



## GASTRIC TRICHOBEZOAR: A RAPUNZEL SURPRISE!

## General Surgery

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## ABSTRACT

Trichobezoar is a rare condition that may pose a diagnostic challenge. Patients with this condition often have an underlying psychiatric illness, and history may not be easily forthcoming. The condition should be entertained especially in young females. Delay in diagnosis may lead to futile complications. We report a classic case of trichobezoar in terms of patient profile, presentation, and investigative findings.

## KEYWORDS

gastric trichobezoar, rapunzel syndrome, exploratory laparotomy

## INTRODUCTION

Trichobezoar, a hair ball within the proximal canal, might be a rare condition almost exclusively seen in young females [1]. Human hair is resistant to digestion still as peristalsis because of its smooth surface. Therefore, it accumulates between the mucosal folds of the stomach. Over a period of some time, continuous ingestion of hair ends up in the impaction of hair together with mucus and food, causing the formation of a trichobezoar. In most cases the trichobezoar is confined within the stomach. In some cases, however, the trichobezoar extends through the pylorus into jejunum, ileum or perhaps colon. This condition, called Rapunzel syndrome, was first described by Vaughan et al. in 1968 [2]. Additionally, incidentally, parts of the tail can break off and migrate to the insufficient intestine, causing obstruction [3-5]. Within the first stage, most trichobezoars may not be recognized due to their nonspecific presentation or even lack of symptoms within the first stages. One should bear in mind of a trichobezoar in young females with psychiatric comorbidity, because it's sometimes the results of the urge to tug out one's own hair (trichotillomania) and swallow it (trichophagia). Other psychiatric disorders, however, like mental disorders, abuse, pica, obsessive compulsive disorder, depression and anorexia could also be associated with trichobezoar [6-7]. When not recognized, the trichobezoar continues to grow in size and weight due to the continued ingestion of hair. This increases the prospect of severe complications, like gastric mucosal erosion, ulceration and even perforation of the stomach or the small intestine. [1]. Following the introduction of minimally invasive surgery and endoscopy with mechanical and laser fragmentation techniques, some authors have questioned the necessity of laparotomy for trichobezoar removal [8]. The aim of this study is to gauge our experience and to select the foremost appropriate approach in light of these new developments, supported a radical review of this literature.

## Case Report

A 15-year-old female presented to surgery OPD with history of abdominal mass associated with epigastric pain, sense of fullness, vomiting after meals for last 4 month and intensity of pain aggravated for 2 days. On per abdomen examination, abdomen was distended (fig 1), guarding present, a well-defined mass of approximately 10x4cm, involving epigastric, partial umbilical region and right lumbar region, firm, non-tender was palpated. Bowel sounds were sluggish. Serum amylase, lipase levels were within normal limits and USG whole abdomen was suggestive of hyperdense area with posterior acoustic shadowing seen in epigastrium. Upper GI endoscopy was suggestive of large trichobezoar in stomach extending across pylorus into duodenum producing obstruction (Fig 2).

Exploratory laparotomy was performed through midline incision, stomach was opened. A huge trichobezoar was identified in stomach

(Fig 3) as its shape and extending into small bowel. Hairball was removed in toto (Fig 4) The stomach was closed in two layers followed by abdomen closure (Fig 5) The patient was discharged on 4th day and advised for psychiatry follow up.



Fig1: distended abdomen



Fig2: upper GI endoscopic image



Fig 3: large trichobezoar in stomach



**Fig 4: large trichobezoar**



**Fig 5: Closure of stomach**

## DISCUSSION

The name of this syndrome comes from the fairy tale about 12-year-old princess who was locked in tower without stairs or doors & managed to escape with help of Rapunzel's long tresses. The extension of trichobezoar into jejunum or further on is referred to as "Rapunzel syndrome". Although rare, trichobezoar may present as an emergency that surgeons should be prepared to deal with. This subject has recently attracted attention because of the controversy about the applying of minimally invasive techniques like endoscopy and laparoscopy. As demonstrated by our case and also the literature, trichobezoars are often not recognized at the initial presentation and also the diagnosis is typically delayed (1). Majority of cases of trichobezoar present late, due to the low index of suspicion by the physician. Of 131 collected cases of trichobezoar, a palpable abdominal mass was present in (87.7%), abdominal pain (70.2%), nausea and vomiting (64.9%), weakness and weight loss (38.1%), constipation or diarrhoea (32%) and haematemesis (6.1%). The laboratory investigations revealed low haemoglobin in about 62% (average) (9). Management 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; it was noted that whereas 5% of attempted endoscopic removals were successful, 75% of attempted laparoscopies were successful. However, laparotomy was 100% successful and thus favoured as their management of choice (10). Early detection of trichobezoar depends on effective screening and for trichotillomania and related disorders.

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