



TRICHOBEZOAR: A CASE OF SWALLOWED HAIR IN A PEDIATRIC PATIENT

General Surgery

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ABSTRACT

A trichobezoar is an intraluminal mass in the stomach or intestine composed of undigested swallowed hair. Trichobezoars (hair ball) are usually located in the stomach, but may extend through the pylorus into the duodenum and small bowel (Rapunzel syndrome). They are almost always associated with trichotillomania, trichophagia or other psychiatric disorders. Presenting symptoms can range from abdominal pain, nausea and vomiting, or an asymptomatic abdominal mass, and can progress to acute complications such as obstruction, perforation, and peritonitis. More chronic complications include weight loss and anemia due to malabsorption.

KEYWORDS

Trichotillomania, Trichobezoar, Bezoar, Trichophagia

INTRODUCTION:

Trichobezoar, a hair ball in the proximal gastrointestinal tract, is a rare condition almost exclusively seen in young females [1–3]. Human hair is resistant to digestion as well as peristalsis due to its smooth surface. Therefore it accumulates between the mucosal folds of the stomach. Over a period of time, continuous ingestion of hair leads to the impaction of hair together with mucus and food, causing the formation of a trichobezoar. In most cases it is confined within the stomach. In some cases, however, the trichobezoar extends through the pylorus into jejunum, ileum or even colon. This condition, called Rapunzel syndrome, was first described by Vaughan et al. in 1968 [4,5]. In the early stage, most trichobezoars may not be recognized due to their nonspecific presentation or even lack of symptoms in the early stages. One should be aware of a trichobezoar in young females with psychiatric comorbidity, as it is usually the result of the urge to pull out one's own hair (trichotillomania) and swallow it (trichophagia). Other psychiatric disorders, however, such as mental disorders, abuse, pica, obsessive compulsive disorder, depression and anorexia nervosa may also be associated with trichobezoar [6,7,8]. When not recognized, the trichobezoar continues to grow in size and weight due to the continued ingestion of hair. This increases the risk of severe complications, such as gastric mucosal erosion, ulceration and even perforation of the stomach or the small intestine.

Case Report:

A 6-year-old girl presented to the emergency department with constant abdominal pain, fever, few episodes of non-bloody, non bilious emesis and abdominal distension. On arrival, her vital signs were heart rate-130bpm, respiratory rate-30pm, saturation 100% on room air and temperature 99°F.

On examination, the patient was noted to be in discomfort, pale, and ill-appearing with distended abdomen and diffuse tenderness. She gave a history of dull aching abdominal pain, on and off for last one year that relieved on its own or after medication. Her mother noticed her habit of eating hair, pieces of paper, cloth or threads, but ignored thinking that it will improve with age. She also noticed that the size of patient's abdominal girth was gradually increasing; as a concern she visited nearby hospital, got sonography done but the study showed nothing significant. The patient suffered one episode of severe abdominal pain and fever one month back for which she was treated conservatively at the local hospital and CECT Abdomen was advised that revealed-Large heterogeneous density intra-luminal mass with mottled gas pattern in stomach extending through the pylorus up to the duodeno-jejunal junction suggesting possibility of trichobezoar. Upper GI endoscopy revealed- (i) Incompetent GE Junction (ii) Trichobezoar in stomach, first and second part of duodenum and also extending downwards. Under general anesthesia midline incision was made, layers opened, stomach was opened longitudinally and trichobezoar was removed. ADK drain was placed in right paracolic gutter and closure done in layers. On postoperative day 5, drain was removed and

on post-operative day 8, total stitch removal was done. Patient was discharged with healthy wound and advice for psychiatric consultation.



GI Endoscopy

DISCUSSION:

Gastric bezoars are an intraluminal mass due to the accumulation of undigested material. Although not completely understood, trichobezoars, accounting for 50% of bezoars, are thought to form as the smooth, slippery, enzyme-resistant hair stays in the gastric mucosal folds as it escapes the stomach's peristaltic propulsion,(9) eventually accumulating and taking shape of the stomach due to the peristalsis. The bezoar is then covered in mucus and gives off a putrid smell due to the fermentation of fats, potentially causing halitosis.(10) Although most trichobezoars are located in the stomach due to the pyloric sphincter preventing migration, small hair can migrate as a tail through the pylorus into the intestines and colon; this is called Rapunzel syndrome.(11,12) As with our patient, many are misdiagnosed on initial presentation with generalized abdominal pain, possibly delaying patient care and leading to complications. Malhotra-Gupta noted in a case review that three of 18 pediatric patients had prior diagnoses before they were finally diagnosed with trichobezoar and gastric perforation.(13)

With delayed diagnosis, bezoars can increase in size. This reduces blood supply to the stomach mucosa, causing ischemia specifically to the limited blood supply watershed area of the lesser gastric curvature, thus causing erosion of the gastric mucosa and eventually leading to ulceration and perforation.(14,15)

Treatment includes removal of the trichobezoar, prevention of complications, and treatment of the underlying cause. Removal includes endoscopy; however, surgery is indicated with perforation, hemorrhage, or Rapunzel syndrome.(16)

After treatment of the trichobezoar, a multimodal preventative therapy — specifically addressing the underlying cause — is needed to prevent recurrence. Fluoxetine and other SSRIs have been used to treat the underlying behavior of hair consumption, although no reproducible

patient benefits have been seen.(17)



Intra-operative Findings



CONCLUSION:

In conclusion, trichobezoar should be considered in young females presenting with non-specific abdominal complaints. Endoscopy can be used as a diagnostic modality for these patients as it can differentiate trichobezoar from other types of bezoars, which can be removed safely with endoscopy. As far as treatment is concerned, however, we consider conventional laparotomy to be the treatment of choice in children with trichobezoar and to be the only valid treatment in children with Rapunzel syndrome.

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