

Trichobezoar: A case report of a hairball in the stomach

Fatima Khurshid^{1*}, Muzzamal Hussain², Ans Abdul Razzaq³

¹ Medical Doctor, Department of Medicine, Mohi-Ud-Din Islamic Medical College, Mirpur AJK, Pakistan

² Post Graduate Trainee, General Surgery, DHQ Hospital Mirpur, Mirpur AJK, Pakistan

³ Dental Surgeon, Department of Dentistry, Islamic International Dental College, Islamabad, Pakistan

Author's Contribution

¹ Data collection, Scientific advisor

² Writing & technical editing

³ Analysis & interpretation

Article Info.

Conflict of interest: Nil

Funding Sources: Nil

Correspondence

Fatima Khurshid

fatimakhurshid61@yahoo.com

A B S T R A C T

Trichobezoar is an underdiagnosed condition that should be considered in children and teenagers, particularly girls. According to a late diagnosis, trichobezoars can result in gastrointestinal bleeding or perforation. In this report, we discussed a 14-year-old girl who presented with severe abdominal pain with a well-defined mass in the Epigastrium; a CT scan revealed a giant mass with stomach distension which was removed through Gastrotomy. Gastric bezoars that are misdiagnosed could have life-threatening effects. Effective screening is necessary for early diagnosis. It is crucial to receive medical counselling to avoid a recurrence of bezoar.

Cite this article as Khurshid F, Hussain M, Razaq AA. Trichobezoar: A case report of a hairball in the stomach. *JSTMU*. 2023; 6(1):54-56.

Keywords: Abdominal Mass, Abdominal Pain In Females, Gastric Trichobezoar

Introduction

A hairball in the proximal gastrointestinal system, known as a trichobezoar, is a rare illness that usually affects young females. Because of its flat surface, human hair slows peristalsis and digestion. As a result, it accumulates in the stomach's mucosal folds.¹ The first reported occurrence of human trichobezoars was described in 1779.² A bezoar is a food or foreign particle buildup in the gastrointestinal tract. Based on the primary constituent, it can be classified as trichobezoar (hair), phytobezoar (plant material), Lactobezoar (concentrated milk formula), and Pharmacobezoar (mixed medicine bezoars). Still, it can also fall into other categories, such as fungal aggregation, food boluses, chemical concretions, and foreign materials.^{3,4} Continuous hair intake can impact hair, mucus, and food material. Over time, continuous hair

ingestion can affect hair, mucus, and food particles in the stomach.⁴

Typically, trichobezoars must be removed through Gastrotomy while treated with broad-spectrum antibiotics.⁵ It is a rare condition affecting less than 1% of the population. Teenage females aged 13 to 20 years old with long hair who have trichotillomania (compulsive pulling out of hair) or trichophagia (compulsive eating of hair) account for 90% of trichobezoar cases.⁶ In this report, we looked at the case of a 14-year-old girl who arrived with severe stomach pain and a well-defined lump in the Epigastrium.

Case report

A 14-year-old female complained of abdominal pain, anaemia, loss of appetite, and body weakness during the previous six months. The patient was skinny, pallid, and well-oriented on physical examination, with normal baseline values. Abdominal examination revealed an 8x9cm immobile intra- abdominal hard mass in the Epigastrium. Physical examination revealed no additional significant findings. The contrast-enhanced CT scan of the abdomen revealed a distended stomach with a large mass lesion seen, confirming the shapes of the gastric fundus, body, and pyloric antrum, as well as the pyloric canal of the stomach, measuring approximately 7.4 x 7.6 x 26.4 cm (AP X TR X CC) and extending to the proximal part of the duodenum.

It has a whorled appearance, fat attenuation regions, and a large distal ileum Lumen. Differential Leiomyosarcoma, gastric malignancy, and gastric trichobezoar were diagnosed. These findings prompted the decision to do surgery. She had exploratory laparotomy and Gastrotomy while under general anaesthesia. A huge trichobezoar (Figure 1) was removed during an upper midline exploratory laparotomy with Gastrotomy. The Gastrotomy was closed in two layers, and the abdomen was sealed with drainage. The patient recovered well after surgery, was able to eat on the fifth postoperative day, had the skin stitches removed on the tenth postoperative day, and was discharged in good health. The psychiatric staff agreed. Before being discharged, she was advised for psychiatric follow-up to prevent recurrence.



Figure 1: Following its removal, A Trichobezoar.

Discussion

Trichobezoars have been related to psychiatric diseases, most notably trichophagia and trichotillomania (the desire to pull out and swallow hair), which are more common in young women. Trichophagia is thought to be practised by only 5-10% of trichotillomania patients. Although the underlying processes of trichotillomania and trichophagia are unknown, pulling out and consuming hair are associated with feelings of fulfilment and alleviation from negative emotions. Compared to adults seeking treatment, childhood behavioural therapy or response prevention has been shown to have a lower likelihood of recurrence.⁵

Indigestion, early satiety, abdominal pain, nausea, vomiting, digestive bleeding, iron deficiency anaemia, and weight loss are characteristic indications and symptoms of gastric trichobezoar.⁶ Physical examination typically indicates a palpable moveable abdominal mass (70%) and hair loss on the head, brows, and eyelashes. Long-term gastric bezoars can induce deadly complications such as obstruction, perforation, haemorrhage, intussusception, peritonitis, ulceration, and obstructive jaundice.⁷ Upper endoscopy, Ultrasound, and CT scans are all diagnostic imaging procedures. While the Ultrasound is accurate in some instances, the CT scan is more accurate. An endoscopy or even a basic radiograph might be used to make a diagnosis swiftly. We performed conventional CT scans to diagnose and confirm our situation.⁴

The trichobezoar is intended to be removed through open, laparoscopic, or endoscopic surgery. Upper endoscopy is not recommended in these situations since it has a lower success rate and a higher risk of airway obstruction and respiratory arrest while being less invasive and expensive. An examination of seven cases of gastric bezoars found that most cases are treated with open surgery; all patients had exploratory laparotomy.⁸ Even though the first laparoscopic bezoar extraction was performed in 1998, only a few successful instances are described in the literature. In our situation, the patient had an exploratory laparotomy with a gastrotomy.⁷

Three strategies are discussed in the literature. Don et al. first described constructing an intra-gastric port by inserting a 10-mm port into the gastric wall and then withdrawing the specimen with a gastroscope.⁹ Second,

Kanetala et al. developed a similar procedure that entailed cutting the bezoar into small pieces using two stomach ports and extracting them via gastroscopy; both methods take time.¹⁰ Shami et al. described a gastrotomy, which entails grabbing the material, placing it in an Endo bag, and extracting it through a 10-mm camera port.¹¹ Laparoscopic surgery is another option, but it can sometimes be time-consuming and technically difficult. Medical treatment, such as enzyme therapy with papain, cellulase, or acetylcysteine, may be tried, albeit usually ineffective. Non-operative treatments are discouraged due to their high failure rate.^{4,7}

Due to the disease's rarity, there is currently no gold standard treatment; however, patient outcomes and safety should be considered before executing the surgery.

Conclusion

Trichobezoars are uncommon. However, they should be evaluated as a differential diagnosis in young females with vague upper abdominal complaints and an epigastric lump. Radiological examinations could shed light on the problem. Complications are common but can be prevented by carefully detecting and treating a trichobezoar. Recurrences are also well known. These repercussions, such as bleeding or perforation, can be avoided by early detection, and counselling can avert recurrences.

References

1. Witte T. Sjögren-Syndrom. Zeitschrift für 1. Gorter, RR Kneepkens, CMF Mattens, ECJL Aronson: DC Heij, HA, 2010, Management of trichobezoar: case report and literature review. *Pediatric surgery international*, volume. 26:0179-0358. DOI: <https://doi.org/10.1007/s00383-010-2570-0>
2. Palanivelu C, Rangarajan M, Senthilkumar R, Madankumar M V: Singapore Med J, Trichobezoars in the stomach and ileum and their laparoscopy-assisted removal: a bizarre case. 2007, 48-37.
3. M J O'Sullivan MB AFRCSI, G McGreal MB FRCS, J G Walsh DCH MRCPCH, H P Redmond Mch FRCSI: Trichobezoar, *Journal of the Royal Society of Medicine*, Volume 94, JR Soc Med . 2001, 94:68-70. DOI: <https://doi.org/10.1177/014107680109400205>
4. Anoop Dixit, Mohd Arshad Raza, Rohit Tiwari: Gastric Trichobezoar with Rapunzel Syndrome: A Case Report. *Journal of Clinical and Diagnostic Research*, ISSN-0973-709X. DOI: <https://doi.org/10.7860/JCDR/2016/17245.7211>
5. Dan Lu, Björn Berglund, Yi Xia, Ajay Jain, Qing Gu, Feng Ji, *Frontiers in Medicine: Endoscopic removal of a massive trichobezoar in a pediatric patient by using a variceal ligator cap: A case report and literature review*, Volume 9-2022. DOI: <https://doi.org/10.3389/fmed.2022.1020648>
6. Harrabi F, Ammar H, Ben Latifa M, et al.: (October 14, 2022) Gastric Trichobezoar Causing Gastrointestinal Bleeding: A Case Report. *Cureus*, *Cureus*. 14:30282. DOI: <https://doi.org/10.7759/cureus.30282>
7. Ahmad E Al-Mulla, Ali Altabeekh, Ahmad Al-Jafar, Shaimaa Dashti: Successful laparoscopic extraction of trichobezoar due to Rapunzel syndrome: first reported case in Kuwait, *Journal of Surgical Case Reports*, Volume. 2021, 12:2021-2042. DOI: <https://doi.org/10.1093/jscr/rjab532>
8. Fallon SC, Slater BJ, Larimer EL, Brandt ML, Lopez ME: The surgical management of Rapunzel syndrome: a case series and literature review. *J Pediatr Surg*. 2013, 48:830-4. DOI: <https://doi.org/10.1016/j.jpedsurg.2012.07.046>
9. Dorn, H. F., Gillick, J. L., & Stringel, G.: Laparoscopic intragastric removal of giant trichobezoar.. *JSLs: Journal of the Society of Laparoendoscopic Surgeons*, . 2010. DOI: <https://doi.org/10.4293/108680810X12785289144520>
10. Shami, Samer B. MD; Jararaa, Ayatallah A. M. MBBS; Hamade, Ayman MD, FRCS; Ammori, Basil J. FRCS, MD: Laparoscopic Removal of a Huge Gastric Trichobezoar in a Patient With Trichotillomania. *Surgical Laparoscopy, Endoscopy & Percutaneous Techniques*. 2007, 17(3):197-200. DOI: <https://doi.org/10.1097/SLE.0b013e318058a101>
11. Kengo Kanetaka, Takashi Azuma, Shinichiro Ito, Shigetoshi Matsuo, Satoshi Yamaguchi, Kenji Shirono, Takashi Kanematsu: Two-channel method for retrieval of gastric trichobezoar: Report of a case . *Journal of Pediatric Surgery*. 2003, 38(2):1-2. DOI: <https://doi.org/10.1053/jpsu.2003.50067>