

## Case Report

# Trichobezoar presenting as gastric outlet obstruction: a case report

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## ABSTRACT

Bezoars are results from accumulation of swallowed solid foreign material in the gastrointestinal tract. Typically, trichobezoars are diagnosis is based on Clinical history, radiological evidences. Surgical or endoscopic intervention is the treatment documented. In this case we present a case report of a teenage female of 16 year old diagnosed and operated for trichobezoar.

**Keywords:** Trichobezoar, Rapunzel syndrome, Hypoproteinemia, Trichotillomania

## INTRODUCTION

Bezoars are results from accumulation of swallowed solid foreign material in the gastrointestinal tract of human body. These collected foreign matter is generally classified into various types based on their composition, including phytobezoar (vegetables), trichobezoar (hairs), lactobezoar (milk/curd), pharmacobezoar, and miscellaneous (fungus, sand, paper, etc).<sup>1</sup> In adults, phytobezoar is the most frequent type while trichobezoars are commonly discovered in children and teenaged girls with underlying psychiatric disorder.<sup>2</sup>

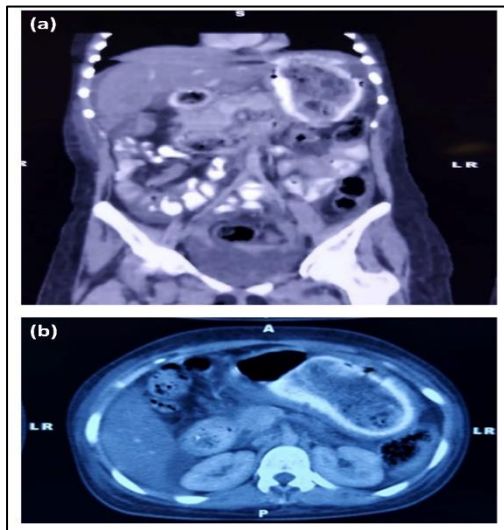
Trichobezoars initially may be asymptomatic or have non-specific presentation and later may display the symptoms of acute abdomen and gastric tract obstruction.<sup>1-3</sup> Typically, trichobezoars are diagnosis is based on radiological evidences while surgical intervention is the treatment of choice.<sup>4</sup> To addition, endoscopic extraction of trichobezoars have been documented in the recent literature aided with various techniques and instruments.<sup>1,5</sup> Hereby we have presented

as case report of a teenage female of 16 year old diagnosed and operated for trichobezoar.

## CASE REPORT

A 16 year old female was presented with pain abdomen and vomiting from the last 2 years which have been increased in frequency and severity from the last 3 months. Previously, she was examined at a local hospital for her grievance of epigastric pain about a 1 year ago for which she was prescribed symptomatic medication. Recently, she was brought to a paediatrician in our hospital, 6 months ago for her complaint, where she was advised abdominal computed tomography (CT). On CT a large intragastric and intraduodenal lesion was identified which was producing mottled gas pattern without any contrast enhancement (Figure 1). Later, on endoscopic visualisation, a large trichobezoar was observed in the stomach and the scope was not negotiable beyond 2nd part of duodenum (Figure 2). Both CT and endoscopic results lead to the diagnosis of trichobezoar in the stomach. Furthermore, general physical examination of

the patient revealed presence of the pallor and pedal oedema. On abdominal examination, a lump was seen occupying the epigastric and the umbilical region exhibiting non tender and mobile characteristics without any other distinguishable features. Besides, routine laboratory studies on this patient disclosed hypoproteinaemia and anaemia with normal remaining profile. Patient belonged to a low socioeconomic status family of 2 siblings, and she is the second youngest. Her parents are farmers and all work in the family farm, and had no psychiatric history in the family. At the age of 12, patient first started eating hair and continued to eat for 2 years. The patient admitted having an urge to eat hair (trichotillomania) during this period.



**Figure 1: CT scans from (a) dorsal and (b) vertical plane exhibits well-defined heterogeneous solid mass interspersed with trapped air in the stomach.**



**Figure 2: UGIE shows the presence of large Trichobezoar in the stomach.**

However, she showed no signs of anxiety and shame regarding her disorder, and no other psychiatric symptoms. Patient was built up before surgery by giving TPN and albumin and was planned for surgery. Mini laparotomy and an anterior gastrotomy were conducted to extract the bezoar from the stomach of patient.

Intraoperatively 45 cm large trichobezoar, observed to occupy entire stomach, duodenum and with a tail extending into the proximal jejunum, was removed from the patient's stomach. Whole of the gut was examined to look for presence of any baby bezoar, but it was found normal. Gastrotomy was closed in two layers and feeding jejunostomy was done to start early feeding. The patient was observed with smooth recovery and without any complications. Feeding was started on postoperative day one via feeding jejunostomy tube. Oral feed was initiated on the fourth postoperative day. Finally, patient was discharged on sixth postoperative day after taking psychiatric consultation.



**Figure 3: Extracted Trichobezoar from the patient's stomach, which was extending into the duodenum and proximal jejunum.**

## DISCUSSION

Typically, trichobezoars are predominately noticed in female patients in their adolescent age and are associated with trichotillomania. This disorder is characterized by habit of eating the hairs, mostly patients own hairs.<sup>2</sup> The clinical presentations developed after years as consumed hair accumulates in the stomach because they escape the gastric peristaltic movements due to their slippery surface.<sup>6</sup> These accumulated hairs in the stomach may extends into the duodenum and is called as Rapunzel syndrome.<sup>6,7</sup> Thus, gastric outlet obstruction is the principal manifestation of trichobezoar. However, several cases have been reported in the literature with rare manifestations of trichobezoar as obstructive jaundice, pancreatitis, and intestinal perforations.<sup>8</sup> It sometimes extends into small intestine and causes feature of simultaneous gastric and small intestinal obstruction.<sup>9</sup> As a result, these patients often show reduced appetite which further worsen the patient health, including weight loss, anemia, and hypoproteinemia.<sup>1,3</sup> In present case report, patient was observed with similar features of gastric outlet obstruction with subsequent anemia and hypoproteinemia. Computed tomography (CT), which is often used as imaging modality of choice, showed characteristics of well-defined heterogeneous solid mass interspersed with air inside the patient's stomach. Additionally, it also scrutinizes the distended small intestine for the concomitant small intestinal obstruction.<sup>4</sup>

Besides, upper endoscopy is generally considered as both confirmatory and as therapeutic approach in such conditions. Thereof, trichobezoar can be removed with the aid of endoscopic fragmentation using varieties of instruments.<sup>5,10</sup> However, surgical retrieval is the treatment of choice as it provides the opportunity to inspect the rest of the intestine and thus prevent the obstruction in future.<sup>11,12</sup> Herein, open laparotomy with gastrostomy done on the patient exhibited the best results in the removal of trichobezoar. Moreover, recent studies also documented the laparoscopic method to removal such bezoar, but it requires experienced hands.<sup>2,7</sup> Our patient was operated by laparotomy with gastrostomy due to generous size of trichobezoar. Furthermore, psychiatric referral has been recommended as the most important remedy to prevent the recurrence, which is very common without treatment and to diagnose the similar illness in siblings.<sup>13</sup>

## CONCLUSION

When a female child presents with epigastric pain, vomiting, findings of an epigastric mass, anemia, and hypoproteinemia should be evaluated for trichophagia in the history, and to look out for trichotillomania through physical examination. Radiological investigation should be used as standard methods in the diagnosis of such patients. Nevertheless, surgery is the treatment of choice for large bezoars and postoperative psychotherapeutic measures are recommended to prevent the recurrence.

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## REFERENCES

1. Sehgal VN, Srivastava G. Trichotillomania ± trichobezoar: revisited. J Euro Acad Dermatol Venereol. 2006;20(8):911-5.
2. Frey AS, McKee M, King RA, Martin A. Hair apparent: Rapunzel syndrome. Am J Psychiatry. 2005;162(2):242-8.
3. Pérez E, Santana JR, García G, Mesa J, Hernández JR, Betancort N et al. Gastric perforation due to trichobezoar in an adult (Rapunzel Syndrome). Cirugía Española. 2005;78(4):268-70.
4. West WM, Duncan ND. CT appearances of the Rapunzel syndrome: an unusual form of bezoar and gastrointestinal obstruction. Pediatric Radiol. 1998;28(5):315-6.
5. Coulter R, Antony MT, Bhuta P, Memon MA. Large gastric trichobezoar in a normal healthy woman: case report and review of pertinent literature. Southern Med J. 2005;98(10):1042-4.
6. Dixit A, Raza MA, Tiwari R. Gastric trichobezoar with Rapunzel syndrome: A case report. Journal of clinical and diagnostic research: JCDR. 2016;10(2): PD10.
7. Naik S, Gupta V, Naik S, Rangole A, Chaudhary AK, Jain P et al. Rapunzel syndrome reviewed and redefined. Digestive Surg. 2007;24(3):157-61.
8. Small A, Muehlbauer M, Kelnhauser S. Obstructing Giant Trichobezoar Involving Stomach and Duodenal Bulb. Am J Gastroenterol. 1968;50(4).
9. Hoover K, Piotrowski J, Pierre KS, Katz A, Goldstein AM. Simultaneous gastric and small intestinal trichobezoars - a hairy problem. J Pediatric Surg. 2006;41(8):1495-7.
10. Ugenti I, Travaglio E, Lagouvardou E, Iambrenghi OC, Martines G. Successful endoscopic treatment of gastric phytobezoar: A case report. Int J Surg Case Reports. 2017; 37:45-7.
11. Caiazzo P, Di Lascio P, Crocoli A, Del Prete I. The Rapunzel syndrome. Report of a case. Il Giornale di chirurgia. 2016;37(2):90.
12. Couceiro A, Viveiro C, Capelão G, Nobre J, Laureano M, Gonçalves I et al. Trichobezoar—A rare cause of abdominal mass and gastric outlet obstruction. GE Portuguese J Gastroenterol. 2016;23(1):50-3.
13. Christenson GA, Crow SJ. The characterization and treatment of trichotillomania. J Clin Psychiatr. 1996;57:42-7.

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