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Sub-Acute Gastric Outlet Obstruction by Diospyrobezoar in Partial Gastrestectomy Patient and Endoscopic Management

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***Abstract*—** Bezoars are considered as rare cause of gastric outlet obstruction. Bezoars contain human or vegetable fibers that accumulate in the gastrointestinal tract and can present as mass in any parts. We report the case of a gentleman with a history of nausea, mild epigastrelgia and abdominal distension after massive ingestion of persimmons in empty stomach. He underwent endoscopic examination and his large diospyrobezoar, which was crushed and removed. This report provides evidence that diospyrobezoar should be considered as a possible rare cause of sub-acute gastric out let obstruction who have previously undergone gastric surgery.

***Keywords*—** Diospyrobezoar; phytobezoar; billorth type –I; gastroperesis.

I. INTRODUCTION

The term bezoar comes from Persian- Arabic word "pahnzehr" or the "badzehr," which mean antidote. [1], [4] Formation of beazors is usually in the stomach, but it can pass into the small intestine and can cause obstruction [2]. Diospyrobezoar is a subtype of phytobezoar. The first bezoar in a human was in 1779, an autopsy case of gastric perforation and peritonitis. Symptoms of bezoars are nausea, vomiting, epigastric pain, and early satiety [4]. Diagnosis can make by barium studies, sonography, Endoscopy, and Computed Tomography [3].

II. CASE REPORT

A 66 year old gentleman referred from other hospital to our hospital with nausea, epigastric pain, abdominal distension and belching for 15 days. His symptoms worsen with food. Upper gastrointestinal endoscopy reveals: billorth sub-total gastrectomy-I with stump erosion and large gastric bezoar at anastomotic end. He was referred to our hospital for bezoar removal. He was admitted in gastroenterology unit on the month of November. His history was reviewed. He said that he was having those symptoms after ingestion of few persimmons in empty stomach and his symptoms worsen when he took food. His surgical history reveals billorth type I gastrectomy nineteen years ago for duodenal ulcer. He is thin build alert and comfortably lying down in bed. His Blood Pressure: 140/70mmhg, Temperature: 36.6^0c, Pulse: 78/min regular. Respiratory Rate: 18/min. Local examination of stomach shows Upper umbilical surgical scar, other findings are uneventful. His Investigation findings are Hb% 12.96Gm/DL, Blood group: B positive, PT: 11.80 sec, INR: 1.02, APTT: 25.20Sec, Stool: Normal, Na^+: 138.7mmol/l, K^+: 3.9mmol/l, Amylase: 96u/l, Alkalinephosphatase: 68u/l, BUN: 4.36mmol/l, Cr: 62.8micromol/l, Chest Xray: Prominent aortic notch,

Endoscopy:

1) Billorth I Gastrectomy with stump Erosion
2) Foreign Body lodged at distal part of stomach

Management consist Endoscopic procedure. Olympus endoscope was used, the bezoar was pieced by polypectomy snare and water jet and its piece was removed endoscopically applying dormia bucket. Largest piece measures 6 centimeter long and 3 cm in width. Whole procedure took 30 minutes. Patient was shifted to ward and discharged two days later without any procedural complication.

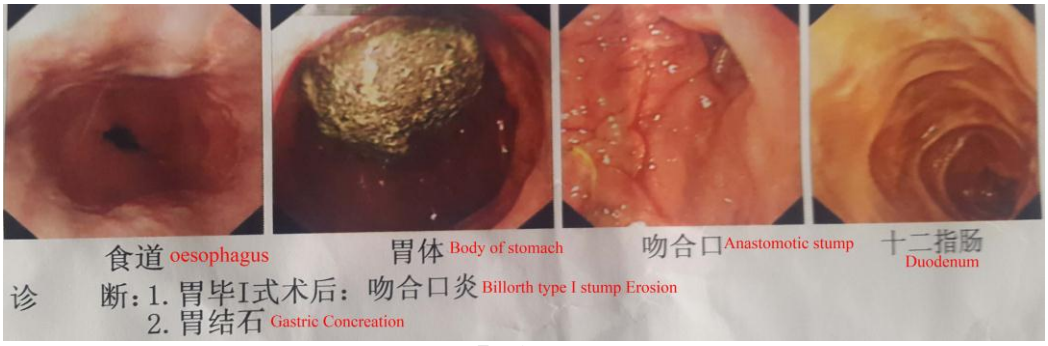

Fig. 1.

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Fig. 2.

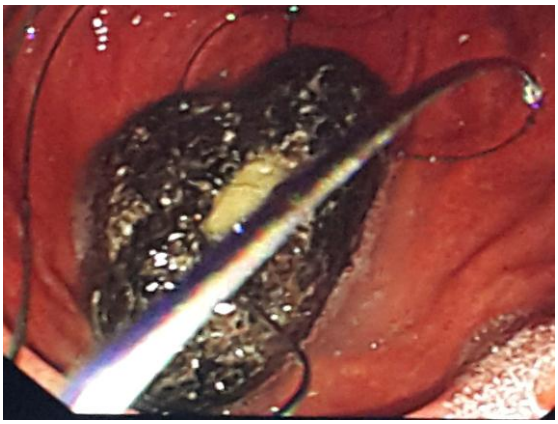

Fig. 3.

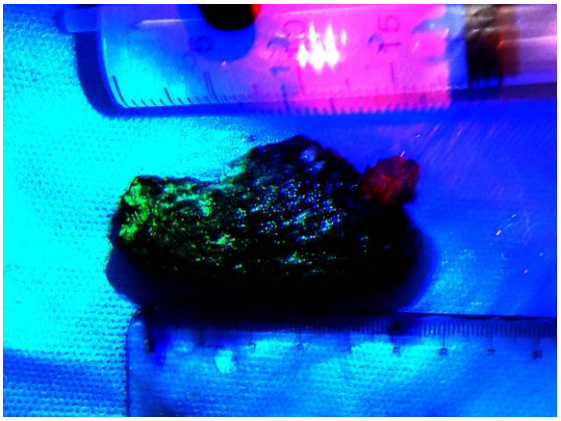

Fig. 4.

III. DISCUSSION

Bezoars are concreation of undigested material found in the gastrointestinal tract. They are various types depending by material content including phytobezoars containing undigested vegetable or fruit, trichobezoars containing hair, lactobezoars containing milk and pharmacobezoars containing drugs such as cholestyramine, resin, cavafate, and antacids [3], [8]. Diospyrobezoar, subtype of phytobezoar occur after excessive intake of the fruit, persimmon. Tannin called shibutol found in the skin of unripe persimmon reacts with the gastric acid and forms coagulum that leads to formation of bezoars [4], [9]. Predisposing factors consists previous gastric surgery and vagotomy, diabetic gastroparesis, vegetarian diet, hypothyroidism [8], [10].

Most of bezoars are asymptomatic; however, the clinical symptoms depend upon the location of bezoars [7]. The endoscopy still remains the best choice for non-invasive diagnostic as well therapeutic technique [5], [6]. Prior gastrointestinal surgery is one of the greatest risk factors for the formation of bezoars, due to poor digestion of food materials as gastric motility is altered [6].

Soft phytobezoars present in the postoperative stomach can be removed by enzyme digestion and endoscopic manipulation [15], [16]. However precaution should be taken since chronic irritation of the gastric mucosa could lead to ulceration and polyp formation 11. Initial management of Small gastric bezoars should be started by non-surgical methods such as prokinetic drugs and enzymatic dissolutions (papain, cellulase, acetylcysteine and Coco-Cola) or by mechanical disruption such as gastric lavage, endoscopic fragmentation [14] or extracorporeal lithotripsy [12]. The treatment of phytobezoars is sometimes difficult because they are occasionally giant-sized [13]. Recommendation of surgery is reserved for large gastric bezoars with impaction or presenting with perforation, penetration or obstruction [3]. in Large gastric phytobezoars, when uncomplicated or sub acute, endoscopic or surgical removal can be applied easily. Endoscopic removals of the large gastric phytobezoars in patients with gastric dysmotility disorders usually are difficult without gradual fragmentation. Affecting factor for the choice of endoscopic treatment are composition, size, associated complications and the preference of the clinicians. Treatment of these lesions by endoscopy consists in direct removal of the bezoar if the size is less than three centimeter in diameter. Endoscopic fragmentation is needed if size is more than three centimeter, and fragments should be removed to prevent the risk of intestinal obstruction. The recurrence rate of gastric bezoars is high so, we suggest that patients with small gastric bezoars should be conservatively treated initially by non-surgical methods as described above. Bigger gastric phytobezoars may be treated by endoscopic removal using water jet and polypectomy snare. Surgery is final recommendation in cases with huge size, impaction or complication such as perforation, penetration or complete obstruction.

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