

# Trichobezoar

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## ABSTRACT

Trichobezoar is an uncommon condition often presenting, among other signs, with a history of trichotillomania and trichophagia. We report an unusual case of gastric trichobezoar with extension into jejunum in a patient with an unusual habit of ingesting hair plucked from other people's scalp.

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**T**richobezoar, the most common form of bezoars, occurs as a result of long-standing ingestion of hair, a condition called trichophagia. The patient is usually a young female with anemia and patchy alopecia. Alopecia is often linked to habitual hair plucking, which is called trichotillomania. It is an impulse control disorder characterized by the repeated urge to pull out scalp hair, eyelashes, eyebrows or other body hair. It is believed to be related to obsessive-compulsive disorder.

**Case Report.** A 24-year-old young unmarried woman was presented to the emergency department with complaints of persistent vomiting and epigastric lump since 2 months. Examination revealed a cachectic, dehydrated, afebrile, severely pale patient with a soft, fixed, non-tender 20 × 15 cm mass in the epigastrium extending into the right hypochondrium. No alopecia was noted on the scalp. On direct questioning, she did not admit to a history of trichophagy. A provisional diagnosis of gastric mass, probably malignant, was made in view of severe pallor and cachexia. Past history and family history were non-contributory. The hematological investigation showed hemoglobin

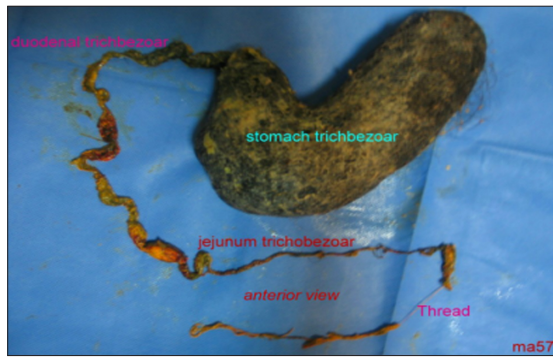
6.6 gm/dL and total count  $12.4 \times 10^3/\text{ul}$  at time of admission. The electrolytes and liver function tests were within the normal range. Radiological investigation included CT scan, which showed an intraluminal heterogeneous, mixed-attenuating mass in the lumen of gastric body and antrum extending into the duodenum. A provisional diagnosis of gastric trichobezoar was made. Endoscopy confirmed a huge hair ball in the stomach with a small polyp at the antrum (**Figure 1**). At laparotomy, a large hair ball extending from the stomach into the duodenum was removed through a vertical gastrotomy incision together with polypectomy proved on histopathology to be hyperplastic polyp. (**Figure 2a-d**). She recovered completely post-operatively. On retrospective questioning, she admitted to a history of trichophagy since last 6 years. But, according to the patient, she always plucked hair from other peoples' scalp. However, no history of emotional disturbance could be elicited.

**Discussion.** Bezoar is an uncommon condition of which only approximately 300 cases have been reported in the literature. The word 'bezoar' is

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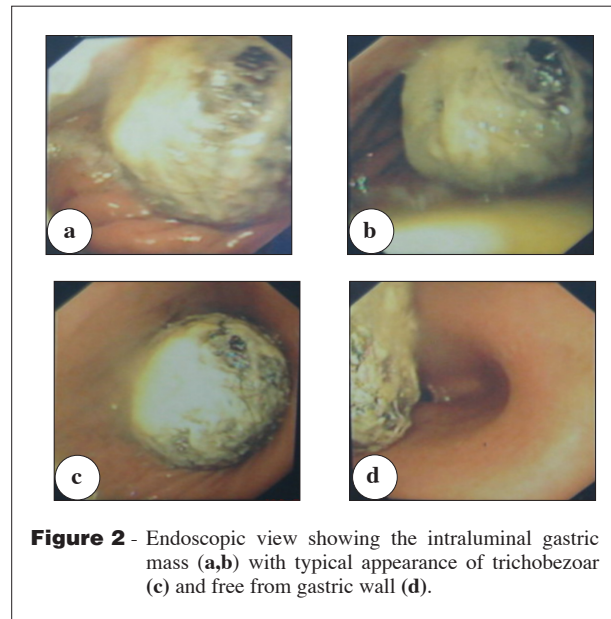


**Figure 1** - Post-operative trichobezoar extracted from the stomach with a long string.

used to describe large concretions that collect in the stomach and fail to pass through the intestine, which is a result of ingestion of indigestible organic matter such as hair (trichobezoar), vegetable and fruit matter (phytobezoar) or a combination of both (trichophytobezoar). Other rare bezoars are formed by candida (mycotic bezoar), drugs (pharmacobezoar), curdled milk (lactobezoar), chewing gum, and mushroom. Of these, trichobezoar seems to be the most common and comprise 55% of all bezoars. It has been found associated with celiac disease in pediatric population.

Trichobezoar consists of a large ball of hair with entrapped undigested dietary fat. It maybe so large to take up the shape of the stomach. The ingested hair in the trichobezoar is always black due to denaturation of proteins in highly acidic gastric juice. The patients are mostly young women (90%) with a peak incidence in second and third decade. Trichobezoar has also been reported in children.<sup>1</sup> Clinical manifestations of gastric trichobezoar are a palpable abdominal mass, which is most commonly followed by abdominal pain, anemia, nausea and vomiting, weakness and weight loss and hematemesis. Qureshi et al<sup>2</sup> concluded that trichobezoar is a condition to think of in case of mobile abdominal mass. The clinical symptoms of a trichobezoar vary considerably from person to person, depending on the size and position of the trichobezoar. Trichobezoar develops in people who eat hair, a condition called trichophagia.

Trichophagia is generally regarded as a personality disorder similar to finger nail biting. In turn, trichophagia is often linked to habitual hair plucking, which is called trichotillomania. It is an impulse control disorder characterized by the repeated urge to pull out scalp hair, eyelashes, eyebrows or other body hair. It is believed to be related to obsessive-compulsive disorder. Most trichotillomania sufferers live relatively normal social lives. Patient with bezoars



**Figure 2** - Endoscopic view showing the intraluminal gastric mass (a,b) with typical appearance of trichobezoar (c) and free from gastric wall (d).

also has some gastric dysmotility, which encourages bezoars to form. Most bezoars occur as a complication of gastric surgery. Diagnosis of trichobezoar rests on the clinical history of a long-standing trichophagy, which is the most important underlying cause.

Plain x-ray of abdomen would show a mass projecting above the gastric bubble or soft tissue opacity in right hypochondrium. Barium study would outline the mass and show its extent. Ultrasound would confirm its location in the stomach. But, CT scan is the most important diagnostic modality, which besides showing its extent, also demonstrates the morphology and internal characteristics, thereby clinching the diagnosis. The absence of any attachment of the mass to the gastric wall and the presence of air within the mass are very suggestive for diagnosis.

Ripolles et al<sup>3</sup> compared conventional abdominal radiographs, sonography, and CT scan in the diagnosis of gastro-intestinal tract bezoars and found CT scan to be more accurate and able to exhibit characteristic bezoar image. All patients presenting with epigastric mass, anemia, vomiting and history of trichophagy should be subjected to a CT scan for confirmation of diagnosis of trichobezoar and followed by endoscopy.<sup>4</sup> The complications of bezoar formation are either mechanical or traumatic. Persistent irritation of gastric wall by the bezoar can cause ulceration, hemorrhage or perforation. However, mechanical complication is more common and are obstruction and ileus, the gastric trichobezoar may extend into the duodenum (as in our case). Some broken-off pieces may migrate distally into the intestine and cause

obstruction<sup>5</sup> or ileus. Long, 'string-like' contiguous extension of gastric trichobezoar has also been reported and extending until ileocecal valve or even transverse colon (Rapunzel syndrome).<sup>6</sup> Uncommon complications such as transient pancreatitis and jejunal perforation have also been reported.

A young woman in second or third decade of life with trichobezoar should be evaluated for some underlying emotional stress leading to trichotillomania and trichophagy. Patchy alopecia is not a definite clue, as in our case. The authors did not find an appropriate nomenclature in the literature for this type of abnormal behavior where the patient was ingesting hair from other people's scalp.

Treatment of gastric trichobezoar is surgical<sup>7</sup> or endoscopic removal. Laparoscopic removal of trichobezoar has also been reported.<sup>8</sup> Recurrence of gastric trichobezoars has also been reported,<sup>9</sup> which emphasizes the need for counseling in these patients. Bouwer and Stein<sup>10</sup> concluded that the medical and psychiatric sequelae of trichotillomania should not be underestimated and that pharmacotherapy may play a useful role in some patients with this disorder. The classification of trichotillomania is still debatable.

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