

Laparoscopic retrieval of gastroduodenal trichobezoar-A simple solution to a ‘tangled’ trouble.

Livin Jose J.R, Prasanna G, Srinivasan UP, Naganath Babu OL

Institute of Surgical Gastroenterology, Madras Medical College, Chennai
India.

Corresponding author: Livin Jose J.R

Abstract: Trichobezoars refer to accumulation of hair resulting from long-term ingestion. Trichobezoars were traditionally managed by endoscopic and open surgical approach. Here we present a case of trichobezoar managed by laparoscopic approach in a young female.

Keywords: Trichobezoar, gastroduodenal, bezoar, laparoscopy

Date of Submission: 26-04-2018

Date of acceptance: 14-05-2018

I. Case Report

15 years old female presented to medical gastroenterology department with complaints of abdominal pain and loss of appetite for 1 month. She also had breathlessness and swelling of legs. On clinical examination she was found to have a firm, smooth non tender mass in epigastrium and left hypochondrium Fig 1. Blood investigations revealed a low hemoglobin (7 gms%) and low albumin (2.8mg/dL). Rest of the parameters were normal. Upper GI scopy was done which showed mass of hair in stomach extending upto duodenum. On retrospective interrogation she admits to have consumed hair. Endoscopic retrieval was attempted twice, but could not be accomplished due to the volume of the trichobezoar and its extension into the duodenum. Hence patient was referred to us for surgical management.

Contrast enhanced computed tomography of abdomen was done to look for the extent of trichobezoar in stomach and to rule out rare possibility of trichobezoar in small intestine. CECT abdomen revealed a large nonhomogenous, non enhancing mass of size 10x4 cm occupying stomach Fig 2. After optimising patient she was taken up for laparoscopic trichobezoar retrieval. Under general anesthesia, 10 mm camera port was introduced in umbilical region by open technique and two 5mm ports were placed in right and left hypochondria Fig 3.

Diagnostic laparoscopy showed a mass causing bulge in body, antrum and pylorus of stomach. Anterior gastrotomy was done over the most prominent region and trichobezoar was visualized. A 5cm incision was made in the epigastrium. Stomach edge fixed to wound edge to avoid spillage and trichobezoar was delivered in toto.

Gastrotomy was closed extracorporeally using 2-0 vicryl and abdomen was closed. Pneumoperitoneum re-created and peritoneal lavage was done. Removed trichobezoar was 30x10x5cm in dimension and weighed about 344grams Fig 4. Postoperatively patient had mild wound infection which was treated conservatively. She was given psychiatric counseling before discharge.

Fig 1



Fig 2

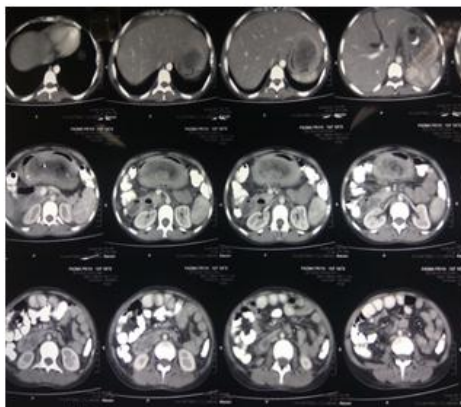


Fig 3





Fig 4

On one month follow-up she has gained weight .Her hemoglobin and albumin levels were found improved.

II. Discussion

Trichobezoar is a mass of indigestible hair that gets accumulated within gastrointestinal tract as a result of repeated ingestion. Stomach is the most common site of trichobezoar formation. Ingested hair is not propelled distally because of its slippery and resilient nature and gets trapped within the mucosal crypts, which later transforms into a large mass forming cast of stomach. Females are most commonly affected(1). Usually these patients have associated psychiatric illness (2).

Clinical diagnosis is based on suspicion with history of abdominal pain and epigastric mass. CECT scan shows a well-circumscribed ovoid intraluminal lesion, composed of concentric whorls of different densities with pockets of air enmeshed within it, appearing in the stomach region. Beyond the lesion, the bowel is found collapsed. Oral contrast fills the more peripheral interstices of the lesion, and a thin band of contrast circumscribes it. Absence of significant post-intravenous contrast enhancement precludes a neoplastic lesion.

Endoscopy confirms the diagnosis of trichobezoar. Trichobezoar has a black color that is seen due to natural colour or denaturation of proteins and gives a foetid odor due to entrapment of undigested fat in the hair mesh with bacterial colonization. Variety of treatment options had been described for bezoar including endoscopic and laparoscopic approaches depending on clinical experience and size and nature of bezoar . There are only few case reports of successful endoscopic trichobezoar retrieval. Combined laparoscopic and endoscopic approach has also been described , when the size of bezoar is small, so as to guide the placement of gastrotomy (3). Traditionally the trichobezoars were removed by formal laparotomies with big abdominal incisions. With the advent of laparoscopy and its application in various surgeries, there have been reports of its use in trichobezoar removal (4-8). Although laparoscopy results in decreased post-operative pain, early recovery and better cosmesis, spillage of hair and gastric juice during retrieval may lead to intra-abdominal and wound infection especially for large trichobezoars(9-10). In addition, a 4-5 cm incision is usually required to retrieve the large specimen. Peritoneal spillage can be avoided by use of endobag or by temporary gastrocutaneopexy(10).

III. Conclusion

Laparoscopic retrieval of trichobezoar is technically feasible and has added advantages of minimal morbidity with reduced chance of infection if utmost care is taken to avoid spillage, less postoperative pain and early recovery. Hence, it can be advocated whenever possible in patients with trichobezoar.

References

- [1]. Nirasawa Y, Mori T, Ito Y, Tanaka H, Seki N, Atomi Y. Laparoscopic removal of a large gastric trichobezoar. *J Pediatr Surg.* 1998; 33(4): 663–665
- [2]. O'Sullivan MJ, McGreal G, Walsh JG, Redmond HP. Trichobezoar. *J R Soc Med.* 2001;94(2): 68–70
- [3]. Rabie ME, Arishi AR, Khan A, Ageely H, Seif El-Nasr GA, Fagihi M. Rapunzel syndrome: the unsuspected culprit. *World J Gastroenterol.* 2008; 14(7): 1141–1143
- [4]. Yao CC, Wong HH, Chen CC, Wang CC, Yang CC, Lin CS. Laparoscopic removal of large gastric phytobezoars. *Surg Laparosc Endosc Percutan Tech.* 2000; 10(4): 243–245
- [5]. Shami SB, Jararaa AA, Hamade A, Ammori BJ. Laparoscopic removal of a huge gastric trichobezoar in a patient with trichotillomania. *Surg Laparosc Endosc Percutan Tech.* 2007;17(3): 197–200
- [6]. Yau KK, Siu WT, Law BK, Cheung HY, Ha JP, Li MK. Laparoscopic approach compared with conventional open approach for bezoar-induced small-bowel obstruction. *Arch Surg.*2005; 140(10): 972–975

- [7]. Meyer-Rochow GY, Grunewald B. Laparoscopic removal of a gastric trichobezoar in a pregnant woman. Surg Laparosc Endosc Percutan Tech. 2007; 17(2): 129–132
- [8]. Song KY, Choi BJ, Kim SN, Park CH. Laparoscopic removal of gastric bezoar. Surg Laparosc Endosc Percutan Tech. 2007 Feb; 17(1): 42–44 cs
- [9]. Palanivelu C, Rangarajan M, Senthilkumar R, Madankumar MV. Trichobezoars in the stomach and ileum and their laparoscopy-assisted removal: a bizarre case. Singapore Med J. 2007 Feb;48(2):e37-9.
- [10]. Javed A, Agarwal AK. A modified minimally invasive technique for the surgical management of large trichobezoars. J Min Access Surg 2013;9:42-4

Livin Jose J.R "Laparoscopic retrieval of gastroduodenal trichobezoar-A simple solution to a 'tangled' trouble.."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 5, 2018, pp 17-19.