ORIGINAL RESEARCH PAPER

Paediatric Surgery

KEY WORDS: Gastric obstruction, Bezoar migration, Peritonitis

RAPID DETERIORATION A FEW HOURS PRIOR TO ELECTIVE SURGERY FOR TRICHOBEZOAR – A MAJOR COMPLICATION AND ITS MANAGEMENT

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ABSTRACT

Background: Trichobezoar refers to a dense mass of hair usually found in the stomach, with its further extension into the small intestine in the case of Rapunzel syndrome. It is a rare condition that is often seen in young females with psychiatric illness, and managed by surgical extraction in most cases. **Clinical Description:** Here we report a case in which a teenage girl presented with abdominal pain persisting for 2 weeks. Upon examination, a vague epigastric mass was identified. To diagnose the exact condition, relevant imaging studies were conducted. The CT scan revealed a gastric trichobezoar. Upper GI endoscopy confirmed the presence of a large trichobezoar in the stomach, with the distal end extending beyond the pylorus, making endoscopic retrieval impossible. **Management & Outcome:** Elective surgery was scheduled the day after trichobezoar diagnosis. In the early hours preceding the planned procedure, the patient exhibited peritonitic features, necessitating emergency surgery. We found that the trichobezoar had completely migrated to the jejunum, resulting in a perforation just proximal to the impacted site. To address this complication, a double resection anastomosis was performed, after which the patient experienced a smooth recovery. A follow up after 3 months showed no worrying symptoms from the psychiatric and surgical perspectives. **Conclusion:** This case represents a rare scenario in which the trichobezoar migrated within a short time, causing perforation. Such a possibility must be routinely considered as part of trichobezoar management, and emergency surgery should be planned especially when the distal end of the trichobezoar cannot be visualized by endoscopy.

INTRODUCTION

Bezoars represent any form of indigestible mass found in the gastrointestinal tract. When that mass is hair, it is referred to as a trichobezoar. The source of this hair is often the patient's own, especially the ones with an urge to pull their hair (trichotillomania) and ingest it (trichophagia). Although trichobezoars are rare, they present unique challenges in children, particularly those with psychiatric comorbidities, with or without developmental delay. Trichobezoars are also known to have a gastric component with a small bowel extension (Rapunzel syndrome). Suspecting trichobezoars becomes crucial in individuals experiencing abdominal pain, given the higher complication rate associated with undiagnosed cases. Timely diagnosis significantly enhances the likelihood of a favourable outcome, as nearly all individuals, when identified early, recover from the physical dangers posed by trichobezoars. The primary treatment modality remains surgery, although alternative approaches such as laparoscopic removal and lithotripsy have been reported (1,2). With psychiatric follow-up, an overall complete recovery is achieved in most of the individuals (3).

In this report, we present a distinctive case of trichobezoar in a teenage girl, wherein the bezoar migrated from the stomach to the jejunum, causing jejunal perforation within a short timeframe during her hospital stay. To the best of our knowledge, this represents the first documented case of a gastric trichobezoar migrating en masse and precipitating an emergency within a single day. Therefore, clinicians should incorporate the possibility of rapid migration into their diagnostic considerations when dealing with trichobezoar cases.

Clinical Description:

A girl in her early teens weighing 37 kg, presented with a two-week history of intermittent abdominal pain, accompanied by loss of appetite, constipation, and occasional non-bilious vomiting. Despite being developmentally appropriate, she appeared withdrawn. Vital signs were well within normal limits. Upon abdominal examination, a soft to firm mass measuring approximately 10 x 7 cm was identified in the epigastrium, with no associated tenderness or guarding.

Management And Outcome:

The presence of the epigastric mass prompted us to consider potential diagnoses such as a stomach tumour, a lymph nodal mass, or a loaded colon, given the associated history of chronic constipation. Blood investigations were normal. Plain X-ray of the abdomen showed a loaded colon, while ultrasound findings were reported as normal. Contrast-enhanced computed tomography (CECT) showed a gastric trichobezoar measuring 12x9cm, ruling out the other diagnostic possibilities. Upper gastrointestinal (GI) endoscopy was conducted for further confirmation of trichobezoar and evaluate a possibility for extraction. This examination confirmed the presence of a large trichobezoar [Figure 1] with the distal end extending beyond the pylorus, ruling out endoscopic retrieval.

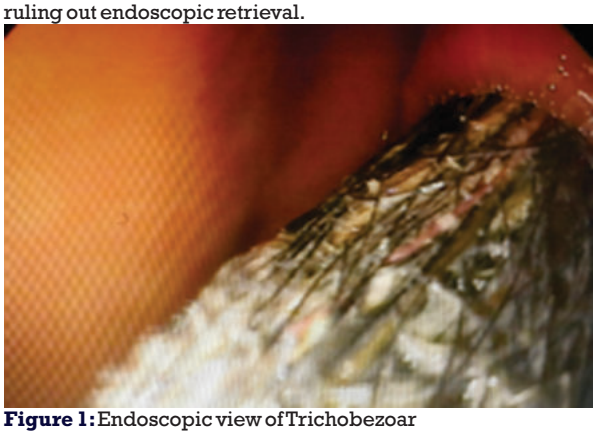

Figure 1: Endoscopic view of Trichobezoar

The patient was scheduled for laparoscopic extraction the following day. A few hours before the scheduled procedure, she reported intense abdominal pain, accompanied by tachycardia (pulse rate of 160/min), tachypnea, and evident signs of peritonism. As a result,, an emergency laparotomy was performed, revealing a locally contained small bowel perforation [Figure 2]. This perforation was approximately 30 centimeters proximal to the segment of the jejunum, which was tensely distended with a large foreign body and exhibited pressure necrosis in the wall [Figure 2].

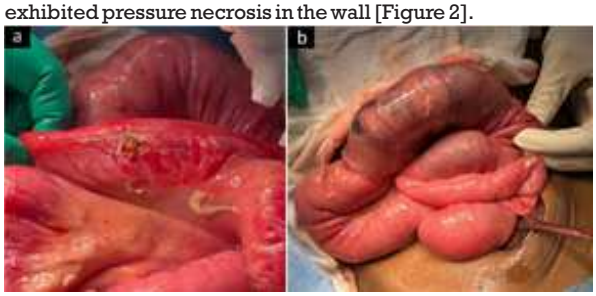

Figure 2: (a) Site of jejunal perforation (b) Pressure necrosis of jejunal wall

A longitudinal enterotomy was made to extract the trichobezoar [Figure 3]. Due to non-viability of the impacted segment, a resection anastomosis was carried out. The perforation, situated close to the mesenteric border with an edematous edge, necessitated a separate resection anastomosis.

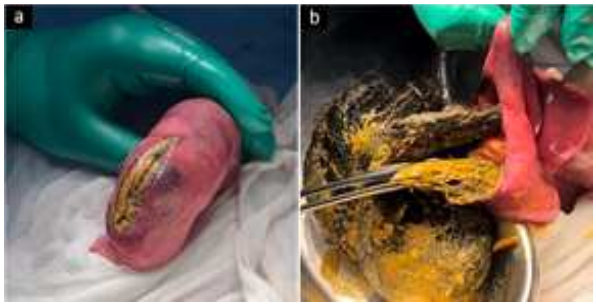

Figure 3: (a) Longitudinal excision for extraction (b) Extraction of Trichobezoar

The patient recovered well and resumed a normal diet by the 5th postoperative day, leading to her discharge on day 7. Following the diagnosis, a re-evaluation of the medical history was conducted. The mother reported observing the daughter occasionally holding her scalp hair in her mouth. Subsequently, psychiatric evaluation and counselling were initiated. At the 3-month follow-up, positive progress was observed.

DISCUSSION

The diagnostic challenge with trichobezoar is its very suspicion as the commonly reported initial symptoms such as abdominal pain, vomiting, nausea and constipation are not unique to this rare disease. It is further complicated by the fact that, sometimes, the history of hair ingestion is unclear with no obvious signs of alopecia (4). As a result, diagnosis is often delayed with infrequent consideration even in differential diagnosis of abdominal pain or mass. Hence, the presence of a palpable upper abdominal mass without systemic signs should still raise suspicion of a gastric trichobezoar, as we have demonstrated in the case study.

Of the diagnostic investigations used, plain X-ray has the disadvantage that the air entrapped in the trichobezoar can be mistaken as faeces. Ultrasound might be a better choice to delineate a solid intraluminal mass in the presence of gastric fluid although faeces or any other calcified mass can produce a similar profile as a trichobezoar (5). While CT scans have higher accuracy, sometimes trichobezoars are missed due to the non-radiopaque nature of hair. Endoscopy is often the choice for unambiguous confirmation and has also been used successfully for retrieval of gastric trichobezoars (6). An important takeaway from this study is that the non-visualization of the distal end of a gastric trichobezoar during endoscopy should serve as an important cue to contemplate emergency surgery. Thus, employing endoscopy for diagnosis has an added advantage to indicate the urgency of surgical intervention.

In the presented case, the absence of local signs and the observation of a capacious stomach around the trichobezoar during endoscopy led us to the planning of elective surgery the day after diagnosis. However, the unexpected migration of the trichobezoar in a matter of hours precipitated an emergency. Therefore, this case highlights a key point that the migratory potential of a gastric trichobezoar within a short timeframe, and a possible perforation of the jejunum should be routinely considered for efficient trichobezoar management.

Finally, although laparoscopy is an attractive option, its effectiveness is only 75%, with a risk of spillage, compared to the 100% success rate in open extraction. Additionally, open extraction provides a more comprehensive examination of the entire gastrointestinal tract with lower complication rates.

CONCLUSIONS

Considering the unanticipated migration of the trichobezoar in a short time frame post diagnosis, our management of this case highlights the importance of early surgery to prevent small bowel-related complications, reducing the need for resectional surgery and minimizing associated morbidity.

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