

Laparoscopic Treatment for Giant Gastric Trichobezoar: A Case Report and Brief Review of Literature

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ABSTRACT

Trichobezoar is a rare bezoar formed due to the ingestion of hair, usually in the gastric cavity but may extend to the small intestine. The word bezoar is derived from an Arabic word “bazahr” or “badhezi” which means antidote and first described in 1779 by Baudomant. A 13-year-old female with no history of trichotillomania came with the chief complaint of pain upper abdomen, vomiting, and lump abdomen for the past 1 month. On further evaluation with UGIE and CECT abdomen diagnosis of trichobezoar was made. The patient underwent laparoscopic-assisted trichobezoar removal successfully with no post-operative complications. The aim of presenting the case is to discuss the role of laparoscopy (minimal access surgery) as the treatment of choice for giant gastric trichobezoar and to review the treatment literature.

Key words: Gastric trichobezoar; laparoscopy; laparoscopy vs open; treatment of choice.

INTRODUCTION

Trichobezoars are rare and usually seen in GIT diseases and in young females with a history of psychiatric disorders. [1] Bezoars are classified based on composition, namely 1) Phytobezoar, indigestible food particles, 2) Trichobezoar, composed of hair, 3) Lactobezoar, indigestible milk proteins, and mucus, etc. Commonly found in the stomach but extension into duodenum constitutes a Rapunzel syndrome. Initially, the patient is asymptomatic or minimally symptomatic

with nonspecific symptoms such as anemia or halitosis. A patient may present with abdominal pain, vomiting containing food particles, early satiety, weight loss, and abdominal lump or obstruction.

CASE

A 13-year young female came to the surgical OPD with the complaint of pain in the upper abdomen which increased after food intake, with projectile nonbilious vomiting usually after 30 min to 1 hour of meals. She also complains of a lump in her upper abdomen with no increase in size, from the past one month, associated with anorexia and significant loss of weight. No history of trichotillomania or any other psychiatric illness. Her physical examination revealed mild pallor and a BMI of 17 kg/m². Her per abdomen examination revealed a non-tender, firm to hard mass involving the upper half of the abdomen, which yielded on pressing (Fig 1). No patchy alopecia is seen on the scalp. Her biochemical investigation revealed anemia only and in radiological, USG abdomen inconclusive. CECT abdomen showed a grossly dilated stomach with 61 x 136 x 228 mm mass, not extending into the duodenum, probably trichobezoar (Fig 2). In UGI endoscopy- Large mass of hair seen in the stomach, single large deep cleaned base ulcer of size 1.5 x 1.5 cm seen in lesser curvature. Biopsy from the ulcer came out to be benign.

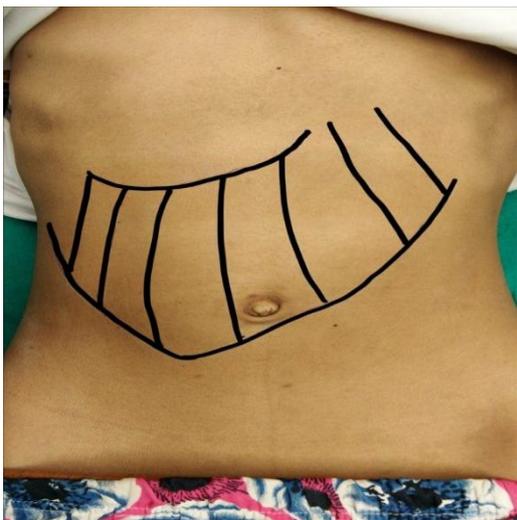


Figure 1: Pre-operative clinical examination, the marked site shows a large abdominal lump.

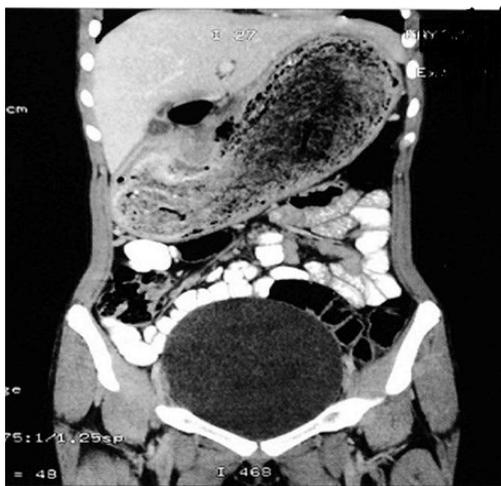


Figure 2: coronal section CECT abdomen, shows content filled and overly distended stomach, the possibility of trichobezoar

Surgical Procedure:

Surgery was done under GA, capnoperitoneum created at 12mm Hg, and entry into the abdomen achieved via a 10-mm infraumbilical incision. 30-degree laparoscope introduced and two 5-mm right and left lateral ports made. Longitudinal 10 cm gastrotomy was made on the anterior surface of the body of the stomach with an ultrasonically activated scalpel (Fig 3). A massive trichobezoar was removed from the stomach (Fig 4) with no extension beyond pylorus. Gastrotomy was closed in 2 layers. The specimen was retrieved in an Endobag via Pfannenstiel incision. Lavage with NS was done and drain placed. The incision was closed in two layers. The operating time was

90 minutes and the specimen weighed 1.8 Kg. The patient's postoperative course was uneventful and psychiatric care was advised. At 1 month follow-up, she has gained two kg weight and doing well.

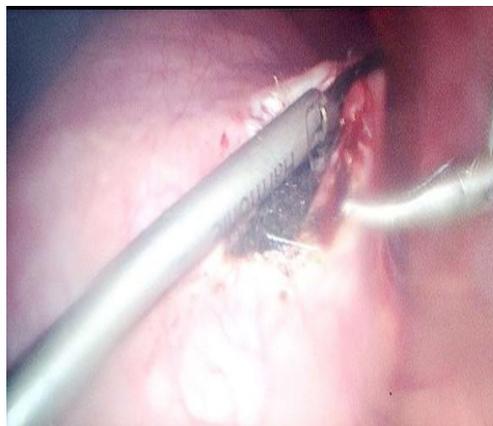


Figure 3: Shows anterior gastrotomy done by a harmonic scalpel.



Figure 4: Shows retrieved specimen of bezoar (weighs 1.8 kg).

DISCUSSION

Human hair when ingested due to its smooth surface resists both digestion and peristalsis and thus accumulates between the gastric mucosal folds forming a trichobezoar. Consistent with the literature our patient was young female but had no history of psychiatric disorders such as trichotillomania, pica, OCDs, and depression etc. [1] Our patient presented after 1 month of onset of symptoms with the sole complication of gastric ulcer barring others like perforation, intussusceptions, obstructive jaundice, and pancreatitis. [2] Per abdominal examination revealed a large, firm to hard, mobile, indentable epigastric

mass known as Lamberton sign. We evaluated our patients with USG, CT, and UGIE. UGIE is both diagnostic (definitive) and therapeutic in small bezoars. [3] Various non-invasive and minimally invasive methods with variable success rates have been reported like intragastric administration of enzymes (pancreatic lipase, cellulase), medications (metoclopramide) [4] and endoscopic fragmentation in combination with the Pepsi-Cola administration. [5] Invasive methods for removal of bezoars are laparotomy and laparoscopic removal; our patient underwent laparoscopic extraction of the bezoar. Apart from obvious advantages of laparoscopy over laparotomy, with laparoscopic-assisted techniques even a bezoar in the intestine can be removed laparoscopically either by an enterotomy or milked into caecum via the ileocecal valve. Disadvantages include spillage of content into the abdominal cavity and longer operative time.

The first laparoscopic procedure was reported by Nirasawa [6] in 1998. Gorter et al (2010) reported a success rate of 5% for endoscopic trichobezoar removal, 75% for laparoscopic removal, and 100% of laparotomies and thus favored them as the management of choice. [3] But with advancing technology and laparoscopic experience, more and more cases are being done by the laparoscopic approach. After 20 years of first laparoscopic bezoar removal, now laparoscopic and endoscopic cooperative surgery (LECS) has been performed with successful results. [7]

CONCLUSION

Trichobezoars are rare entities usually seen in young females having psychiatric disorders, who need strict follow up to identify relapse. No definitive argument has been made regarding the operative management of choice. Given this case and growing literature in laparoscopic evidence, it is pragmatic to

make a recommendation for laparoscopic removal of trichobezoar as the treatment of choice.

Abbreviations:

CECT: contrast enhanced computed tomography, UGIE: upper gastrointestinal endoscopy. GIT- Gastrointestinal Tracta

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