

Gastric Trichobezoar, Case Presentations

Harjit S. Chaal, Ateeq Muneera, Mohana Prakash

Hospital Tengku Ampuan Afzan, Pahang, Malaysia

Email: harjitchaalsingh@hotmail.com

How to cite this paper: Chaal, H.S., Muneera, A. and Prakash, M. (2022) Gastric Trichobezoar, Case Presentations. *Case Reports in Clinical Medicine*, 11, 227-233. <https://doi.org/10.4236/crcm.2022.116034>

Received: January 14, 2022

Accepted: June 19, 2022

Published: June 22, 2022

Copyright © 2022 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Trichobezoars are accumulations of hair casts in the stomach which is associated with trichophagia. The continuous ingestion causes mass of undigested material within the gastrointestinal, accumulating between the mucosal folds of stomach. Trichotillomania, is a mental disorder, described when someone cannot resist the urge to pull their hair from the scalp, eyebrows or eyelashes seen generally by teenagers or adolescents. A person with trichotillomania may experience repetitive pulling of hair, often without awareness, associated with anxiety and a sense of relief after pulling out hair. Consumed hair strands are beyond the pylorus into the small bowel identified as Rapunzel syndrome. Two cases of trichobezoars were encountered in our centre. They presented with nonspecific abdominal pain and abdominal mass. After investigations, with clinical correlation they were subjected to surgery, an open gastrotomy and complete removal of the trichobezoars. After surgery, the aim is to prevent recurrence by tackling the underlying cause of trichophagia which is commonly associated with trichotillomania. This case report series discusses about the management of trichobezoars.

Keywords

Trichobezoar, Trichophagia, Trichotillomania, Rapunzel Syndrome

1. Introduction

Undigested material within the gastrointestinal tract is called bezoar while trichobezoar develops when consumed hair forms a hairball within the stomach. 95% of cases reported occurred in females and 72% were below 15 years of age. Symptoms may be misleading as it is nonspecific at early stage. Several manifestations of trichobezoars have been presented as intussusceptions [1] [2], pancreatitis [1] and bile duct dilatation [1]. Rapunzel syndrome requires a gastrotomy for removal and no medication has been developed to digest or fragmentate the bezoar. Endoscopic removal of the hairball would be difficult and only

successful in small bezoars [2]. In this paper we present two case reports in paediatric age group presented with abdominal mass which was discovered to be trichobezoars. From the clinical findings and the radiographic imaging done, it was unlikely the bezoars to be removed endoscopically as the bezoars were immense. Laparotomy and gastrotomy for removal of the trichobezoar was performed. After the surgery, during the recovery period, the patient was referred to the psychiatrist. From surgical point, the treatment goal is gastrotomy and removal of the trichobezoar. Child needs a psychiatric follow up to tackle the underlying mental disorder hence needing psychotherapeutic sessions adjunct with medications that would help to overcome the hair pulling impulse disorder.

2. Case Series Report

Case 1. 7 years old, girl, Malay ethnicity presented to us with nonspecific abdominal pain mainly in epigastrium region. She also complained of early satiety. Otherwise denies any odynophagia or dysphagia. No altered bowel habit or family history of malignancy. Upon further history child has habit of eating her own hair since the age of 1 year old. An examination revealed child was not septic looking, her hydration status was fair. Her abdomen was soft and not distended. A large, firm, mobile mass was felt at the epigastrium. Percussion over the mass revealed dullness. Abdominal X ray (**Figure 1**) showed a radiopaque mass within the stomach. Hence, proceeded with an ultrasound abdomen (**Figure 2**) showed an echogenic mass with intense acoustic shadow obscuring posterior structures of the stomach region measuring approximately 6.1 cm in length. The duodenum adjacent to the mass appears not dilated. After the imaging, diagnosis of trichobezoar in the stomach made and an operative procedure (open gastrotomy) removal

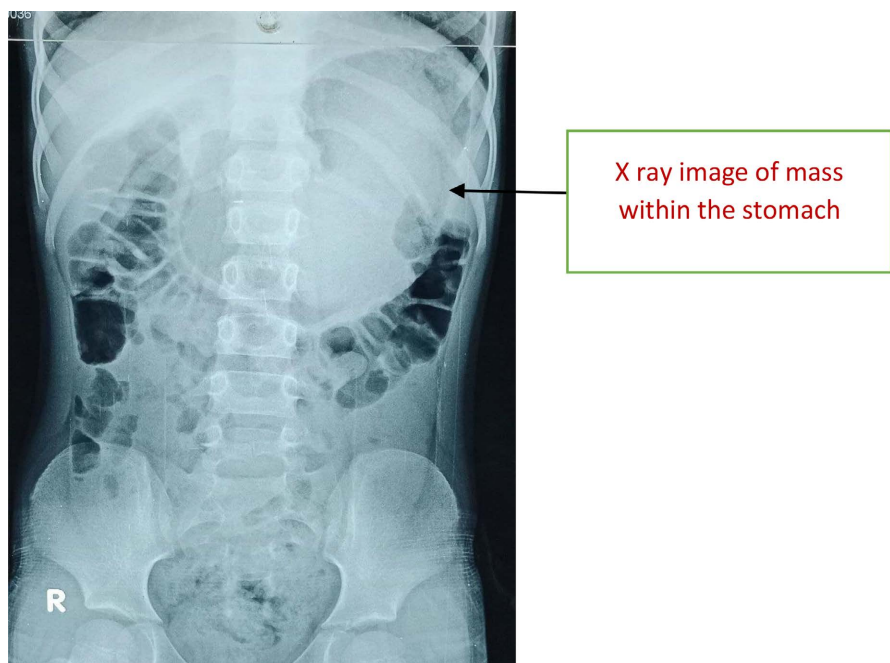


Figure 1. Abdominal X-ray showing a radiopaque mass in stomach.

of the trichobezoar (**Figure 3**). Gastric casting bezoar removed as shown in **Figure 4**. Intraoperative the stomach mucosa was examined and showed no evidence of erosions or ulcerations. After the surgery, she was allowed on fluid diet and gradually escalated to soft diet and finally normal diet. To avoid recurrence she was also referred to psychiatric department. Parents were emphasized that a psychiatrist's visit and regular check would be important to avoid recurrence.



Figure 2. Ultrasound demonstrating an echo enhancing mass.

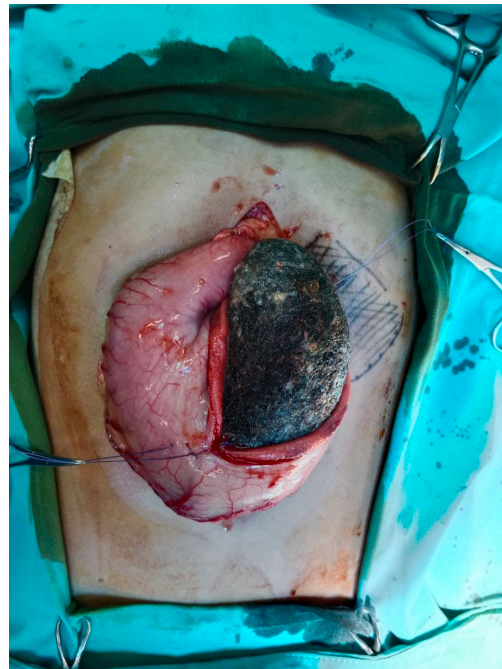


Figure 3. Vertical incision gastrostomy revealing a trichobezoar.



Figure 4. Gastric cast trichobezoar removed via gastrotomy.



Figure 5. Vertical incision gastrotomy to deliver the huge trichobezoar.

Case 2. A 10 years old girl presented with 4 days history of abdominal pain and vomiting with blood. She appears shaven, failure to thrive with boy-like short hair. There was a palpable mass at the epigastric aspect of the stomach. USG abdomen was unable to appreciate any mass, however computed Tomography (CT) abdomen showed a mottled gas patterned intragastric mass with linear calcification within. We proceed with laparotomy, vertical incision gastrotomy to deliver the huge trichobezoar (**Figure 5**). Incidental findings of worm ball at the jejunum were evacuated via a jejunal enterostomy 30 cm from DJ junction (**Figure 6**). A



Figure 6. Incidental findings of worm ball at the jejunum were evacuated via a jejunal enterostomy 30 cm from duodenojejunal junction.

large antral ulcer 2 × 3 cm was treated conservatively. Post operatively, she was referred to psychiatry department for evaluation and discharged at day 5 post op. She was discharged with medication for deworming. Her operative wound healed unremarkably. Child showed remarkable weight improvement during 2 months clinic review. With the help from the psychiatrist, psychotherapy has prevented recurrence. Based on our clinical assessments in outpatient clinic review, child has no episode of abdominal pain and no endoscopic assessment was done to evaluate the stomach ulcer after surgery.

3. Discussion

Trichotillomania typifies an impulsive recurrent hair tugging or yanking. Trichophagia, which means *tricho*-hair and *phagia*-eating. Eating or ingesting the hair forms bezoars in the gastrointestinal tract forming a hairball in the stomach [1]. Due to indigestion of the bezoar, it emits an unpleasant odour. The enzymes in the intestines defile the protein nature of the hair, form indigested material casting the stomach [2].

In 1812 Rapunzel a young unwed girl, with long curls who was trapped in a penitentiary, high up in a tower. She lowered her hair to ground from the tower jail window, for a prince to climb up the tower to save her [3]. “Rapunzel” syndrome: hence is a hairball casting the stomach with tail extending beyond the pylorus into the small intestine or even up to the colon [4] [5]. As the bezoar obstructs the bowel lumen, patient develops intestinal obstruction. They may present with persistent vomiting, hematemesis or coffee ground vomitus due to stomach ulceration, inability to pass flatus, abdominal pain and distension. The condition may worsen as gastric ulceration may cause perforation and patient may succumb to severe sepsis and develops generalized abdominal pain due to peritonitis. Laboratories results may reveal anaemia such as due to chronic blood

loss. There are cases reported association of vitamin B 12 deficiency, hence blood results may show macrocytic, megaloblastic anaemia [6].

The operative procedure for removal of the hairball from the intestine would be an open surgery such as laparotomy and enterotomy [7]. In both of the described cases above, an open surgery (laparotomy) was done. To overcome the anaemia blood transfusion if symptomatic, hematinic such as iron tablets, folic acid and vitamin b12 tablets can be prescribed to correct the anaemia. Proton pump inhibitors to lower the gastric pH and treating the ulcers. In such cases where the hairball in the stomach is too large and extends far into small intestines such as jejunum, laparoscopic approach would be difficult. Endoscopic removal of the bezoar is also not advisable [8]. After surgery, emphasizing on importance of proper psychiatric follow up would be important, as the root cause is treated, to avoid recurrence. In our case, we referred both patients for proper evaluation and treatment of the underlying mental disorder.

The peculiarities of both cases described above are that they were females and their hair showed jiggered edges with clinical findings of mass at upper abdomen. Similar cases have been reported globally and most cases treated with gastrotomy and evacuation of the bezoar.

4. Conclusion

Parents should be aware if they notice bald patches on the scalp of their children. Ingesting hair after pulling from the scalp may cause casting in the stomach, which later may cause obstruction and ulceration or intestinal perforation. Anaemia and vitamin deficiencies from the trichobezoars may stunt their growth and development.

Consent

Written informed consent was obtained from the patient's parents for publication of this case report and accompanying images.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Dalshaug, G.B., Wainer, S. and Hollaar, G.L. (1999) The Rapunzel Syndrome (Trichobezoar) Causing Atypical Intussusception in a Child: A Case Report. *Journal of Pediatric Surgery*, **34**, 479-480. [https://doi.org/10.1016/S0022-3468\(99\)90504-3](https://doi.org/10.1016/S0022-3468(99)90504-3)
- [2] Yik, Y.I. and How, A.K. (2016) Stomach Trichobezoar (Rapunzel Syndrome) with Iatrogenic Intussusception. *Medical Journal of Malaysia*, **71**, 74-76.
- [3] Al Wadan, A.H., Al Kaff, H., Al Senabani, J. and Al Saadi, A.S. (2008) 'Rapunzel Syndrome' Trichobezoar in a 7-Year-Old Girl: A Case Report. *Cases Journal*, **1**, 205. <https://doi.org/10.1186/1757-1626-1-205>
- [4] Chintamani, Durkhure, R., Singh, J.P. and Singhal, V. (2003) Cotton Bezoar—A

Rare Cause of Intestinal Obstruction: Case Report. *BMC Surgery*, **3**, 5.

<https://doi.org/10.1186/1471-2482-3-5>

- [5] Al-Wadan, A.H., Al-Absi, M., Al-Saadi, A.S. and Abdoulgafour, M. (2006) Rapunzel Syndrome. *Saudi Medical Journal*, **27**, 1912-1914.
- [6] Vaughan, E.D., Sawyers, J.L. and Scott, H.W. (1968) The Rapunzel Syndrome. An Unusual Complication of Intestinal Bezoar. *Surgery*, **63**, 339-343.
- [7] Frey, A.S., Mckee, M., King, R.A. and Martin, A. (2005) Hair Apparent: Rapunzel Syndrome. *American Journal of Psychiatry*, **62**, 242-248.
<https://doi.org/10.1176/appi.ajp.162.2.242>
- [8] Altonbary, A.Y. and Bahgat, M.H. (2015) Rapunzel Syndrome. *Journal of Translational Internal Medicine*, **3**, 79-81. <https://doi.org/10.1515/jtim-2015-0008>