

# GASTRIC TRICHOBEZOAR IN A 03 YEARS OLD GIRL; A CASE REPORT AND REVIEW OF LITERATURE

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## ABSTRACT

The term “bezoar” is derived from Arabic word Badzehr meaning “antidote”. Bezoars were described by reports dated as early as 1000 years BC, when they were considered as extremely powerful amulets and thought to have possessed purifying and healing properties. As of today, the word “bezoar” is used to describe accumulation of indigestible foreign bodies or substances in gastrointestinal tract resulting in formation of intra gastric mass. It is classified into various forms depending on the composition. In this case report we describe a case of trichobezoar in a 03 years old girl. To the knowledge of author only few cases of trichobezoar have been reported in children younger than 05 years of age. Our patient presented with palpable abdominal mass with no suspicion of trichobezoar due to no definite history of trichophagia. However on CT scan abdomen, diagnosis of trichobezoar was made which was later confirmed on surgery.

## Introduction

The word “bezoar” corresponds to accumulation of indigestible foreign bodies in gastrointestinal tract including stomach, small intestine and rarely colon. It was first described from a post mortem in 1779 by Baudamant. Bezoars can have varied composition, however four commonly classified forms are trichobezoar (hair ball), phytobezoar (accumulation of food fibres e.g cellulose, seeds etc.), lactobezoar (undigested milk curd), pharmacobezoar (or medication bezoars).

Trichobezoar is derived from the Greek word “trich” which means hair. A trichobezoar is mass formed by accumulation of undigested hair, most commonly affecting the stomach. It is a rare disorder, exclusively seen in young female with some psychological disturbances. It is almost always seen in association with trichotillomania, a psychiatric disorder with pulling of one’s hair from scalp, eyebrow, eyelashes or else

where from body and trichophagia (swallowing hair).<sup>1,2</sup> Here we report a case of trichobezoar in a 03 years old girl with a brief review of literature.

## Case Report

A 03 year old girl presented through in patient department for CT scan abdomen. Patient was admitted with 03 weeks history of abdominal mass and frequent central abdomen pain which was moderate to severe in intensity, associated with vomiting. No other problems were reported. There was no definite history of trichophagia. However prompted by the diagnostic findings mentioned below, on further enquiring the parents gave history of seeing the patient eating hair from a hair brush occasionally. On clinical examination patient was fully conscious,

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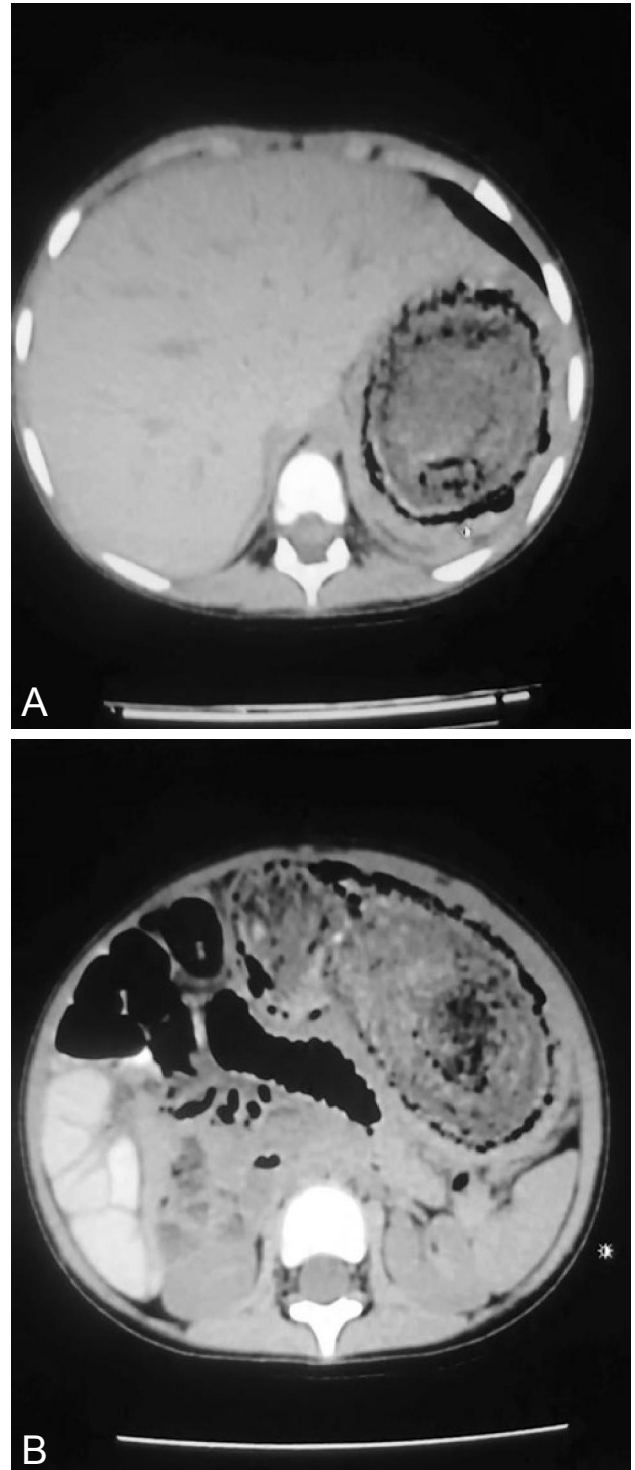
thin built, pale and moderately dehydrated. Her developmental milestones were normal. She was vitally stable. Her abdomen was soft on palpation with a relatively firm, intra-abdominal mobile mass in epigastric region extending up to the para umbilical region measuring approximately 8.0 x 7.0 cm in size. It had smooth surface and was not tender, compressible or pulsatile. Her bowel sounds were audible. Ultrasound abdomen was performed which showed a large echogenic mass in epigastrium extending up to the para umbilical region. It shows dense posterior acoustic shadowing. Plain CT scan abdomen was performed. Scout view showed distended stomach shadow with intra gastric mottled gas pattern outlined by fundal gas, resembling a food filled stomach.



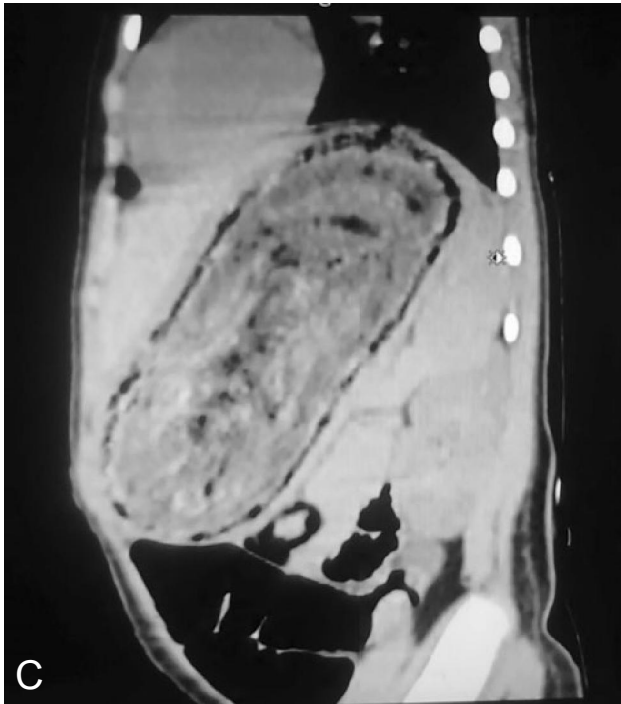
**Figure 1:** Scout View CT scan abdomen showing distended gastric shadow with intra gastric mottled lucencies.

On CT scan abdomen gross gastric distension with a large well circumscribed intra gastric mass extending up to the pyloric antrum was seen. It is mottled in appearance with a concentric ring pattern due to entrapped air and food particles. Normal stomach outline can be traced completely separate from the

lesion. No evidence of intraperitoneal fluid or gas noted. On the basis of these findings provisional diagnosis of trichobezoar was made.



**Figure 2A & B:** CT scan abdomen axial section showing distended stomach with heterogeneous intra gastric mass having mottled appearance and forming concentric ring pattern.



**Figure 2C & D:** CT scan abdomen sagittal and coronal sections showing heterogeneous intra gastric mass extending up to the pyloric antrum, normal stomach outline is seen separately.

CT findings were confirmed on surgery. A foul smelling trichobezoar was removed by anterior wall gastrotomy.



**Figure 3:** Gastric trichobezoar removed by anterior wall gastrotomy.

## Discussion

Trichobezoar is a rare medico-surgical condition, with more than 90 % cases seen in young females under 30 years of age.<sup>3,4</sup> Only few cases of trichobezoar

have been reported in children younger than 05 years of age. Although trichobezoar is generally associated with psychological disorders, ranging from chronic anxiety disorders to mental retardation resulting in compulsion to pull one's hair and swallow them (trichotillomania and trichophagia), however they are not always evident.<sup>5</sup> According to a study conducted by Debaquey and Oschner only 9 per cent of the collected cases of trichobezoar demonstrated some psychic or mental disturbance.<sup>4</sup>

Human hair have smooth surface and therefore are resistant to digestion and propulsion by peristalsis. Therefore in patients with trichophagia they tend to accumulate between the gastric mucosal folds. Over a period of time, continuous ingestion leads to agglomeration of hair together with mucus and food, resulting in the formation of a trichobezoar.

It most commonly affects the stomach, however it can extend distally into the gastrointestinal tract with involvement of the colon rarely.<sup>6</sup> Extension of bezoars from the stomach into the jejunum or further on is called "Rapunzel Syndrome" First described by Vaughan et al. In 1968.<sup>7</sup> Bezoars have also been seen in distal gastrointestinal tract with no continuation with gastric bezoar, in these case parts of bezoar tail breaks down and migrates distally.

In cases of trichobezoar clinical presentation is often vague and non-specific and may even be asymptomatic resulting in delay in diagnosis due to non-recognition at initial presentation, increasing the risk of complications. The presence of symptoms depends on the elasticity of the stomach, the size of the bezoar at presentation and presence or absence of complications. The characteristic clinical manifestations of trichobezoar are a rather large, firm, mobile epigastric mass (87.7%), associated with non-specific abdominal pain (70.2%), nausea and vomiting (64.9%), weakness and weight loss (38.1%).<sup>5</sup> Patients can also present with complications which can include gastric mucosal erosion, ulceration and even perforation of the stomach or the small intestine. In addition, parts of the bezoar tail can break off and migrate to the small intestine, causing intestinal obstruction. Less common presentations and complications include nutritional deficiencies particularly of iron, protein losing enteropathy, pancreatitis, obstructive jaundice and intussusception.<sup>6,8-11</sup>

For diagnosis of bezoars endoscopy is highly sensitive

and specific, as direct visualization of the mass is possible, though anatomical extension cannot be defined reliably.<sup>5,12</sup> In view with recent research endoscopy can be used as an alternative to laparotomy for removal of trichobezoar as well.<sup>6</sup> In literature the most commonly used diagnostic tool in cases of bezoars is CT scan.<sup>13</sup> It is the most accurate imaging test as it shows characteristic imaging features of a heterogeneous intra gastric mass with mottled appearance or forming concentric rings pattern due to impacted air and food particles in the interstices of hair. Other imaging modalities like barium studies and ultrasound can also play a vital role in supporting the diagnosis.

Management of trichobezoar include endoscopic removal, laparoscopic or removal via laprotomy.<sup>6</sup> Due to possible association with psychiatric illness, psychiatric evaluation and psychotherapy is also an important part of treatment in these patients.

## Conclusion

Trichobezoar is a rare disorder characterized by agglomeration of hair in gastrointestinal tract most commonly affecting the stomach. It is seen mostly in young female usually in association with psychiatric problems, however psychological disorders are not always recognized. Clinical presentation is non-specific and can be asymptomatic as well resulting in delay in diagnosis. When not recognized trichobezoar continue to grow in size and weight, increasing the risk of severe complications which can be life threatening, if proper surgical management is not ensued. The definite treatment of trichobezoar is surgery along with neuropsychiatric management.

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