ORIGINAL RESEARCH PAPER
Volume-9 | Issue-2 | February-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TRICHOBEZOAR IN A CHILD - A RARE CAUSE OF GASTRIC OUTLET OBSTRUCTION

Surgery

Jai Durairaj Paramasivam — Assistant Professor, Dept. of Paediatric Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105, TN, India.

Bhaskar Reddy Mummadi — Resident, Dept. of General Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105, TN, India.

Jeevan Ruban Kumar — Resident, Dept. of General Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105, TN, India.

Surya Rao Rao Venkata Mahipathy* — Professor & Head, Dept. of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105, TN, India. *Corresponding Author

ABSTRACT

Trichobezoar is a rare condition to diagnose that causes gastric outlet obstruction. Patients with this condition are generally young females and usually have an underlying psychiatric illness. Delay in diagnosis may lead to complications as the patients often remain asymptomatic for many years. A bezoar is persistent, ingested material that collects within the gastrointestinal tract. The most common type of bezoar, a gastric trichobezoar, is made up of human hair and found in the stomach. The aim of treatment of trichobezoar is removal of the bezoar and to prevent recurrence. Here, we present the case of an 11 year old girl presented with abdominal pain and vomiting. Radiology suggested was suggestive of partial gastric outlet obstruction most probably due to a bezoar in gastric lumen. Therefore, trichobezoar should be considered in young females presenting with non-specific abdominal complaints.

KEYWORDS

Trichobezoar, Rare, Gastric, Obstruction, Surgery

INTRODUCTION

A bezoar is a mass of undigested material within the gastrointestinal tract. The term bezoar derives from the Arabic word Badzehr, which means antidote [1]. Bezoars were used as antidotes against plague, snake-bite, leprosy, and epilepsy by physicians from 12th to 18th century [2]. Bezoars can be classified into six types: Phytobezoars, Trichobezoars, Lithobezoars, Pharmacobezoars, Plasticobezoars and Lactobezoars [3]. Trichobezoar is from the Greek word trich which means hair [4]. A trichobezoar is a mass of undigested hair within the gastrointestinal tract. Trichobezoars are often associated with trichotillomania (hair pulling), and trichophagia (hair swallowing). Trichobezoars most commonly occur in adolescent females [5]. The site of hair pulling is most commonly from the scalp, but can occur from the eyelashes, eyebrows, and pubic area [6]. In humans, the most common type of bezoar is the trichobezoar, which is mostly made of hair.

CASE REPORT

An 11 year old female child presented with upper abdominal fullness, early satiety, loss of weight and vomiting for the past 3 months. There was no history of trichophagia from the child or her parents. She was otherwise apparently asymptomatic prior to this with no history of fever, lower gastrointestinal symptoms and no co-morbid illnesses. On examination, she was moderately built and nourished with no pallor. Clinically, she had a well-defined epigastric mass which was non-tender. (Fig. 1)

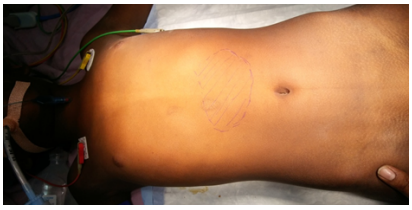

Fig. 1 – Picture showing epigastric fullness

The rest of abdomen appeared normal. Routine blood investigations were normal but abdominal X-ray showed dilated stomach gas shadows, and ultrasound revealed bowel wall thickening. (Fig. 2) CT scan showed the stomach and duodenum filled with non-homogenous mottled gas patterned lesion suggestive of trichobezoar. (Fig. 3) This was further confirmed by upper GI endoscopy which showed hair and vegetative material present in the entire body of stomach with the duodenum being normal. The child was prepared pre-operatively with stomach wash with nasogastric tube and hydrated well. Under general anaesthesia, gastrotomy was done through a mini-laparotomy approach. (Fig. 4)

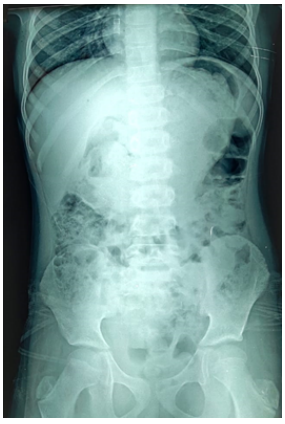

Fig. 2 – Abdominal Xray showing dilated stomach gas shadows

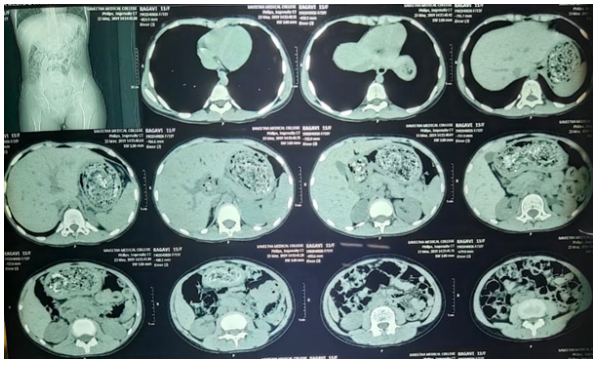

Fig. 3 – CT scan showing the stomach and duodenum filled with non-homogenous mottled gas patterned lesion

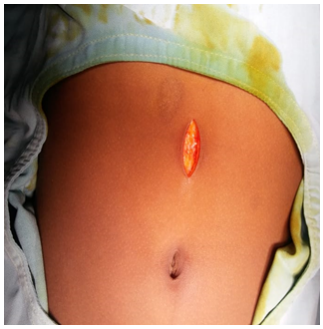

Fig. 4 – Mini-laparotomy incision

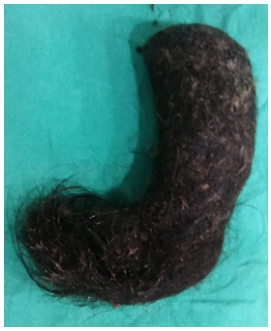

Fig. 5 – Specimen of hair in the shape of stomach

A mass of hair weighing 300 grams occupying the entire stomach was removed in toto.(Fig. 5) A thorough wash wash given and the gastrotomy wound was closed in two layers with 3-0 polyglactin. Abdomen wash closed in regular fashion and the child was extubated. Post-operatively, the child recovered well and has undergone psychological counselling. The child is on regular follow up with paediatrician, paediatric surgeon and psychologist.

DISCUSSION

Trichobezoars were first described from a post mortem by Swain in 1854 [7]. The hypothesis formation in the stomach is that hair is undigestable and due to its smooth nature cannot be propulsed with peristalsis and thus over a period of time forms a bezoar within the stomach. This bezoar can extend distally from the stomach into the caecum. Extention of the bezoar from the stomach into the jejunum or further on is referred to as 'Rapunzel syndrome', first described by Vaughan Jr. et al. in 1968 [8]. Bezoars can also be found distally in the gastrointestinal tract without continuity with the stomach bezoar due to breakage and distal propulsion. Trichobezoars continue to grow in size with continued ingestion of hair and this increases the risk and severity of complications. The most common of these complications that have been reported include gastric mucosal erosion, ulceration, and perforation of the stomach or the small intestine, gastric outlet obstruction, intussusception, obstructive jaundice, protein-losing enteropathy, pancreatitis, and death [9–14]. Trichobezoars commonly occur in adolescent females, who have a psychiatric or social problem. Clinical presentation of these patients may be confusing as often they are not forthcoming with a history of trichophagia either due to embarrassment or the unintentional nature of the problem. Presentation ranges from nonspecific abdominal or epigastric pain, to a range of previously mentioned complications. Clinical examination often reveals a large mobile epigastric mass that may be indentable, the so-called Lamerton's sign [15]. Endoscopy is usually diagnostic. The hair appears black (despite the normal hair colour) due to denaturing of the hair protein by the acid. Decomposition and fermentation of fats give the bezoar, and the patient's breath, a putrid smell [16]. The most common diagnostic tool used in the literature is a CT scan, with a typical image showing a well-defined intraluminal ovoid heterogeneous mass with interspersed gas [17, 18]. The treatment options include endoscopic removal, laparoscopic removal, or via laparotomy. Gorter et al., in a retrospective review of 108 cases of trichobezoar, evaluated the available management options [19] and it was noted that only 5% of attempted endoscopic removals were successful whereas 75% of attempted laparoscopies were successful. However, laparotomy was 100% successful and was thus their treatment of choice.

CONCLUSION

Trichobezoars though rare should be considered as a differential diagnosis in a young female patient with a mobile epigastric mass. Diagnosis can be easily made with the use of CT scan and upper gastrointestinal endoscopy. The treatment always requires surgical removal mostly through a laparotomy It is usual that many of the patients have an underlying psychiatric or social disorder. A multidisciplinary approach is essential to prevent recurrence of the problem.

REFERENCES

1. A. Samad, M. Ahmad, and Z. Latif. Bezoars: a review and report of two cases. Journal of the College of Physicians and Surgeons Pakistan. 1997; 7(6); 263–265.
2. S. Khattak and K. Asghar. Trichobezoar. Gomal Journal of Medical Sciences. 2004; 2(1); 25–26.
3. Blamm ME, Lichtenstein GR. A new endoscopic technique for the removal of gastric phytobezoars. Gastrointest Endossc. 2000;52; 404-8.
4. M. E. Rabie, A. R. Arishi, A. Khan, H. Ageely, G. A. S. El-Nasr, and M. Fagihi. Rapunzel syndrome: the unsuspected culprit. World Journal of Gastroenterology. 2008; 14(7); 1141–1143.
5. M. R. Phillips, S. Zaheer, and G. T. Drugas. Gastric trichobezoar: case report and literature review. Mayo Clinic Proceedings. 1998; 73(7); 653–656.
6. G. A. Christenson, T. B. Mackenzie, and J. E. Mitchell. Characteristics of 60 adult chronic hair pullers. American Journal of Psychiatry. 1991; 148(3); 365–370.
7. E. M. Chisholm, H. T. Leong, S. C. S. Chung, and A. K. C. Li. Phytobezoar: an uncommon cause of small bowel obstruction. Annals of the Royal College of Surgeons of England. 1992; 74(5); 342–344.
8. E. D. Vaughan Jr., J. L. Sawyers, and H. W. Scott Jr. The Rapunzel syndrome. An unusual complication of intestinal bezoar. Surgery. 1968; 63(2); 339–343.
9. D. E. Ventura, F. A. Mardiros Herbella, S. T. Schettini, and C. Delmonte. Rapunzel syndrome with a fatal outcome in a neglected child. Journal of Pediatric Surgery. 2005; 40(10); 1665–1667.
10. M. H. Mehta and R. V. Patel. Intussusception and intestinal perforations caused by multiple trichobezoars. Journal of Pediatric Surgery. 1992; 27(9); 1234–1235.
11. H. Schreiber and H. C. Filston. Obstructive jaundice due to gastric trichobezoar. Journal of Pediatric Surgery. 1976; 11(1); 103–104.
12. A. Hossenbocus and D. G. Colin Jones. Trichobezoar, gastric polyposis, protein losing enteropathy and steatorrhoea. Gut. 1973; 14(9); 730–732.
13. R. N. Shawis and C. M. Doig. Gastric trichobezoar associated with transient pancreatitis. Archives of Disease in Childhood. 1984; 59(10); 994–995.
14. A. R. Jensen, C. T. Trankiem, S. Lebovitch, and H. Grewal. Gastric outlet obstruction secondary to a large trichobezoar. Journal of Pediatric Surgery. 2005; 40(8); 1364–1365.
15. A. J. Lamerton. Trichobezoar: two case reports—a new physical sign. American Journal of Gastroenterology. 1984; 79(5); 354–356.
16. Sidhu BS, Singh G, Khanna S: Trichobezoar. J Indian Med Assoc 1993;91; 100–101.
17. J. Tamminen and D. Rosenfeld. CT diagnosis of a gastric trichobezoar. Computerized Medical Imaging and Graphics. 1988; 12(6); 339–341.
18. F. Navab and J. Sabol. Images in clinical medicine. New England Journal of Medicine. 1997; 336(24); 1721.
19. R. R. Gorter, C. M. F. Kneepkens, E. C. J. L. Mattens, D. C. Aronson, and H. A. Heij. Management of trichobezoar: case report and literature review. Pediatric Surgery International. 2010; 26(5); 457–463.