

## Case Report

### A CASE OF CHILDHOOD UPPER GIT OBSTRUCTION: AN UNUSUAL CAUSE

Sheikh Sayidul Haque<sup>1</sup>, Amar Kumar Saha<sup>2</sup>, Sahadeb Kumar Das<sup>3</sup>, Monwar Hossain<sup>4</sup>

#### Abstract

Bezoars are retained concretions of undigested foreign material that accumulate and coalesce within the gastrointestinal tract, commonly in the stomach. The occurrence of bezoars formation is well documented in human, but the diagnosis, management and treatment remains a difficult task for the patient and health care professionals. The differential diagnosis of upper GIT obstruction in children includes both common and rare pathologies. Within these lists different types of bezoars causing upper GIT obstruction have been reported in literature and different methods of management have been described. In this article we have reported that a 6 years old boy presented to us with features of duodenal obstruction. The clinical and radiological evaluation was suggestive of duodenal obstruction. Finally, laparotomy was done and a phytobezoar found in the third part of duodenum which was disimpacted and removed by gastrotomy. The child had an uneventful post operative course and discharged on the seventh post operative day in a stable condition.

#### Introduction

Chewing on or eating hair or any indigestible materials can lead to the formation of bezoar<sup>1</sup>. Out of all bezoars, phytobezoars are common type of bezoars today. They are composed of food materials indigestible by humans including cellulose, hemicellulose, lignin and fruits tannin<sup>2</sup>. In general, most upper GIT foreign bodies are related to food impaction, with meat being the most frequent culprit<sup>3</sup>. Bezoars occur most frequently in patients with impaired GI motility or a history of gastric surgery<sup>4</sup>. Clinical assessment of upper GIT obstruction in children poses a challenge to both the pediatricians and the surgeons<sup>5</sup>. Here we present a rare case of upper GIT obstruction in a child of 6 years due to a phytobezoar.

#### Case Report

A 6 years old boy was admitted in a private hospital in Satkhira on 24<sup>th</sup> May 2012 with history of recurrent vomiting for the last 3 weeks and upper abdominal discomfort for same duration. Vomiting occurred several times a day especially after meal, which was projectile, copious in amount, containing the food materials immediately taken before. Relative constipation was present. His appetite was intact but the child was afraid of taking food. He had no other gastrointestinal disorders and his mental status was normal. The boy was accustomed to normal Bengali food habit.

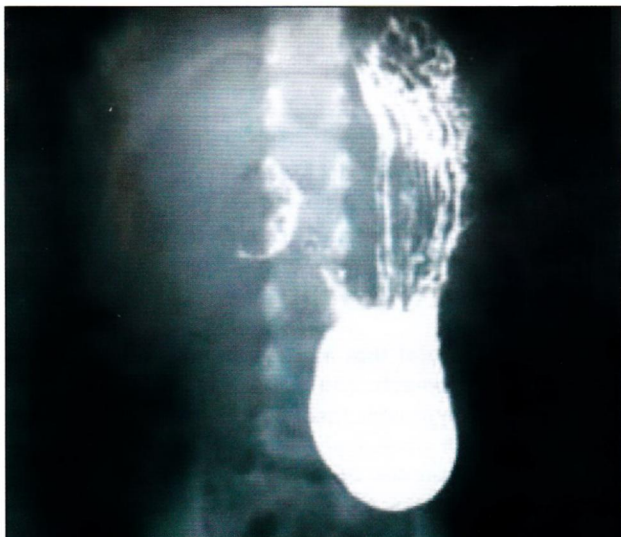
On examination the boy was ill-looking, moderately dehydrated, and mildly anaemic. His vital parameters were stable. Abdomen was not distended but visible peristalsis in the epigastrium was present which moved from left hypochondrium towards the right across the midline. No other abnormality detected on abdominal examination. Other than clinical evaluation, the patient was investigated by Ba-meal X-ray of upper GIT and

1. Associate Prof of Surgery KMC
2. Assistant Prof of Paediatric Surgery KMC
3. IMOKMCH
4. Consultant Sadar Hosp Satkhira

**Correspondence to:** Dr Sheikh Sayidul Haque, Associate Prof of Surgery, Khulna Medical College, Khulna, E-mail : drhaque27@yahoo.com

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ultrasound. Ba-meal study of upper GIT revealed distended stomach with relative dilatation of proximal duodenum. USG of upper abdomen revealed normal study. Findings of other routine investigations were unremarkable. Due to lack of facilities, endoscopy and laparoscopy were not done.



**Fig.-1:** Barium meal x-ray of upper GIT showing gastric outlet obstruction.



**Fig-2:** Phytobezoar after removal.

Based on clinical and radiological evaluation, the boy was diagnosed as a case of upper GIT obstruction. Keeping in mind the differential diagnosis, an exploratory laparotomy was performed. Per operative findings showed –an intraluminal impacted mass in the third part of duodenum which was too hard for fragmentation. It was dis impacted and pushed back in the stomach and removed by gastrotomy. The removed mass showed aggregation of undigested fibers of different food and finally diagnosed that

phytobezoar is the culprit causing the upper GIT obstruction in this boy. Postoperative course of the patient was uneventful. The patient was allowed liquid orally on third postoperative day and soft diet onwards. He was discharged on 7<sup>th</sup> postoperative day. The patient had no complaints regarding upper GIT disorders in the follow-up period.

### Discussion

A bezoar is an aggregation of indigestible foreign materials within the gut which has been repeatedly ingested over a period of time<sup>1</sup>. Depending upon the materials contained within, they may be trichobezoar, phytobezoar, lactobezoar or others. Phytobezoars are more common, while trichobezoars are rare. Common predisposing factors are previous gastric surgery, psychiatric illness, coeliac disease and metabolic disorders such as uremia<sup>2</sup>.

Recurrent upper abdominal pain or acute small bowel obstruction is the usual presentation of gastrointestinal bezoars<sup>3</sup>. The more severe manifestation of bezoars is complete gastric outlet obstruction or duodenal obstruction, similar to our case. A history of foreign body ingestion, especially in children and mentally retarded patient is important<sup>4</sup>. Rarely bezoars can cause serious problems due to complications like perforation<sup>5</sup>.

Computed tomography (CT) best describes its size, configuration and location and differentiates bezoars from neoplasm. Oral contrast agent circumscribes the mass and may fill the minute gaps on the surface of the lesions. Endoscope and radiological studies, including ultrasound, computed tomography scan and gastrografen swallow, may help make the diagnosis.

A range of methods have been used in the management of bezoars. These include endoscopy, surgery, combined laparoscopy and surgery and the use of emulsifying agents. In uncomplicated cases, endoscopy or surgical removal can be appropriate<sup>6</sup>. For our patient we have done laparotomy and removed the phytobezoar by gastrotomy. A large phytobezoar is traditionally removed by laparotomy. With the advent of laparoscopic surgery, it became visible to retrieve foreign body from stomach without the necessity for a laparotomy<sup>7</sup>. Endoscopic removal is usually not successful and results only in the retrieval of a small portion of gastric bezoars<sup>8</sup>. However Wei et al have reported that endoscopic retrieval is possible and open surgical or laparoscopic gastrotomy may be tried only

if this fails. Many endoscopic techniques have been described for breaking up the bezoars. These include use of instruments such as normal biopsy forceps, polypectomy snares, and foreign body forceps, endoscopic injection with enzymes, water-jet spray and lithotripter<sup>9</sup>. Zamir et al reported a large series of patients between 1992 and 2002<sup>10</sup> in which 18 patients had bezoars, 16 had phytobezoars two had trichobezoars. All patients but one was treated surgically. Still then laparoscopic approach now a day can be the treatment of choice for removal of the GIT bezoars where facilities are available.

### Conclusion

Phytobezoars as commonest of all bezoars should be included in differential diagnosis of upper GIT obstruction in children. Early surgical assessment is important in the management of this condition.

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