A rare case report of mass per abdomen in a young girl

K. Surender[1], Shyam Prasad[2], Arelly Jyostna[3,*], V. Sangeetha[4]

[1,2]Associate Professor, [3]Post Graduate, [4]Senior Resident, Dept. of Paediatrics, Kakatiya Medical College, Mahatma Gandhi Memorial Hospital, Warangal, Telangana, India

***Correspondence Author:**
Email: dr.jyostnaarelly@gmail.com

Abstract

Introduction: Trichobezoar is a rare condition due to accumulation of hair within gastrointestinal tract with varied presentation from asymptomatic to intestinal obstruction, perforation.
Case characteristics: 10 year old girl presenting with mass per abdomen.
Outcome: Large Gastric Trichobezoar confirmed on upper gastrointestinal endoscopy, removed by laparotomy. Postoperative period is uneventful.
Message: Trichobezoar must be considered as one of the differential diagnosis in young girls presenting with mass per abdomen or with nonspecific abdominal complaints.

Keywords: Mass per abdomen, Trichobezoar.

Introduction

A bezoar is due to chronic ingestion of various materials that gets collected within gastrointestinal tract. They are retained concretions of undigested material that gets accumulated in stomach, may get dislodged to distal parts of gastrointestinal tract. Trichobezoars are usually of swallowed hair, which in most cases its patient's own hair. Patient with trichobezoar often remain asymptomatic for many years and remain so until it increases in size to cause obstruction. Most patients with trichobezoar suffer from psychiatric disorder trichotillomania (pulling of one's own hair) and trichophagia (eating of hair). It has been estimated that only 1% of patients with trichophagia develop trichobezoar. We present such a case of patient with trichophagia developing into trichobezoar.

Case Report

A 10 year old female presented to emergency room with complaints of multiple episodes of seizures. Child is a known case of Epilepsy since 1 year of age and is using anti epileptics (Tab. Tegrital) since then. Child was diagnosed to have TB lymphadenitis 1 year ago and used anti tuberculosis drugs for 9 months.

On general examination: Child conscious, afebrile, pallor and alopecia present, with weight-20kg, which is less than 3rd percentile, height-120cm,which is between -2 to -3SD, stable vitals.

On systemic examination: CNS, CVS, respiratory systems nothing abnormal detected. Per abdomen showed mass of 15cmx10cm, in left hypochondrium extending to epigastrium and above umbilicus, firm, mobile both horizontally and vertically, with smooth surface, well defined margins, not associated with local rise of temperature, non-tender, no guarding or rigidity, surroundings normal.

Fig. 1: Firm mass palpated per abdomen on clinical examination extending to epigastrium measuring 15cmx10cm

Mass per abdomen was suspected as splenomegaly clinically and ultrasonography showed no splenomegaly, hyperechoic curvilinear band with posterior shadowing. The abdominal CT showed a gastric dilatation with filling defect extending from fundus, body and antrum-suggestive of trichobezoar. Barium meal follow through revealed a filling effect in stomach, upper gastrointestinal endoscopy confirmed hair in the stomach-gastric trichobezoar extending from fundus, body till antrum.

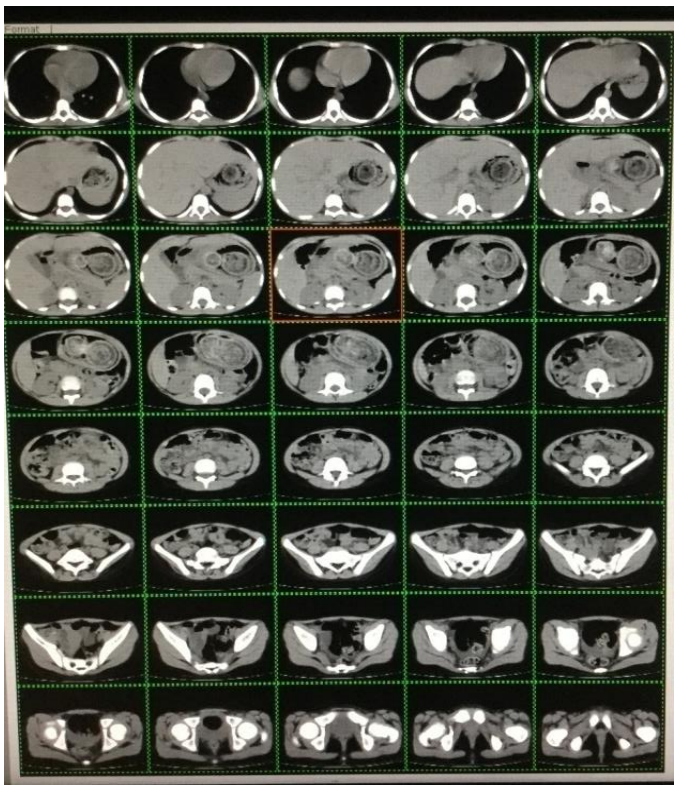

Fig. 2: CT abdomen showing intra luminal soft tissue density filling defect with dilatation and few interspaced air density noted in the stomach extending from lower esophageal sphincter to the pyloric antrum, but not extending into the duodenum.

Fig. 3: Barium meal study showing well defined organized filling defect noted in the dependent area of the stomach, and the contrast is well delineated from the stomach wall.

Fig. 4: On endoscopy well organized clumped hair/trichobezoar extending from lower esophageal sphincter to pyloric antrum and not extending to the duodenum.

Fig. 5: Gastric trichobezoar removed by laparotomy

Child retrospectively revealed history of plucking her own hair and ingestion of her own hair for about a year. Parents are unaware of the condition of the child. Psychiatric evaluation revealed drug induced impulsivity due to Tegrital, Trichotillomania and Trichophagia. Councelling done for the child and parents.

Child underwent laparotomy, gastric trichobezoar was successfully removed with uneventful postoperative period.

Discussion

A bezoar is due to chronic ingestion of undigested matter that gets accumulated within the stomach and may subsequently gets dislodged to distal parts of the Gastrointestinal tract. The first report of a trichobezoar was in 18th century, when Baudamant described a 16 year old boy with this condition.[1] 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]

Bezoars are divided into three types. Phytobezoar, due to vegetable or fruit fibres, lactobezoar –due to milk curds and trichobezoar –due to human hair. The most common type of bezoar is gastric trichobezoar which is found in the stomach.[4] Trichobezoars are usually of swallowed hair, forms when hair strands, escaping gastric peristaltic propulsion are enmeshed into a ball. As this ball gets too large to leave the stomach, gastric atony may result. The mass is usually black because of the acidic nature of the stomach that denatures the proteins. Patients often have a foul smelling breath odour because of the decomposition and fermentation of fats.[4]

Patients with trichobezoar often remain asymptomatic for many years and remain so until it increases in size and causes obstruction. The clinical features depend on the part of the gastrointestinal tract is involved.[5] Severe halitosis and patchy alopecia provide clues on physical examination. Complications by a large eroding or obstructing bezoar additionally include gastric ulceration, obstructive jaundice, acute pancreatitis and gastric emphysema.[6] Other malabsorption related complications include protein-losing enteropathy, iron deficiency, and megaloblastic anemia.[7] Bezoar diagnosis is easily missed in the mentally retarded young patients. Most patients with trichobezoar suffer from psychiatric disorders including trichotillomania (pulling out of their own hair) and trichophagia (eating of hair). It has been estimated that only 1% of patients with trichophagia develop a trichobezoar. Growth parameters should be measured to evaluate any malnutrition or stunted growth.[8]

Radiologic investigations include abdominal radiography to reveal any distended gastric antrum, with associated dilated small bowel loop (Rapunzel Syndrome), and chest radiography to reveal any air under the diaphragm signifying intestinal perforation. Ultrasound abdomen and computerized tomography can be performed to evaluate the nature, size, and position of the mass.[9] Endoscopy is the diagnostic technique of choice for gastric and esophageal bezoars and has therapeutic potentials. Endoscopy can help a surgeon distinguish between a trichobezoar and another foreign body that can be broken apart and removed endoscopically.[10]

The advent of minimally invasive surgical techniques has increased the number of laparoscopic attempts to remove trichobezoars, but these procedures are often difficult. Advantages of laparoscopic removal are an improved cosmetic appearance, fewer postoperative complications, and reduced hospital stay. Laparoscopic removal of an entire bezoar is difficult without spillage of hairs into the peritoneal cavity.[11] Open surgery is the most common technique used for trichobezoar removal. Some physicians consider conventional laparotomy to be the treatment of choice. Surgical removal is accomplished by gastrotomy or enterotomy. After the trichobezoar has been removed by laparotomy, it is essential to explore the remainder of the small intestine and stomach to look for any retained bezoars.[12]

Bezoars have a tendency to recur in up to 14% of patients.[13] Treatment of underlying predisposing condition, increased water intake, diet alteration (e.g. avoid persimmons and stringy vegetables) in case of phytobezoars, to chew food carefully, psychiatric evaluation for trichobezoars and counseling are part of treatment to prevent recurrence.[1]

Conclusion

Trichobezoar should be considered in young females presenting with mass per abdomen and non-specific abdominal complaints.

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