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Original Research Paper

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TRICHOBEZOAR AND TRICHOPHAGIA: A CASE REPORT

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INTRODUCTION

A hair ball in the proximal gastrointestinal system known as trichobezoar is an uncommon ailment that primarily affects young girls. Human hair's flat surface makes it resistant to both peristalsis and digestion. As a result, it builds up between the stomach's mucosal folds. When hair is continuously consumed over time, it becomes impacted along with food and mucous, resulting in the formation of a trichobezoar. The trichobezoar is restricted to the stomach in the majority of cases. On the other hand, the trichobezoar occasionally passes past the pylorus into the jejunum, ileum, or colon. Vaughan et al. initially reported this disorder, known as Rapunzel syndrome, in 1968. Moreover, accidentally, sections of the tail may separate and move.[1]The term "Bezoar" is derived from the Persian word "padzhar" or the Arabic word "bedzehr".

The majority of trichobezoars occur in youngsters. A history of trichotillomania, trichophagia, or other mental disorders is present in most cases of trichobezoars, which affect 90% of female patients with long hair. Trichobezoar should thus be taken into account as a differential diagnosis in young females who exhibit vague symptoms.Most trichobezoars may go undiagnosed in the early stages because of their vague presentation or even absence of symptoms.

The trichobezoar continue growing in size and weight if not recognised. Severe consequences include erosion of the stomach mucosa, ulceration, and even perforation of the stomach or small intestine are more likely as a result. Moreover, problems include pancreatitis, intussusception, obstructive jaundice, protein-losing enteropathy, and even fatalities have been documented [2]

Case History

A 12-year old female from Jarwa,Mahendragarh,Haryana presented to emergency with abdominal pain,vomiting after meals for last 10 days.

The patient gave history of ingestion of hair for last 1 year. There was no associated history of weight loss or decreased appetite. There was no personal or family psychiatric history.

On examination the patient was conscious, well oriented, thin built, left frontal balding of hair,Pulse rate-88/min,Blood Pressure- 126/74 mm Hg, RR-18/min. Abdominal examination revealed a hard solid mass in the epigastric region,which was mobile with respiration,nontender,concave lower margin, upper margin of lump could not be defined.

Figure:1 Clinical picture showing lump of size 10x10 cm in epigastric region

An abdominal ultrasound revealed a linear echogenic foci in the epigastric region.CECT whole abdomen revealed a large heterogeneous intraluminal mass with mottled gas pattern and hyperdense foci in the stomach extending through the pylorus upto the third part of duodenum (trichobezoar).

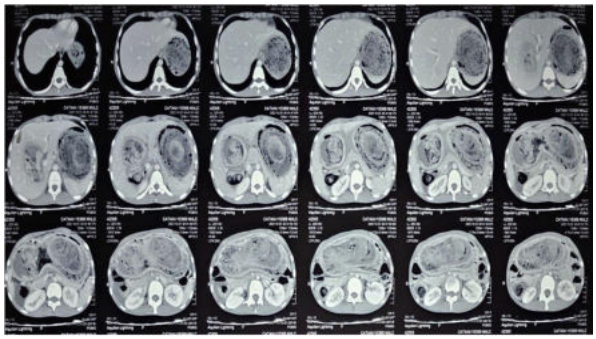

Figure 2:CECT whole abdomen showing a large heterogeneous intraluminal mass with mottled gas pattern

and hyperdense foci in the stomach extending through the pylorus upto the third part of duodenum.

Subsequently surgical intervention was planned through a midline laparotomy incision. A large mass was extracted through a 7cm anterior gastrotomy incision.There was a large trichobezoar filling the entire stomach stomach measuring upto 20 cm in length and 10 cm in width extending till 2nd part of duodenum.The incision was closed in two layers using silk 2-0 suture and abdomen was closed with a drain in situ.

Figure 3: Intraoperative picture showing gastrostomy showing in situ mass of hair

Figure 4&5: Intraoperative picture showing stomach shaped trichobezoar mas

The patient had an uneventful recovery following surgery. Feeding was started on post operative day 7. The patient was discharged on the 10th postoperative day.She also underwent psychological treatment in order to prevent a recurrence.

DISCUSSION

A trichobezoar is formed when hair is continuously consumed over time and becomes impacted with mucus and food. Trichobezoar is an uncommon condition that primarily affects children. Up to 90% of people between the ages of 13 and 20 have trichophagia and trichotillomania, which may be related to women's traditional hair [3]. Debakey and Osterman hypothesized that trichobezoars form from hair trapped in the stomach folds, although the exact mechanism of bezoar formation in the non-operated stomach is still unclear. But this doesn't explain why big hairballs stay in the stomach.Studies have shown no difference in the emptying of solids between patients with and without bezoars, even in postoperative patients.

According to certain reports, delayed emptying in patients who have had vagotomies may play a role in the development of bezoars. It has been suggested that bezoar formation may be caused more by impairment of the stomach's grinding and sieving mechanisms than by emptying.Hair, carpet, and clothing become entangled in the gastric mucosal folds during the formation of trichobezoar cysts.

Regardless of their natural color, bezoars turn black due to the denatured hair proteins caused by stomach acid [4].

Abdominal pain, nausea, bloating, early satiety, and weight loss are among the most common complaints. Patients with trichobezoars rarely pass hair fragments in their stools or vomit. The majority of patients present relatively benign symptoms when there is no bowel obstruction. They may exhibit upper gastrointestinal bleeding from a related gastric ulcer or epigastric pain mimicking a peptic ulcer.The lack of specific signs and symptoms of gastric bezoars makes the differential diagnosis broad and the clinical examination for diagnosis generally unsatisfactory. For the accurate diagnosis of gastrointestinal bleeding, CT and ultrasonography are both suitable options. CT is more precise and produces an extremely distinctive bezoar image. It can also detect the existence of extra gastrointestinal abnormalities. By using endoscopy, bezoars can be definitively diagnosed. To rule out Rapunzel syndrome—an extension of the bezoar tail—a duodenal endoscopy is necessary.[5]

In order to treat gastric bezoars, they must be removed and their recurrence must be avoided. Prokinetic medications, a clear liquid diet, and nasogastric lavage or suction may be helpful for small bezoars.To remove most trichobezoars, however, surgery is necessary. As was the case with our patient, the standard course of treatment involves a gastrotomy and bezoar extraction.

Extracorporeal shock wave lithotripsy, the NdYaG laser, and endoscopic and laparoscopic excision are examples of novel therapies.

In China, a novel endoscopic mini-explosive technique has reported a 100% success rate. There have been recent reports of successful laparoscopic trichobezoar removals. Although described, enzymatic treatment is primarily used for phytobezoars.[6.7].Despite being appealing due to their noninvasive nature, medical intervention and enzymatic degradation have been shown to be ineffective[11,12].

If successful, endoscopic removal would be the most desirable option. The initial account of a trichobezoar successfully removed by endoscopy featured a comparatively small one, weighing just 55 grama[13].However, in the majority of case reports, fragmentation was thought to be impossible due to the material's size, density, and hardness, and endoscopy was disregarded as a potential treatment option. Furthermore, as the endoscope must be introduced numerous times in order to remove all fragments, pressure ulcers, esophagitis, and even esophageal perforations may result [14,15]

The procedure changed from a laparoscopy to a laparotomy due to the discovery of a large intragastric mass.The first report on laparoscopic removal of a trichobezoar was published by Nirasawa et al.The rarity of trichobezoar may contribute to the paucity of reports on endoscopic treatment, but it may also mean that laparoscopy is not a desirable therapeutic option for trichobezoar. The trichobezoar's size or satellite trichobezoars in other parts of the gastrointestinal tract are the main reasons why a laparoscopy is unable to remove it.Since the tail typically extends into the jejunum and manipulation carries the risk of parts breaking off, which cannot be removed endoscopically, endoscopic removal should really not even be attempted[17,18].

Laparotomy remains the treatment of choice because of its 100% success rate, comparatively low rate of complications, low complexity, and ability to thoroughly check the entire gastrointestinal tract for satellites in a short amount of time.

If psychiatric management is successful in controlling habitual trichophagia following trichobezoar removal, the prognosis is favorable[8].Hypnosis, play therapy for kids, and

selective serotonin uptake inhibitors are all part of the treatment[9].It is known that recurrences can happen if the underlying psychological disorder is not addressed.[10].

Disclosures
Compliance with ethical standards.

Conflict Of Interest
The authors declare that they have no conflict of interest.

Informed Consent
Informed consent was obtained from patients included in the study.

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