TRICHOBEZOAR WITH GASTRIC OUTLET OBSTRUCTION: A CASE REPORT

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ABSTRACT

Trichobezoar is collection of hairs forming a conglomerated mass. It is a very rare entity mimicking other common causes of gastric outlet obstruction. It is classically seen in adolescent females usually with psychiatric disturbances. Stomach is the most common site of occurrence. Occasionally, it may extend into small intestine (Rapunzel syndrome). Patients present with nonspecific symptoms such as loss of appetite, early satiety and vomiting. It may present as failure to thrive in small children. Diagnosis is frequently delayed due to paucity of symptoms. It is noticed as a slowly growing lump but occasionally may present with complications such as perforation, intestinal obstruction and pancreatitis. Abdominal ultrasonography is inconclusive and upper gastrointestinal endoscopy confirms the diagnosis. Laparotomy and extraction is the standard of treatment in spite of many new minimally invasive techniques. This is a case of gastric trichobezoar in a 16-year-old girl who presented with gastric outlet obstruction, which was successfully removed surgically. Recurrences are frequent due to associated psychiatric disturbances, hence psychiatric counselling must form an integral part of treatment.

KEYWORDS

Trichobezoar, Laparotomy, Gastric Outlet Obstruction, Hairball.

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INTRODUCTION: Trichobezoar refers to a hair ball in the gastrointestinal tract. It is a rare condition first described by Vaughan et al[(1)] in 1967. This is seen almost exclusively in young females[(2)] with psychiatric illness. It occurs most commonly in the stomach, but may extend into the duodenum and small intestine resulting in small bowel obstruction (Rapunzel syndrome).[(3)] Human hair is indigestible. It commonly gets trapped in the mucosal folds of the stomach and resists peristalsis due to its smooth texture. Persistent ingestion of hair over a period of time results in its accumulation which along with mucus forms a hair ball. This may remain unnoticed for years. Progressive increase in size may result in complications such as gastrointestinal erosions, ulcerations, and perforation. Intussusception, obstructive jaundice, protein-losing enteropathy, pancreatitis and even death have been reported as complications of unrecognised Trichobezoar in the literature.[(4-8)] Laparotomy and removal of Trichobezoar has been the standard of care despite the evolution of newer endoscopic and laparoscopic techniques.

CASE REPORT: A 16-year-old female presented with anorexia, early satiety, persistent vomiting and loss of weight since 4 months. General examination was unremarkable. A lump was palpable in the epigastric region which was nontender and moving with respiration. The lump was extending into the umbilical region. Upper border of the lump was not felt.

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Clinically, the organ of origin was speculated to be either the left lobe of liver, stomach or spleen (Figure 1).

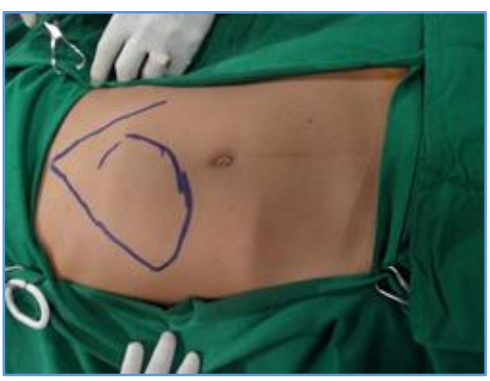

Fig. 1: Lump Palpable in Epigastric Region Extending to Umbilical Region

Routine blood investigations were normal. Abdominal ultrasonography was inconclusive. A contrast enhanced CT abdomen (Figure 2, 3 and 4) was done which showed a large gastric mass with internal air loculi.

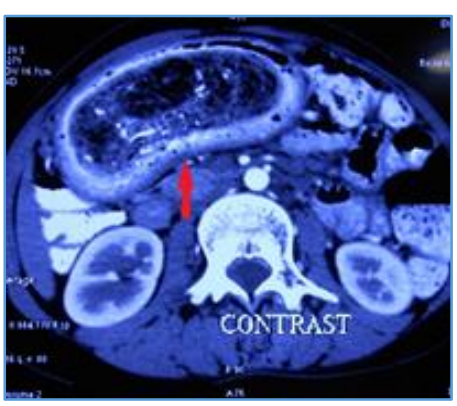

Fig. 2: Axial section of CT Abdomen Showing Mass Occupying most of Stomach

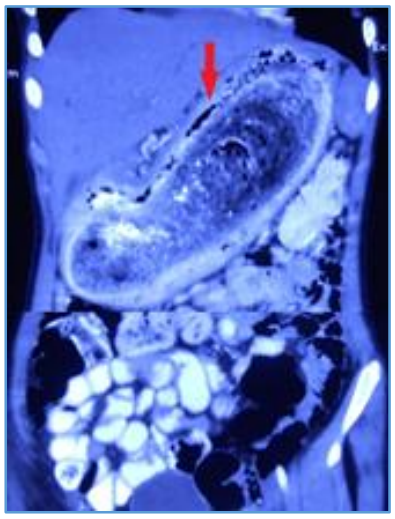

Fig. 3: Coronal Section of CT Abdomen Showing the Mass Occupying Entire Stomach

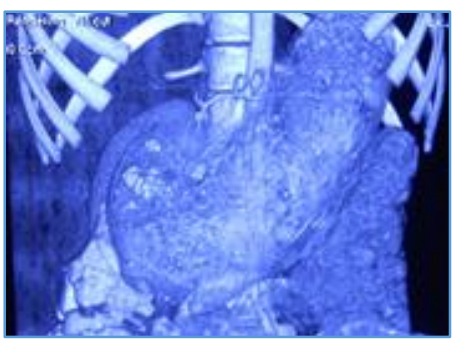

Fig. 4: 3D Reconstructed Image of the Mass? Trichobezoar

Upper GI endoscopy was confirmatory which showed a huge hair ball occupying the entire stomach with multiple superficial ulcerations in the body and antrum (Figure 5).

Fig. 5: Endoscopic Image showing Trichobezoar Occupying Most part of Stomach

Gastroscopic removal was not attempted as the mass was huge and there was a chance of aspiration of infected hair debris which may be fatal. Patient was taken up for laparoscopic removal. However, as the hair ball was too large and there was a chance of hair spilling into peritoneal cavity, the procedure was converted to laparotomy. A gastrotomy was done and Trichobezoar was removed in-toto Figure 6 and 7).

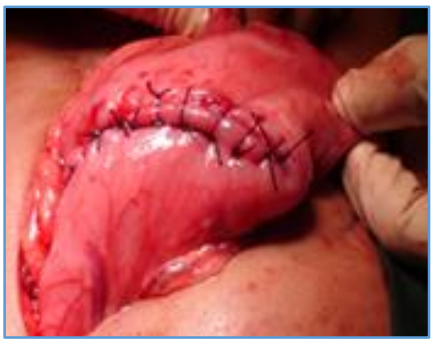

Fig. 6: Intraoperative Enterotomy in Stomach after Extraction of Trichobezoar and Closure of Enterotomy Done

Fig. 7: Trichobezoar Extracted in Toto. The Trichobezoar has taken the Shape of Stomach

Stomach mucosa was checked for any ulcerations and extension into the duodenum was excluded. The gastrotomy was closed. There was no intraoperative spillage or migration of hair particles into distal intestines. Postoperative recovery was uneventful. A psychiatry consultation was sought and patient was found to be suffering from pica for which appropriate counselling was done. Three years post procedure, the patient is doing well with good appetite and healthy weight gain with no recurrence.

DISCUSSION: Trichobezoar is a rare entity which should be kept in mind while treating lump in the abdomen. Diagnosis is usually delayed due to paucity of symptoms unless a complication occurs. Clinical presentation is usually nonspecific like early satiety, anorexia, weight loss and vomiting. A nontender lump may be palpable in upper abdomen. The lump is mostly thought of and worked up as malignant mass or splenomegaly and trichobezoar springs up on the surgical table as a surprize.[9] Psychiatric comorbidities such as trichotillomania (urge to pull out one`s own hair), trichophagia (swallow hair) should be considered.[10] It may also be associated with anorexia nervosa, abuse, depression and behavioural disorders. They occur most commonly in the stomach and may rarely migrate into the small intestine. Nearly 108 cases of trichobezoar have been described in literature and majority are as case reports. Majority were incidental finding while presentation with a complication was reported in 16.7% cases (Table 1).

Clinical presentation	Number of cases (percentage)
Asymptomatic	90 (83.3%)
Symptomatic with complication:	18 (16.7%)
1. Perforation (stomach/intestine)	11 (61%)
2. Intussusception	2 (11.11%)
3. Pancreatitis	1 (5.55%)
4. Cholangitis	1 (5.55%)
5. Others	2 (11.11%)

Table 1. Overview of cases in literature: clinical presentation

Trichobezoar should be considered in the differential diagnosis in young females who present with nonspecific symptoms such as epigastric pain, vomiting, lump, weight loss and fatigue. Ultrasonography of the abdomen is usually inconclusive as in our case as there is no water interface and clump of hair has no solid organ to reflect and produce image. Upper GI endoscopy clinches the diagnosis. Laparotomy and removal of trichobezoar is the standard modality of treatment. Minimally invasive procedures like mechanical and laser assisted lithotripsy via endoscopic means, totally laparoscopic and laparoscopic assisted surgeries have been advocated in the recent past (Table 2).

Treatment Modalities	Number of cases (%)
1. Endoscopic removal	40
Successful	2 (5%)
Complications	0
2. Laparoscopic removal	8
Successful	6 (75%)
Complications	0
3. Laparotomy	100
Successful	99 (99%)
Complications	12 (12%)

Table 2. Overview of literature: Treatment modalities

Endoscopic means of extraction (Mechanical fragmentation and enzymatic degradation) have not gained widespread acceptance because of high rates of failure. The large size of the trichobezoar making it difficult to extract, spillage during the process leading to aspiration, slippage into more distal part of intestine account for the failure.[11,12] Endoscopic means fails to assess the presence of hair ball in distal intestine and thus has no role in Rapunzel syndrome. Due to these various reasons, endoscopic extraction of Trichobezoar has gone out of favour. Nirasawa et al[13] were the first to report laparoscopic removal of Trichobezoar.

Since then, only six cases of attempted laparoscopic removal have been reported. In our case, initial laparoscopy was attempted but because of the size of the mass, procedure was converted to a conventional laparotomy. The benefits of laparoscopic removal include early postoperative recovery, better cosmetic result, less admission time. However, laparoscopic removal is associated with significantly longer intra-operative time. There is chance of peritoneal spillage leading to septicaemia and associated complications. Removal of spilled material into the peritoneal cavity poses a tedious task contributing to increased operative times. Although several reports highlight cosmetic result but they frequently find need to extend the port incision by up to 2 to 4 cm facilitating extraction of Trichobezoar.[14] Laparoscopic procedure is challenging and has not gained popularity probably because of the rarity of occurrence of Trichobezoar.

Due to high success rates, low complications and added ability to examine the distal gastrointestinal tract and rule other satellite lesions, laparotomy is still considered the first option of choice for the treatment of Trichobezoar.

CONCLUSION: Trichobezoar should be considered in the diagnostic workup of adolescent female presenting with abdominal lump and symptoms suggestive of gastric outlet obstruction. Endoscopy confirms the diagnosis and also excludes other types of bezoars which are amenable for endoscopic removal. Conventional laparotomy is the treatment of choice, in fact the only valid treatment in Rapunzel syndrome. Psychiatric counselling is a must to prevent relapses.

REFERENCES

1. Vaughan ED, Sawyers JL, Scott HW. The Rapunzel syndrome. An unusual complication of intestinal bezoar. Surgery 1968;63(2):339-343.
2. Phillips MR, Zaheer S, Drugas GT. Gastric trichobezoar: case report and literature review. Mayo Clinic Proceedings 1998;73(7):653-656.
3. Balik E, Ulman I, Taneli C, et al. The Rapunzel syndrome: a case report and review of the literature. Eur J Pediatr Surg 1993;3(3):171-173.
4. Ventura DE, Mardiros Herbella FA, Schettini ST, et al. Rapunzel syndrome with a fatal outcome in a neglected child. Journal of Pediatric Surgery 2005;40(10):1665-1667.
5. Mehta MH, Patel RV. Intussusception and intestinal perforations caused by multiple trichobezoars. Journal of Pediatric Surgery 1992;27(9):1234-1235.
6. Schreiber H, Filston HC. Obstructive jaundice due to gastric trichobezoar. Journal of Pediatric Surgery 1976;11(1):103–104.
7. Hossenbocus A, Colin Jones DG. Trichobezoar, gastric polyposis, protein losing enteropathy and steatorrhoea Gut 1973;14(9):730-732.
8. Shawis RN, Doig CM. Gastric trichobezoar associated with transient pancreatitis. Archives of Disease in Childhood 1984;59(10):994-995.

9. Gorter RR, Kneepkens CMF, Mattens ECJL, et al. Management of trichobezoar: case report and literature review. Pediatr Surg Int 2010;26(5):457-463.
10. Bouwer C, Stein DJ. Trichobezoars in trichotillomania: case report and literature overview. Psychosomatic Medicine 1998;60(5):658-660.
11. Saeed ZA, Ramirez FC, Hepps KS, et al. A method for the, endoscopic retrieval of trichobezoars. Gastrointest Endosc 1993;39(5):698-700.
12. Soehendra N. Endoscopic removal of a trichobezoar. Endoscopy 1989;211:201.
13. Nirasawa Y, Mori T, Ito Y, et al. Laparoscopic removal of a large gastric trichobezoar. J Pediatr Surg 1998;33(4):663-665.
14. 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.