



GIANT GASTRODUODENAL TRICHOBEZOAR: A RARE CASE OF GASTRIC OUTLET OBSTRUCTION

General Surgery

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ABSTRACT

Background: Bezoars are collections of non-digestible matters that usually accumulates in stomach and can extend to small bowel. A trichobezoar (concretions of condition despite being reported in many ages, they predominate in young females diagnosed with bezoars and are usually associated with abnormal psychiatric behaviour of eating hairs and nails (trichophagia). Trichobezoar usually develop insidiously and hence at presentation are large in size and can be complicated with potentially serious conditions such as gastric outlet obstruction, gastric bleeding, intussusceptions, and perforation peritonitis. **Aim & Objective:** To assess the effect of laparotomy and anterior gastrotomy in the management of trichobezoar. **Material and Methods:** In this case study A female patient age 36 yrs., diagnosed and non-operated case of giant gastro duodenal trichobezoar with history of trichophagia, came to General Surgery OPD of L.G. hospital Ahmedabad with chief complaints of upper abdominal pain with epigastric fullness, nausea and vomiting since last 4-5 months, associated with upper abdominal lump. Patient was managed by exploratory laparotomy and anterior gastrotomy. **Observation:** Post operatively she recovered well and was discharged in satisfactory condition with advice for psychiatric follow up. **Discussion:** Bezoars, an already rare entity, can occasionally lead to gastric and small bowel obstructions. Small collections of ingested hair build up in the intestinal tract causing significant symptoms. These obstructions sometimes be treated through minimally invasive techniques but, in our case described, it is unlikely to have been treated any other way due to the substantial size of the trichobezoar. **Conclusion:** The present paper intends to highlight the management of giant gastroduodenal trichobezoar. After the treatment it can be concluded the exploratory laparotomy and anterior gastrotomy can be used as effective treatment in the management of giant gastroduodenal trichobezoar.

KEYWORDS

Trichobezoar, Gastric Outlet Obstruction, Gastrotomy

INTRODUCTION

A bezoar is a rare pathological phenomenon that is a solid mass of partially or completely undigested materials that collect in the gastrointestinal (GI) tract.

Based on the composition of each group, bezoars are divided into four categories. 1) Pharmacobezoar are made up of various undigested medications, 2) phytobezoars are made up of indigestible material found in fruits and vegetables, (3) trichobezoars are primarily an accumulation of a patient's hair, though occasionally aggregates from toys, animals, or carpets are recovered, and (4) other bezoars are a heterogeneous group that includes aggregates from a variety of substances like paper, gloves, shellac, Styrofoam, cement, milk curd, and several other materials.^[1] Bezoars are usually asymptomatic.^[2] As the size of a bezoar increase, symptoms begin to develop. In the rare case of a complete intestinal obstruction or perforation, a patient may present with symptoms of acute abdomen.^[3] A trichobezoar (hair ball) is a rare condition consisting of a hair ball in the proximal gastrointestinal tract. The trichobezoar is mostly confined within the gastric lumen. Rapunzel syndrome is a rare form of trichobezoar with a long tail which may extend up to the jejunum or beyond. It is mostly seen in adolescence girls with abnormal psychiatric behavior of eating hairs and nails (trichophagia). Gastroduodenal trichobezoar is the rare cause for gastric outlet obstruction. Trichotillomania, a psychiatric disorder characterized by the compulsory and persistent pulling out of one's hair, leads to noticeable hair loss. We describe a case of 30-year-old female patient with history of trichotillomania and trichophagia who presented to general surgery department with complaint of upper abdominal pain with epigastric fullness, nausea and vomiting associated with palpable upper abdominal lump. On examination and after investigation, patient was diagnosed with giant gastric trichobezoar requiring surgical intervention and indicating the need for psychiatric treatment. She was treated successfully by exploratory laparotomy, gastrotomy and removal of hair ball.

MATERIALS & METHODS

Case Report:

A female patient age 35 yrs., came to general surgery OPD of L.G. Hospital and Narendra Modi Medical College, Ahmedabad with chief complaints of upper abdominal pain with epigastric fullness, nausea and vomiting since 4 to 5 months associated with upper abdominal lump.

Past History:

Patient had similar complaint in past at the age of 3 years and operated for the same and off treatment for her psychiatric condition.

Family History:

There was no family history pertaining to present illness.

General Examination:

Pallor	NO
Icterus	NO
Cynosis	NO
Tongue	coated
Pulse	74/min
Blood pressure	120/80 mmhg
Temperature	37°C
Respiratory rate	16/min
Height	150 cm
Weight	62 kg
BMI	23 kg/m ²

Systemic Examination:

P/A: abdomen was soft on palpation, and mild epigastric tenderness with upper abdominal lump having smooth surface, regular margin, measuring about approx. 15*10 cm in size. No abdominal distension was seen.

CVS: S1 S2 normal

RS: BEAE No rales/rhonchi

CNS: Patient is well oriented to time, place and person.

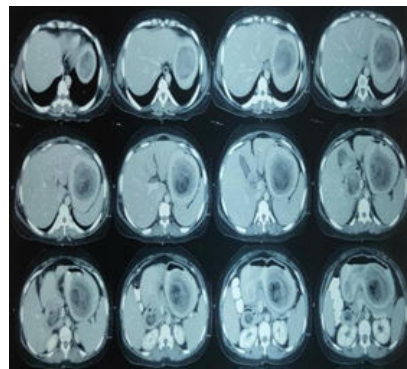
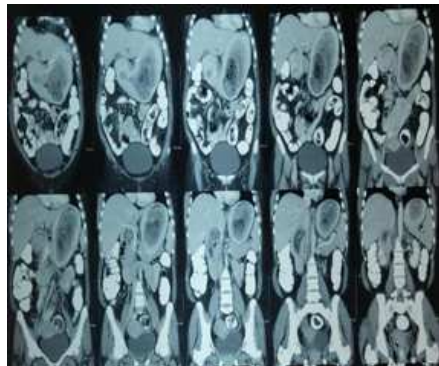


Figure 1: Axial section of CECT abdomen showing stomach bezoar**Imaging Study:**

X-ray of Abdomen (Standing): No any significant finding is there.

USG Abdomen: No any significant finding is there.

CECT Abdomen: stomach appears distended and shows approximately 97*145*146* mm sized well defined non enhancing in homogenous predominantly hypodense intraluminal mass with internal few air foci giving concentric ring appearance seen in stomach extending upto 2nd part of duodenum S/O Trichobezoar in stomach extending upto 2nd part of duodenum.

**Figure 2:** Sagittal section of CECT abdomen showing stomach bezoar involving whole stomach**Laboratory Parameters:**

All preoperative investigation with in normal limits so patient schedule for elective operative intervention.

Management

- On admission patient hemoglobin was 10.8 gm/dl and normal electrolyte and hepatic enzyme level.
- Patient post for elective exploratory laparotomy, gastrostomy and retrieval of trichobezoar.
- Skin Incision kept horizontally enclosing previous surgery scar in epigastric region.
- Stomach opened by oblique incision made over anterior wall and large hair ball mass removed with its tail (Rapunzel syndrome) and sent for HPE.
- Stomach wall closed with silk 2-0 in full thickness first layer in continuous interlocking manner and second outer seromuscular layer taken with vicryl 2-0 in simple interrupted manner.
- Closed abdominal drain no. 32 kept in left paracolic gutter.
- Hemostasis achieved.
- Abdominal wall closure done.
- Sterile dressing done.

**Figure 3:** Intra op picture of trichobezoar**Figure 4:** Giant trichobezoar with its tail (Rapunzel syndrome)**Observation**

(after 1 month of Follow-up)

SYMPTOMS	BT	AT
Abdominal pain	Present	Absent
Epigastric fullness	Present	Absent
Nausea	Present	Absent
Vomiting	Present	Absent

DISCUSSION

- Trichobezoars arise from the ingestion of hair, which is ineffectively moved by peristalsis due to its smooth surface and poorly digested keratinaceous substance. As a result, her hair becomes matted into a ball and is retained in the folds of gastric mucosa. The ball can reach sizes sufficient to cause stomach distension and inhibit gastric emptying.^[4]
- The patient with trichobezoar remains asymptomatic for many years. Large-sized trichobezoar usually presents with symptoms of gastrointestinal obstruction.^[5] Trichobezoars occur more frequently in women, with only isolated cases reported in males^[6]. The current case was 35-year-old female patient with history of trichophagia.
- Large bezoars are generally retained in the stomach, likely due to the presence of a sphincter at the pylorus. There, they may produce symptoms related to obstruction at this level, including nonbilious vomiting, dehydration, anorexia, and colicky abdominal pain.^[7]
- The most common presenting symptoms include abdominal pain, nausea, and vomiting.
- The most common presentation is palpable abdominal mass followed by abdominal pain. A palpable mass in the upper abdomen, known as Lamerton's sign, may also be present.^[8]
- Other complications include gastric ulceration, obstructive jaundice, acute-pancreatitis, gastric outlet obstruction, gastric bleeding, intussusceptions, and perforation peritonitis. In addition, malabsorption related complications include protein losing enteropathy, iron deficiency and megaloblastic anaemia.
- Anemia and hypoalbuminemia are postulated to occur due to protein wasting and chronic gastritis resulting from gastric irritation by the bezoar.^[9]
- The diagnosis of trichobezoars is based on imaging evidence. Ultrasound and x-ray are competent in diagnosing of the condition. However, CT-scan is more authentic in demonstrating bezoar characteristic and increasing the chances of identification of Rapunzel syndrome. Endoscopy give the definitive diagnosis.
- Different therapeutic options have been employed to treat this condition, including laparotomy, endoscopic removal and laparoscopic removal. A majority of the literature describes minimally invasive techniques for trichobezoar removal. Other treatments described include laparotomy, laparoscopy-assisted, or endoscopy. In one review, it was shown that there was a 75% success rate for laparoscopic treatment versus a 99% success rate with laparotomy. As a surgeon faced with this rare entity, it is important to take into consideration the clinical status of the patient and severity of the obstruction when choosing which therapeutic modality. Conventional laparotomy is still the treatment of choice depending on the size and site of trichobezoar.

CONCLUSION

Trichobezoar is a rare entity that should be carefully considered in young and adolescence female patients presenting with abdominal pain and symptoms of a gastric outlet obstruction and diagnosis is based on data of imaging. The treatment is often surgical associated with psychiatric care of patients. psychiatric consultation is imperative to prevent recurrence and improve long term prognosis. Data recollection in our environment may provide information for the determination of new information regarding the presence of this condition.

Conflict Of Interest

The authors declare no conflict of interests.

Authors' Contributions

All authors contribute in the management of the patient and the redaction of this article. All authors have read and agreed to the final manuscript.

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