



A Case of Trichobezoar in an Adolescent Female

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Case Report

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Abstract

Introduction: Trichobezoar is a condition where hair builds up in the stomach, forming a mass that resembles a ball. Since human hair is resistant to peristalsis and digestion, it eventually builds up in the folds of the stomach. Affected individuals with trichotillomania and trichophagia have a propensity to pull out their own hair and consume it. Nearly all of the cases of the condition are in females.

Case presentation: Several days prior to her presentation, a 13-year-old female patient arrived at the emergency room complaining of epigastric pain, frequent vomiting episodes, chronic abdominal discomfort, and weight loss. Upon clinical examination, a 20 X 15 cm epigastric mass that descends to the umbilicus is found. All of the laboratory tests came back clean. Ultrasonography and a simple abdominal x-ray were not specific. In order to demonstrate the presence of a significant filling defect extending to the second part of the duodenum within the stomach, a barium meal was performed. An upper endoscopy was performed for additional confirmation and revealed a large trichobezoar that was gastric-confined. This enormous hairy mass was removed through surgery. The post-operative recovery took place without a hitch and produced satisfactory results.

Conclusion: Trichobezoar is an extremely rare condition that may be encountered during surgical practice; a high index of suspicion is required for diagnosis, and endoscopy remains the gold standard method for investigation and diagnosis. The primary treatment method is open surgery. All patients require psychiatric consultation and long-term monitoring.

Keywords: Trichobezoar; Trichophagia; abdominal; surgery; examination

Introduction

A bezoar is a thick collection of indigestible contents that are formed in a heavy mass within the gastrointestinal tract and rarely causes bowel obstruction [1,2]. There are many forms of bezoars based on their compositions, one of them is trichobezoar which is a mass of hair or hair-like fibers that

is usually found in the stomach but it can involve the whole small intestine in an extremely rare variant called Rapunzel syndrome [1, 3]. Trichobezoar is a rare condition that mainly affects adolescent females specifically those who suffer from psychiatric disorders that involve the urge to hair pulling or swallowing (trichotillomania, trichophagia) respectively. However, other mental disorders such as depression, OCD,

and anorexia nervosa were found to be associated with trichobezoar [3, 4]. Despite that its prevalence varies from 0.06% to 4%, it must be considered one of the differential diagnoses for the presentation of nonspecific symptoms such as nausea, vomiting, abdominal pain, early satiety, and weight loss depending on the severity of the condition. In its advanced forms, it might present as a case of intestinal bleeding or obstruction and even pancreatitis so if the appropriate management was delayed; the mortality rate may reach up to 30% [2, 3, 5, 6]. This case report presents the case of a 13-year-old female patient who suffered from bizarre eating habits in which she used to eat her hair for many years and was diagnosed with a trichobezoar after proper history, physical examination and suitable imaging.

Case Presentation

A 13-year-old female patient came to the emergency room complaining of mild epigastric pain for many days prior to the presentation; the child also described repeated episodes of vomiting and chronic abdominal discomfort. Weight loss is evoked in addition to the primary complaint. In addition, the patient's relatives indicated that she had bizarre eating habits, she used to eat her hair for many years.

Clinical examination reveals that the patient had looked ill, below average total body weight with palpable epigastric mass of 20 X 15 cm extending down to the umbilicus.

Hematology- complete blood count-, biochemistry- kidney and liver functions- and serology tests were normal including Tumor markers.

Plain abdominal x-ray was not informative. Ultrasonography was also obtained which reported non-specific findings, dilated stomach with acoustic shadow. As a result of the unspecific symptoms and initial radiological studies, a Barium meal was done to show the presence of There is a huge filling defect within the stomach that extends to the second part of the duodenum, indicating trichobezoar. In addition to that there was no evidence of intestinal obstruction since the barium meal went easily to the small bowel. Up to this point, clinical, laboratory, and radiology findings were ultimately suggestive of gastric trichobezoar. For further confirmation, upper endoscopy was done to disclose gastric-confined large trichobezoar. However, the endoscopist could not extract the hair mass due to the massive extension.

Consequently, laparotomy and subsequent gastrostomy were performed to extract a huge hairy compact mass; (Figure 1). Post-operative recovery passed smoothly with satisfactory outcome. Psychiatric follow up with a related planned therapeutic regimen were recommended as the patient was referred to the addressed department.

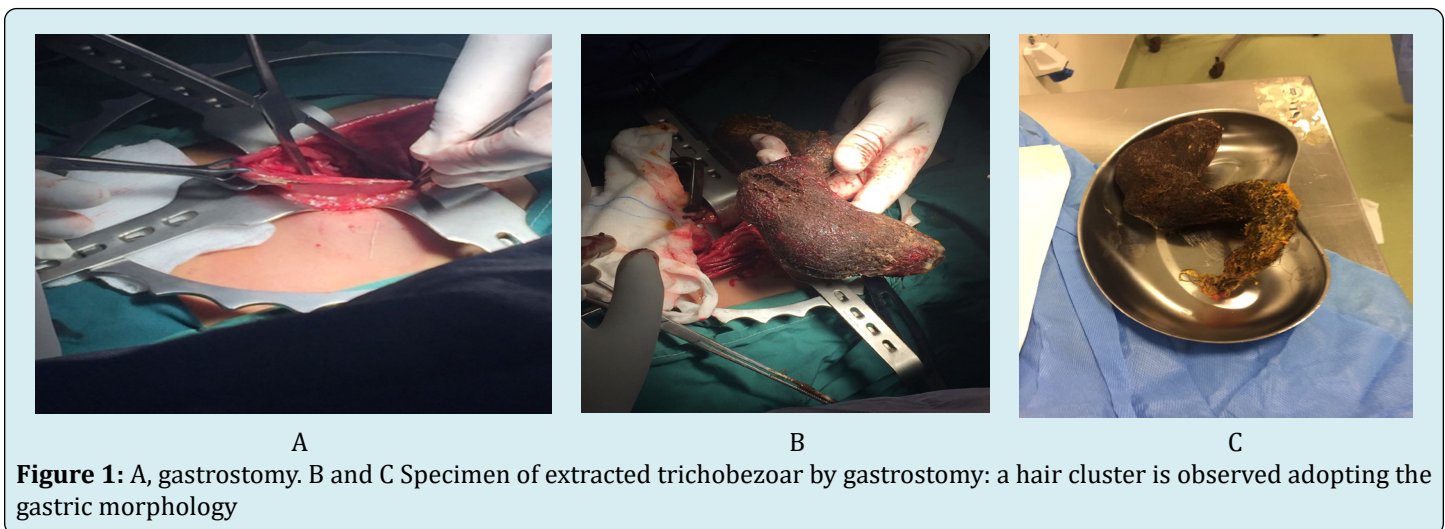


Figure 1: A, gastrostomy. B and C Specimen of extracted trichobezoar by gastrostomy: a hair cluster is observed adopting the gastric morphology

Discussion

Trichobezoars, which usually form due to ingestion of a large amount of hair over a long time, are mostly discovered in the stomach. However, they might extend to the small intestine and possibly the colon in what is referred to as "Rapunzel Syndrome" [7] commonly, the trichobezoar patient is a female under the age of 30, usually a child or

adolescent female like our patient. It is often caused by trichotillomania, a psychiatric disorder characterized by the continuous compulsory pulling out of one's hair, including the hair from the scalp, eyebrows, and eyelashes or elsewhere in the body, leading to notable hair loss. Most people with this disorder have emotional problems including depression, anxiety, and poor self- image with tension and discomfort prior to pulling the hair or when avoiding the pulling, and

subsequent pleasure and gratification after the hair is pulled. The prevalence rate is variable, reported to be between 0.06% to 4% [8]. Approximately 30% of these patients will also suffer from trichophagia, the repeated ingestion of hair often associated with trichotillomania that can involve eating parts of one's own hair or whole strands of hair. Of trichophagia sufferers, only 1% will develop a trichobezoar. Despite this association between trichobezoar formation and psychiatric disease, the condition may also affect healthy females [9].

Trichobezoars are composed of hair mixed with undigested food components in the alimentary tract. They become symptomatic once they grow enough to cause a palpable mass, which is the most common complaint. In one incidence, a trichobezoar grew till it measured 6.20 kg [10]. Additionally, the trichobezoar could cause an obstruction in the alimentary tract, and the patient can present with symptoms like abdominal pain, nausea, vomiting, malaise, weight loss, diarrhea, or constipation [11]. On clinical examination, over 80% of patients will have a palpable abdominal mass among other findings like halitosis and alopecia [12]. Our patient had also experienced these symptoms, and she had a palpable epigastric mass of 20 X 15 cm extending down to the umbilicus.

Diagnosis of a trichobezoar is based on imaging techniques as well as upper gastrointestinal endoscopy for direct viewing. Ultrasound is often used as first-line imaging, however it has a low sensitivity for diagnosis since hair has a high echogenicity, and there are often air bubbles trapped within the bezoar with various other acoustic reflections too. Abdominal CT is the gold standard for diagnosis of a trichobezoar, with accuracy between 73% and 95% in diagnosis. It appears as a well-demarcated, oval intraluminal mass that is often mottled, since it has trapped air and mixed ingested food. Additionally, abdominal radiographs and upper gastrointestinal fluoroscopic imaging can be used to aid the diagnosis of a gastric trichobezoar. It also appears mottled and may display a calcified rim on radiography and a filling defect on fluoroscopy as described in this case. Lastly, upper gastrointestinal endoscopy allows direct visualisation of the bezoar, and it allows sampling of the mass with possible therapeutic benefit through intervention, which was not possible in this case due to massive extension [13]. If left untreated, trichobezoars can cause very serious complications like peritonitis, gastric perforation or duodenal perforation, acute pancreatitis, obstructive jaundice, subphrenic abscesses, gastrointestinal hemorrhage, fistulas, intussusception, malabsorption, and iron deficiency anemia [14].

Thus, trichobezoars must be treated once discovered, and therapy should be tailored to the composition and the

underlying pathophysiology of the bezoar. Trichobezoars are resistant to chemical dissolution and endoscopic therapy is indicated. Surgery is another option which should be reserved for selected patients with gastric bezoars when other modalities are not either not possible or fail, and for when patients present with complications like gastric hemorrhage or obstruction. The standard surgery, which was carried out on our patient, is a laparotomy with consequent gastrotomy. The rest of the stomach and small intestine must be properly examined to rule out other coexisting bezoars. After removal of the trichobezoar, prognosis depends on the likelihood of recurrence, and up to 20% of patients will have recurrent bezoars. Prognosis is very good once modifications are made to prevent recurrence by increased water intake, modified diet, chewing food more carefully, and seeking psychiatric evaluation if needed for any underlying psychological conditions [15].

To summarize, trichobezoar is a rare occurrence in clinical practice, but it is crucial to detect and identify trichobezoar since it is linked with a variety of sequelae and high mortality.

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