejunum (11.76%), ileum (25.32%), stomach and jejunum (5.88%), stomach and ileum (8.82%), duodenum and jejunum (2.94%).^[2] Phytobezoars have rarely been associated with gastrointestinal complications such as peritonitis and perforation.^[3,4]

Case report

A 35-year-old woman was evaluated for bilious vomiting and upper abdominal distension. Her abdominal fullness was mainly in the epigastric region and has been present intermittently for one year. This abdominal fullness increased after intake of food but relieved by bilious vomiting. She also complained of anorexia, nausea, early satiety, generalized weakness, easy fatigability and lost

6 kg in the last 6 months. There was history sudden severe attack of pain in right upper abdomen, one year back for which she was treated in the line of acute cholecystitis and got relieved. There was no history of intermittent pain, fever, jaundice, bleeding per rectum, previous gastric surgery, diabetes mellitus, hypothyroidism, or medications that could reduce gastric motility. Her mental condition was absolutely normal. She had undergone sonographic evaluations for abdominal pain one year back which was reported as acute cholecystitis. The general examination was normal except for pallor & dehydration. The abdomen was soft with normal bowel sounds and fullness in epigastrium, which was relieved after passive evacuation of one liter of bile through Ryles tube aspiration. The laboratory evaluation revealed haemoglobin of 8.5g/dl, total white cell count of 9,900 per mm³, platelet count 220,000 per mm³ and ESR of 40 mm at the end of 1 hour. Liver and renal function tests were normal.

Sonography revealed a mass in peripancreatic region, not well appreciated, common bile duct dilated (C.B.D.). There was pneumobilia. Non-contrast C.T. Scan revealed dense calcified lesion in the pylorus, duodenum extending into C.B.D. causing hepatic duct obstruction, suggesting phytobezoar with perforation

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of C.B.D. Lower C.B.D. is displaced medially by the lesion. Pneumobilia was confirmed.

Endoscopy (Fig 1) showed a oval greenish black mass of amorphous material occupying the pylorus and duodenum compatible with a phytobezoar along with scattered ulceration and friability of gastric mucosa and scope could not be negotiated into pylorus. Also noted were mild erythema of the distal esophagus. We decided to attempt endoscopic fragmentation. The bezoar was grasped with polypectomy snare but could not be broken into smaller fragments.



Fig 1: Endoscopy showing oval greenish black mass

3D-Barium meal study (Fig 2) was performed in digital volume tomography unit which confirmed the pathology.

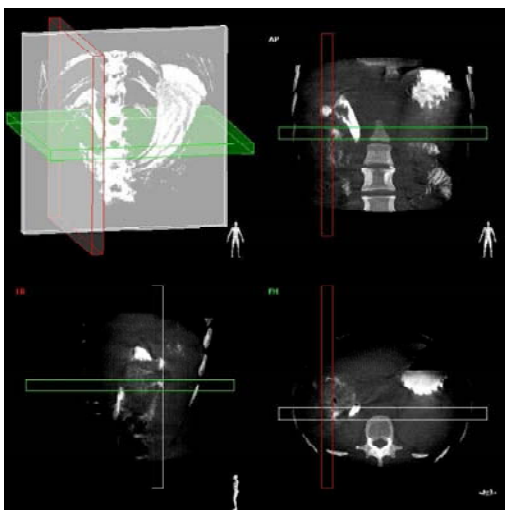


Fig 2: Coronal, Axial, Sagittal & 3D image of barium meal

Intra-operatively after doing gastrostomy phytobezoar was confirmed (Fig 3).

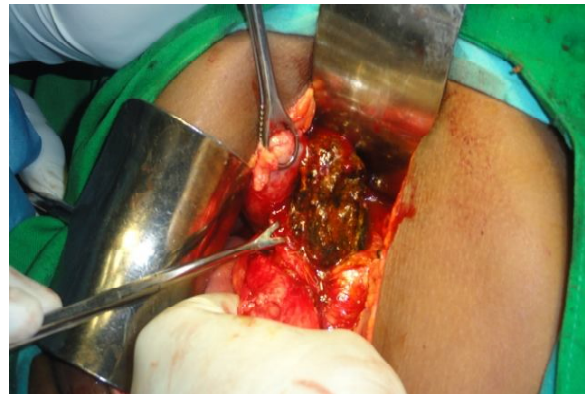


Fig 3: Intraoperative confirmation of phytobezoar

Part of phytobezoar was removed in piece meal. Intact phytobezoar after piece meal removal of few of its portion is shown in (Fig 4).



Fig 4: Showing removed phytobezoar

The fistulous tract communicating to common hepatic duct was flushed with normal saline to see the patency of tract for biliary drainage. Gastrostomy was closed in two layers along with omental patch. Histo-pathology report was consistent with phytobezoar. Peripheral bony density of the bezoar in plain C.T. scan was because of salt deposition over its surface. Patient was asymptomatic in postoperative period.

Discussion

Bezoars are classified according to their composition into phytobezoar (PBZ) (vegetable matter), Trichobezoar (TBZ) (hair), lactobezoar (concentrated

milk formulas), mixed medication pharmacobezoar (PBZ).^[5,6] Bezoar formation is rare in healthy subjects and is generally an aftermath of benign pathologies. Previous gastric surgery, poor mastication, overindulgence of foods with high fiber contents are common factors predisposing to phytobezoar formation.^[7] Loss of pyloric function, gastric motility, hypoacidity and delayed gastric emptying because of diabetes mellitus, mixed connective tissue disease or hypothyroidism were also reported as predisposing factors of bezoar formation.^[8] Phytobezoars keep on growing by the continuing ingestion of food rich in cellulose and other indigestible materials, matted together by protein, mucus and pectin. Phytobezoar occurring without any predisposing factors, as in our case, is very rare. Affected patients may remain asymptomatic for many years and develop symptoms insidiously. Gastro-duodenal bezoars may present as epigastric pain, loss of appetite, weight loss, episode of distension and vomiting.^[9] Phytobezoars have rarely been associated with other gastrointestinal complications such as peritonitis, perforation, steatorrhea, intussusception, appendicitis and constipation.^[3] In this case probably there was perforation of duodenum (D1) which occurred one year back. Through this rent site, duodenal part of gastro-duodenal phytobezoar might have perforated into common hepatic duct causing fistulous tract between D1 & common hepatic duct, which was sealed with omentum. This event was recognised as acute cholecystitis and treated. Bile through this fistulous tract refluxed into stomach because of partial compression of phytobezoar over common bile duct & partial D1 obstruction. The coating of bile on phytobezoar gave greenish black colour. Gold standard of diagnosis of gastric phytobezoars is upper gastrointestinal endoscopy as it provides direct visualization of the phytobezoars and allows sampling for analysis¹⁰. Ultrasound or Computer tomography scan may be helpful in the diagnosis.^[4] Barium studies are helpful in the cases of non-obstructive bezoars. Classic appearance of bezoars on barium studies is an intraluminally-filling defect. Barium study could show a mottled appearance similar to that of villous tumor.^[11] The ultimate goal of the treatment of bezoars is their

removal and prevention of recurrence. Phytobezoars can be treated by several ways including gastric lavage, enzymatic dissolution, endoscopic disruption, endoscopic procedures & lavage, conventional and videolaparoscopic surgery.^[12]

We conclude that patients with bezoar have symptoms that are indistinguishable from the underlying gastrointestinal pathology. Thus a detailed evaluation to confirm pathology and find out its complication is necessary in patients without any predisposing factors.

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