

Case Reports

Gastric Trichobezoar with Outlet Obstruction in a Child of 4 Years old - A Rare Occurrence

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Introduction

A bezoar is a ball of swallowed foreign material (usually hair or fibre) that collects in the stomach and fails to pass through the intestine. The risk is greater among the mentally retarded or emotionally disturbed children. Bezoars are commonly seen in female patients (approximately 90%) aged 10- 19 years and only half of the patients have history of trichophagia¹. Trichophagia (eating of hair) and trichotillomania (pulling of hair) are psychiatric disorders which usually precede the formation of trichobezoar².

The patients usually present with anorexia, early satiety, nausea, vomiting, abdominal pain and mass in the abdomen with or without alopecia. There is a high association of gastric ulcers or gastritis in patients with bezoars. So gastrointestinal bleeding may occur leading to iron deficiency anaemia. Rarely bezoars have been associated with a vast array of other gastrointestinal complications. These include perforation, peritonitis, protein losing enteropathy, steatorrhoea, pancreatitis, intussusception, obstructive jaundice and appendicitis^{3,4}. Contiguous extension of a trichobezoar into the small bowel can lead to the 'Rapungel syndrome'^{4,5}. Many bezoars become quiet large; but gastric outlet obstruction is an uncommon presentation. Though eighty percent of trichobezoar occur before the age of 30 years, the peak incidence is found in the second decade. It is very rare below 10 years of age. Moreover gastric outlet obstruction is uncommon. This case is reported because of its rarity in a young child.

Case Report

A four year old girl presented with the complaints of nausea, vomiting and abdominal pain for 2 days. Vomitus was nonbilious and projectile. Pain was epigastric. Initially the pain was mild in nature but

within one day it became severe and agonizing. There was no constipation or urinary complaints. She was afebrile throughout her illness. Her past history revealed that she suffered from mumps 2 months back. She had early satiety and poor appetite for long time. Her birth history was uneventful and developmental milestones were normal. She received all vaccines according to EPI schedule.

On examination she looked toxic, mildly pale, nonicteric. Her scalp had scanty hair with patchy areas of alopecia. Her body weight was 20kg which was normal for her age and sex. On systemic examination, a hard mass was palpable in the left hypochondriac region which was nontender and nonmobile. Other areas of the abdomen was soft and no organomegaly was detected. Other systems did not reveal any abnormality. Provisional diagnosis was gastrointestinal obstruction due to intra-abdominal mass. Differential diagnosis was gastric trichobezoar, malignant tumour, pancreatitis. Her haemoglobin was 10.6 gm/dL. Blood count was normal. Blood film showed features of combined deficiency anaemia. Serum electrolytes and liver function tests were normal. Serum lipase and amylase was done to see any change in favour of pancreatitis following mumps. Alphafetoprotein, LDH was done to exclude abdominal malignancy. All values were normal. Ultrasonography of whole abdomen showed distended stomach. CT scan of abdomen showed distended stomach and a heterogenous dense structure noted within the lumen of the stomach and horizontal part of the duodenum causing narrowing of the lumen of the duodenum (Fig.-1).

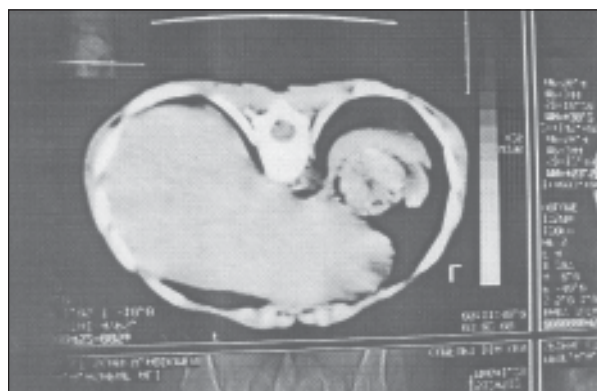


Fig.-1: CT scan shows trichobezoar in the stomach

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After this identification of structure having heterogenous density within the stomach in CT scan, further inquiry was made to the parents regarding pica; then mother mentioned her abnormal feeding behavior. According to her mother, the child used to pull hair of her own as well as of her parents since 9-10th months of age. Sometimes she used to eat fallen hair from the place wherever it was available. Now-a-days she does not seem to have this habit but often she is found to pull off the hair from the toys and swallow it. Endoscopy of OGD showed foreign body (bezoar) in the stomach occupying almost half of the stomach (Fig.-2). Removal was attempted using a polypectomy snare but the grasper could not hold the mass due to its density and hardness. Only a part of it was taken out and diagnosis of trichobezoar was made.

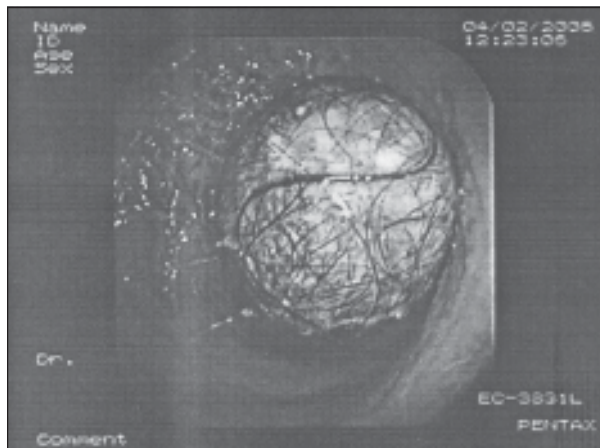


Fig.- 2: Endoscope showing foreign body (bezoar) in the stomach

The patient was managed conservatively initially and later on surgical intervention was done. Exploratory laparotomy was done through an upper mid transverse incision. Stomach was full with a smooth solid stomach shaped mass freely moved when pressed from the antrum. Anterior longitudinal gastrotomy was done. The stomach-shaped black hard block of trichobezoar was identified and retrieved (Fig.-3). The interior of the stomach was checked. The gastric mucosa was red, oedematous and multiple superficial ulcers were noted along the lesser curvature. There was no tail like extension distal to the duodenum. The whole length of the small gut was examined for any dislodged trichobezoar but revealed nothing abnormal. Gastrotomy was closed in two layers. Laparotomy wound was closed in layers. She made good postoperative recovery. Within 5 days of

treatment her appetite improved and she was discharged from the hospital with the advice for the follow up visit. The specimen was preserved in a plastic jar (Fig.-4). We encouraged parents for seeking psychiatric evaluation of their child and to receive counselling regarding trichotillomania and trichophagia.

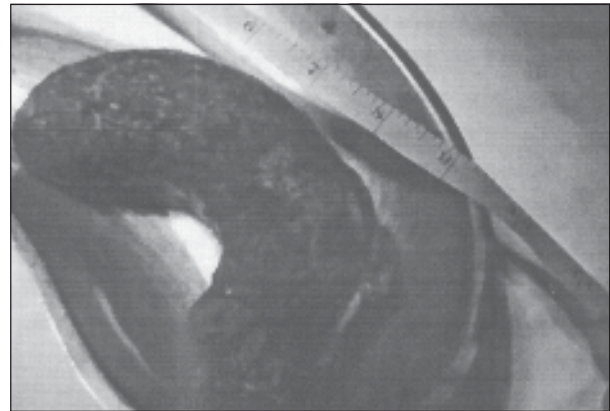


Fig.-3: Stomach shaped black hard block identified after surgery

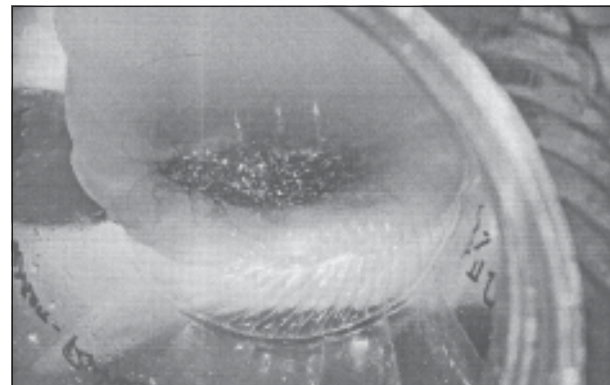


Fig.-4: Hair block presented in jar

Discussion

A bezoar is an aggregation within the gut of indigestible foreign matter which has been repeatedly ingested over a period of time.

The most commonly encountered bezoar is trichobezoar. It is exclusively seen in female patients, often associated with psychiatric problems. The first case of bezoar was reported by Bendamant in 1779 and the first surgical removal was accomplished by Schouborn in 1883.

The exact origin of the term appears to be questionable. However its derivation has been attributed by most writers to the Arabian word 'bezehr' or to the Persian

word 'padzehr' both of which denote counter poison or antidote⁶.

Bezoars are classified according to their composition, which may include hair (trichobezoar), vegetable matter like skin, seeds and fibre, (phytobezoar), undigested milk curd (lactobezoar), mud, stones (lithobezoar)⁷. Out of all these types, trichobezoar is the commonest variety of bezoar.

Trichobezoar may be formed by the hair of the patient, other human or animal, carpet fibre, the wool of clothes or blanket, the hair of dolls and other toys.

It is postulated that hair strands are too slippery to be propelled but these are initially retained in the mucosal crypts of the stomach and become enmeshed over a period to form a hair ball. The interstices of which get filled by a variety of vegetable materials. The stomach is not able to push these hairs out of its lumen because the friction surface of bezoar is insufficient for propulsion by peristalsis. Rarely however these bezoars can get broken and pass into the intestine^{8,9}. Trichobezoars are usually black for denaturation of proteins by acid and glistening from retained mucus.

The diagnosis trichotillomania, a psychosomatic entity in which there is an irresistible desire to pull out the hair from the scalp, eye lashes, eye brows and other parts of the body, is made after taking a thorough history, noting the clinical features and evaluating a hair root examination, where telogen hair is almost completely lacking¹⁰. This condition eludes diagnosis unless sought for particularly in the paediatric age group¹¹.

The effective treatment of trichobezoar lies not only in its surgical removal but also in the cognitive behavior therapy and pharmacotherapy with selective serotonin reuptake inhibitors¹⁰ and domipramine. Intensive psychiatric follow up is mandatory for preventing relapse².

Conclusion

The diagnosis of trichobezoar in an apparently healthy child requires a high index of suspicion as it can present with nonspecific symptomatology. It should be included in the differential diagnosis of abdominal pain.

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