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Trichobezoar in Children: A Report of Five Cases

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Abstract

Trichobezoar is a rare condition almost exclusively seen in young females. Clinical symptoms related to the presence of a trichobezoar within the gastrointestinal (GI) tract are characterized by late onset and lack of specificity, causing late diagnosis. We present a report of five young infants with different circumstances of discovery. It was treated successfully with surgery followed by psychiatric consultation. The patient's abdominal symptoms subsided after the bezoarswere eliminated; no subsequent gastrointestinal events occurred in the following months

Keywords: *Trichobezoar, Trichophagia, children.*

Introduction

A trichobezoar is an unusual condition hair bundles in stomach and small intestine, leading to intestinal obstruction usually affecting younger females [1]. They are related to mental disorders and usually sit in a healthy stomach. This diagnosis must be evoked in front of a chronic digestive symptomatology on a field of trichophagia or in the context of a trapping occlusive syndrome but its discovery may be fortuitous in the context of the assessment of anemia or the palpation of an abdominal mass epigastric.Gastric trichobezoar is a very rare entity. If it is diagnosed early and treated successfully, causes no significant complication. However psychiatric assessment will form an integral form of treatment as recurrences have been described [2]

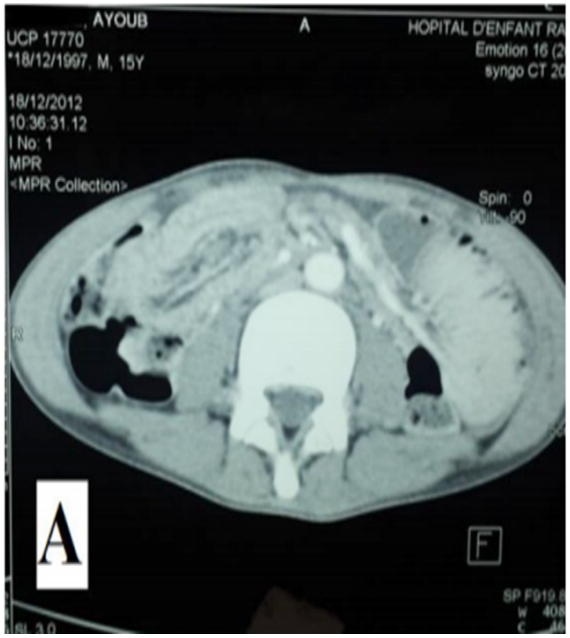
Here, we present Five patient suffering from gastric trichobezoar presenting with different symptoms.

Observations

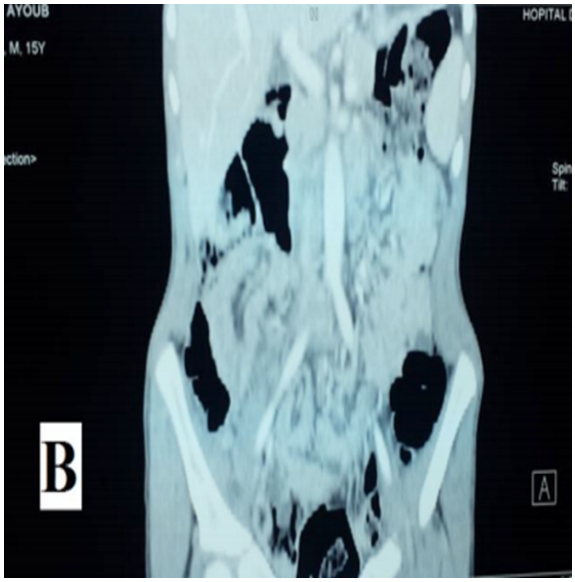
Case N° 1

A healthy fifteen-year-old school boy was referred to Rabat Children's Hospital. He had a two week

history of paroxysmal abdominal pain with food vomiting without diarrhoea or rectorrhagia. On examination the child was well built, no sign of malnutrition was apparent and there was no alopecia. He had sparse short hair**.** The abdomen was distended without palpable mass. Routine blood investigations were within normal limits.An abdominal ultrasound had retained the presence of a minimal effusion supplemented by an abdominal CT injected returned in favour of intestinal intussusception (figure 1). Surgical intervention with a left umbilical transverse laparotomy led to the discovery at the opening multiple trichobezoar attached to a wire (Figure 2) externalized by 3 enterotomy with simple reduction. Her postoperative course was uneventful. After discharge she was referred for a psychiatric follow up.



A: sagittal section



B: coronal section

Fig 1. *A slice of a computed tomography (CT) scan of the abdomen and pelvis of the patient, with IV contrast, demonstrating intussusception.*

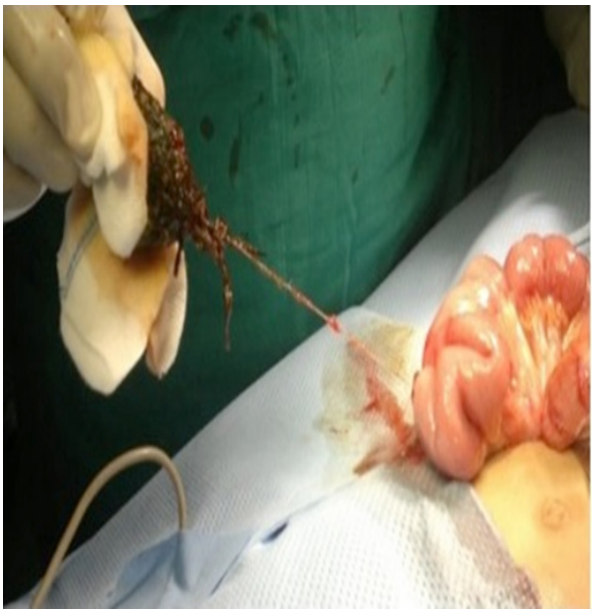


Fig 2. *Enterotomy allowing extraction of the trichobezoar connected by a wire*

Case N°2

A 12-year-old girl presented to our outpatient department with complaints of intermittent food vomiting with chronic constipation and unencrypted weight loss.

On examination of the abdomen a 4 x 10 centimetre mobile, firm and non-tender epigastric mass was palpable.

Abnormal laboratory investigations included low haemoglobin, 9.2 gms/dL.; and serum albumin, 2.6g/dL. The other blood biochemistry indices were normal. Urgent abdominal

computed tomography (CT) with contrast showed a mass into the lumen of the stomach (figure 3).

This mass was extractable by laparotomy. The histological examination described a brownish, hard consistent, 10x7x3.5 cm mass, including hair and food material (figure 4, 5). It confirmed the diagnosis of trichobezoar. From direct interview with parents and the anamnesis, a history of trycophagia emerged. Psychiatric follow-up was arranged.

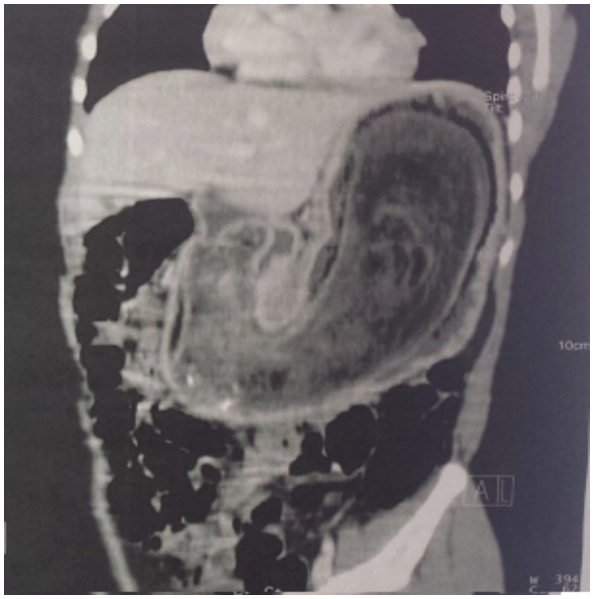


Fig 3. *Abdominal CT scan showing a gastric mass*

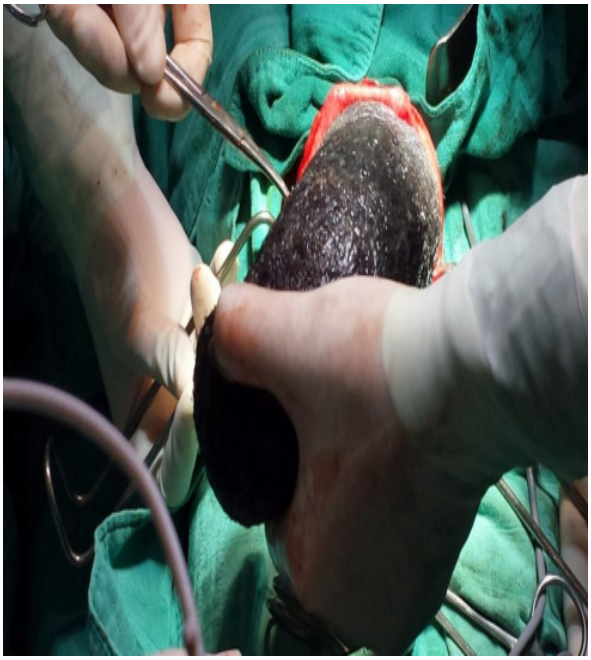


Fig 4. *Intraoperative view of the trichobezoar*

Fig 5. Surgical specimen shows the resected gastric bezoar.

Case N° 3

A 7-year-old female patient came with a history of diffuse abdominal pain, vomiting and constipation. The patient was referred to the paediatric surgical emergencies Department. On examination, the patient has epigastric Mass extend up to the umbilicus, mobile and firm. Other systemic parameters were normal. An abdominal ultra-sound revealed arcuate hyperechoic interface image with posterior shadow cone. A contrast upper gastrointestinal showed heterogeneous mass compatible with tricobezoar (figure 6). Blood tests were normal.

At laparotomy,carried out through a midline incision, the gastrostomy made it possible to extract a trichobezoar of 3 cm long axis. The patientmade a good post-operative recovery. She admitted that she liked eating hair.the patient was referred to a psychiatrist for treatment of trichotillomania and trycophagia.

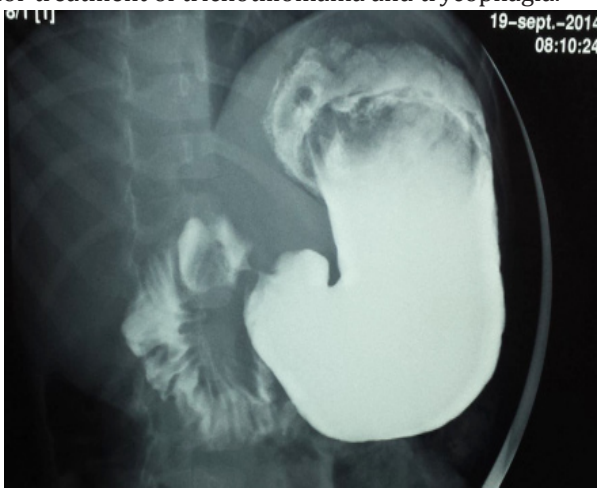


Figure 6: Barium contrast study showing an intragastric trichobezoar

Case N°4

A 6-year-old girl was admitted withan asymptomatic epigastric lump of 3 months' duration and loss of appetite.Her mother mentioned that the she had a history of eating hair. She hadn't taken any treatment for the habits. The patient had normal development and had stable vital signs. There was pallor noted with alopecia involving the frontal part of the head (figure 7). Per abdomen examination revealed a firm, non-mobile 5" x 4" lump in the epigastrium, extending to left hypochondrium.

Laboratory evaluations revealed haemoglobin of 8.7 gm/dL. Other laboratory investigations including serum electrolytes, creatinine and blood urea were within normal limits.

An ultrasound of the abdomen showed an echogenic area in the stomach region completed by contrast upper gastrointestinal thus confirming the diagnosis of trichobezoar.

She was taken up for exploratory laparotomy. The trichobezoar was removed via a gastrostomy (figure 8). The trichobezoar weighed 450 g and was 14 cm long (figure 9). Her postoperative course was uneventful. After discharge she was referred for a psychiatric follow up.

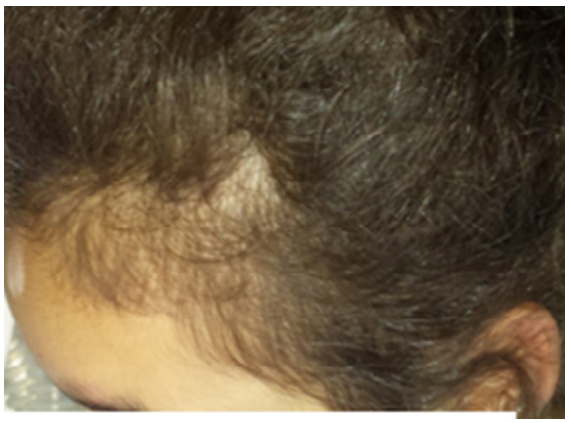


Fig 7. *frontal head alopecia*

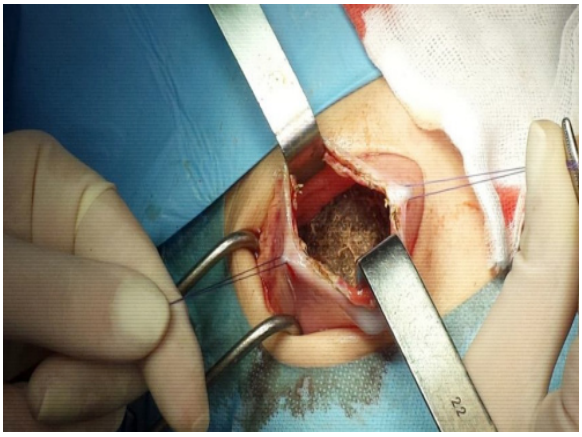


Fig 8. *Gastrostomy and removing the trichobezoar*

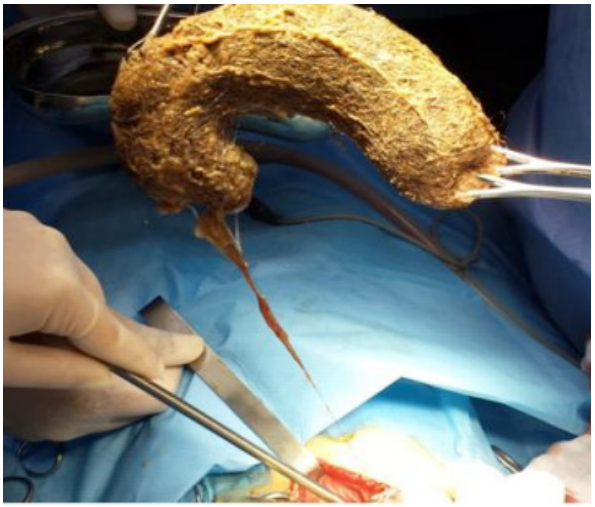


Fig 9. *Trichobezoar extracted*

Case N°5

A 14-year old girl was admitted to the Department of Paediatrics with weight loss (5 kg), anorexia, postprandial vomiting with 5 months' duration and low abundance hematemesis with history of trichotill omania and trichophagia.

Abdominal examination revealed a ballot able epigastric mass extending over the midline.The mass moved with respiration and it was possible to get above it with temporal alopecia.

Plain radiograph of the abdomen showedintragastric mass moulded by air. The diagnostic was confirmed by abdominal ultrasound. Laboratory investigation revealed anaemia (haemoglobin – 9.6 g/dL).

A median umbilical medial laparotomy was performed allowing the extraction of a giant 3 kg trichobezard by gastrostomy (figure 10, 11).

The patient was discharged home 5 days later, having recovered without complications. Psychiatric follow-up was arranged, where she showed improvement in behavior, which is key to prevent recurrence

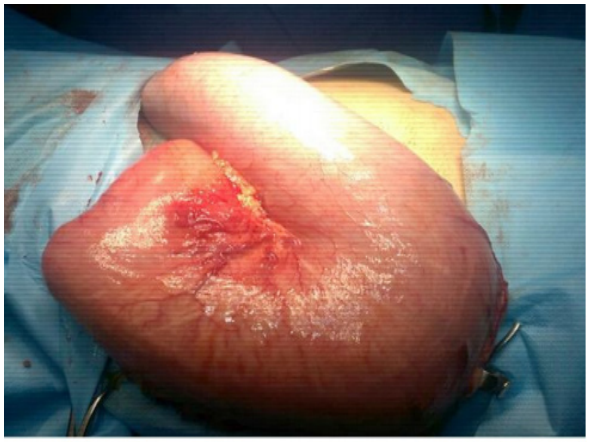


Fig 10. *Intraoperative view of giant trichobezoar*

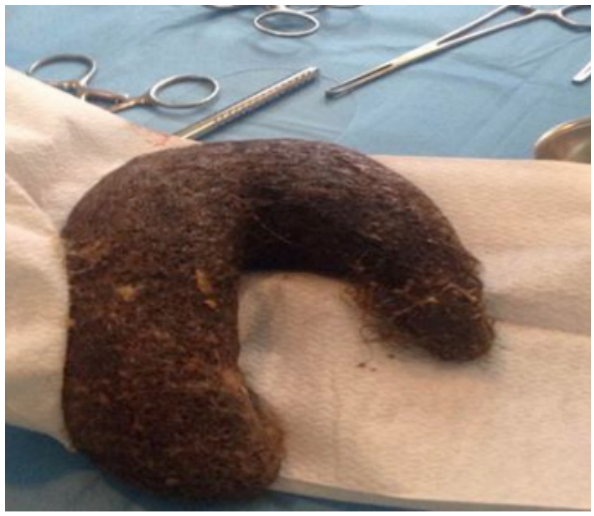


Fig 11. *Stomach-shaped trichobezoar*

Discussion

The word bezoar is derived from the Persian language, which means "protection from the poison." Historically, bezoars were believed to have the power of a universal antidote against any poison [3].

The classification of bezoars depends on their composition:trichobezoar includes hair; phytobezoar, vegetable mattersuch as skin, seeds, and fiber; lactobezoar, undigested milkcurd; and lithobezoar, mud and stones [4].

Trichobezoars are usually associated to underlying psychiatric disorders, such as depression, obsessive-compulsive disorder, body dysmorphic disorder and, particularly, trichotillomania [5, 6]

The age of onset of Trichobezoard is 80% of cases less than 30 years with a frequency peak between 10 and 19 years [7] and another peak between 2 and 6 years. Our patients had an average age of 11 years.

The literature on trichobezoar in children almost exclusively deals with case reports, most of them females, as was the case for as was the case for four of our five patients.

Trichobezoar should be considered as a differential diagnosis in young females who present with non-specific symptoms such as epigastric pain, fatigue, weight loss and epigastric mass.

This increases the risk of severe complications, such as gastric mucosal erosion, ulceration and even perforation of the stomach or the small intestine. In addition, intussusception, obstructive jaundice,

protein-losing enteropathy, pancreatitis and even death have been reported as complications of (unrecognized) trichobezoar in the literature [8].

Various modalities are used for diagnosis of this rare condition. A contrast upper gastrointestinal series often diagnostic of trichobezoars. They are also easily diagnosed on abdominal ultrasonography and or computed tomography scan[1]. However, upper GI endoscopy is an effective diagnostic tool to confirm the presence of a trichobezoar. Endoscopy also helps the clinician to differentiate between a trichobezoar and another foreign body[8].

Surgical removal at laparotomy or laparoscopically is the treatment of choice.Mechanical fragmentation, chemical substances to dissolve small trichobezoars are options apart from surgery or endoscopic removal. [9], Surgery and removal of the long trichochobezoar through gastrostomy is the procedure described as standard of care.

Untreated bezoars have a mortality of 75% and there is a4% mortality. A psychiatric and psychological disorders experthelp is essential and recurrence is likely if the habit is not abandoned.

Conclusion

In conclusion, trichobezoar should be considered in young child 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.

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