



Contents lists available at <https://amejcaserepclinimag.com/>

## American Journal of Case Reports and Clinical Images



### A Tangled Tale: Trichobezoar in a Young Patient with Undiagnosed Celiac Disease

Espinal Niki MD<sup>1</sup> , Lyons Hernando MD<sup>2</sup> , Langenberg Scott MD<sup>3</sup>, Kumar Sanjay MD<sup>2</sup> 

<sup>1</sup>Department of Pediatrics, Henry Ford St. John Children's Hospital, Detroit, MI, Email: [nmoftak1@hfhs.org](mailto:nmoftak1@hfhs.org)

<sup>2</sup>Department of Pediatric Gastroenterology, Henry Ford St. John Children's Hospital, Detroit, MI

<sup>3</sup>Department of Pediatric Surgery, Henry Ford St. John Children's Hospital, Detroit, MI

#### ARTICLE INFO

##### Article history:

Received: 04-11-2025

Revised: 20-12-2025

Accepted: 22-12-2025

Published: 25-12-2025

#### ABSTRACT

Trichobezoars are uncommon gastrointestinal masses composed of ingested hair. Celiac disease is an immune-mediated disease triggered by gluten ingestion and can present with a variety of gastrointestinal and extra-gastrointestinal symptoms. We report the case of a 6-year-old girl with a history of trichophagia who was found to have both a large gastric trichobezoar and newly diagnosed celiac disease. This case highlights the significance of how nutritional deficiencies and psychological problems can potentially lead to abnormal eating behaviors resulting in complicated gastrointestinal manifestations.

**Copyrights** © 2025, Espinal Niki. *Et al*, This article is licensed under the Creative Commons Attribution-Non-Commercial-4.0-International-License-(CCBY-NC) (<https://amejcaserepclinimag.com/blogpage/copyright-policy>). Usage and distribution for commercial purposes require written permission.

#### Introduction

Trichobezoars are firm masses of ingested hair that accumulate in the gastrointestinal tract, most commonly within the stomach. They most often affect adolescent females and are associated with psychiatric conditions such as trichotillomania and trichophagia [1] Hair buildup in the human gastrointestinal tract can accumulate over time and potentially lead to obstruction or mass effects [2].

Celiac disease affects about 1% of children and may present with symptoms ranging from diarrhea and abdominal pain to iron-deficiency anemia, behavioral disturbances and some patients might not exhibit any symptoms. Diagnosis involves serologic testing for celiac-specific antibodies and duodenal biopsy [3-5].

Although rare, coexistence between trichobezoar and celiac disease has been reported [6]. Both diseases can present with nonspecific gastrointestinal symptoms and are associated with psychiatric or behavioral manifestations, which can further complicate the diagnostic process [7]. We present a pediatric case of concurrent trichobezoar and celiac disease to highlight the potential relationship between psychiatric, nutritional, and gastrointestinal factors.

#### Case Report

A 6-year-old female was referred for evaluation of a left upper quadrant abdominal mass noted during a routine sick visit for an unrelated problem. She had a known history of trichophagia, with prior episodes of hair ingestion and hair strands observed in her stool. Her trichophagia developed shortly after her parents' separation. She denied abdominal pain, nausea, or vomiting. However, she described daily foul-smelling burping.

On examination, a 3–4 cm firm, non-tender mass was palpated in the left upper quadrant. Abdominal imaging revealed a dense intragastric mass suspicious for a bezoar. While she had no prior gastrointestinal diagnoses, her mother had celiac disease. Aside from intermittent constipation, her review of systems was otherwise unremarkable.

\* Corresponding author.

Espinal Niki MD, Department of Pediatrics, Henry Ford St. John Children's Hospital, Detroit, MI, Email: [nmoftak1@hfhs.org](mailto:nmoftak1@hfhs.org)

Upper endoscopy confirmed a large trichobezoar (Figure 1) in the stomach. Due to large size of bezoar, it was not amenable to endoscopic removal. Duodenal biopsies were obtained due to family history which showed findings consistent with celiac disease, including villous atrophy (Figure 2). She underwent successful surgical removal of the trichobezoar (Figure 3) and was discharged after an uncomplicated two-day hospital stay.

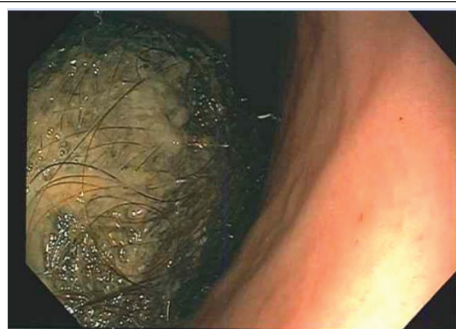


Figure 1: Endoscopy View.

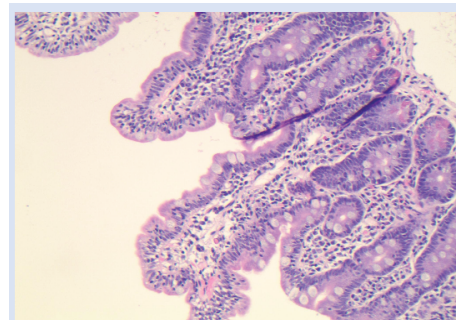
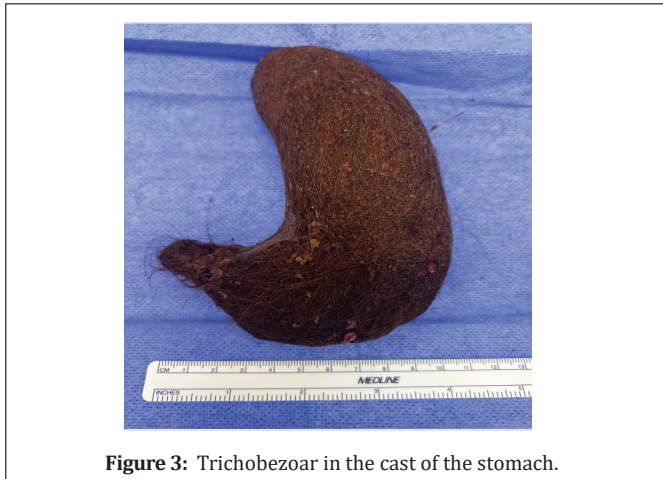


Figure 2: Duodenal Biopsy with evidence of villous atrophy.



**Figure 3:** Trichobezoar in the cast of the stomach.

## Discussion

A unique diagnostic problem arises when trichobezoar and celiac disease co-occur. Trichobezoars are typically associated with mental health disorders, including anxiety, obsessive-compulsive behaviors, and trichophagia [1]. Meanwhile, children with celiac disease can present with gastrointestinal and neurobehavioral symptoms [3].

In this case, the patient's trichophagia may have been exacerbated by psychosocial stressors such as family instability. However, nutritional deficiencies from undiagnosed celiac disease may also have contributed. Micronutrient deficiencies, particularly iron, are well-documented in celiac disease and associated with pica-like behaviors.

Celiac disease causes villous atrophy, leading to malabsorption and reduced uptake of essential nutrients. Iron deficiency anemia (IDA) is a frequent extraintestinal manifestation for patients with celiac disease, most frequently in adult patients in comparison with children. IDA may contribute to behavioral disturbances and cravings for certain non-nutritive substances [7,8]. While a direct link between trichophagia and celiac disease is not yet known, this case supports a possible relationship through nutritional deficiency-mediated behavioral changes.

This case highlights the importance of considering overlapping psychiatric, nutritional, and gastrointestinal diagnoses in children with unusual signs and symptoms. Early identification and multidisciplinary management—including dietary intervention, psychological support, and medical treatment—are key to improving outcomes and preventing recurrence [9].

## Conclusion

This case highlights the rare but clinically relevant overlap of trichobezoar and celiac disease in a pediatric patient. When evaluating children with abnormal eating behaviors or gastrointestinal symptoms, clinicians should consider psychiatric and nutritional etiologies. This case also emphasizes the potential behavioral consequences of untreated nutritional deficiencies and the importance of well-rounded care in pediatric gastroenterology.

**Ethics Statement:** We wish to thank the parents and child described in the case report, who gave us permission to discuss the case findings

## Author Contributions:

**Nico Espinal\***: Primary author; contributed to case conceptualization, chart review, literature review, and drafting of the manuscript.

**Hernando Lyons**: Provided clinical oversight and supervision; contributed to case management and critical revisions of the manuscript.

**Scott Langenburg**: Served as attending surgeon on the case; contributed surgical perspective, case details, and critical review of the manuscript.

**Sanjay Kumar**: Assisted in diagnostic workup and management; contributed to clinical context and manuscript editing.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** No new data were created or analyzed in this study. Data sharing is not applicable to this article.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Naik S, Gupta V, Naik S, Rangole A, Chaudhary AK, Jain P, Sharma AK. Rapunzel syndrome reviewed and redefined. *Dig Surg*. 2007;24(3):157-61. doi: 10.1159/000102098. Epub 2007 Apr 27. PMID: 17476105.
- Vaughn ED, Sawyers JL, Scott HW. The Rapunzel syndrome. *Am J Surg*. 1968;115(6):735-738. [https://doi.org/10.1016/0002-9610\(68\)90257-1](https://doi.org/10.1016/0002-9610(68)90257-1)
- Husby S, Koletzko S, Korponay-Szabó IR, et al. ESPGHAN guidelines for diagnosing celiac disease. *J Pediatr Gastroenterol Nutr*. 2012;54(1):136-160. <https://doi.org/10.1097/MPG.0b013e31821a23d0>
- Guandalini S, Assiri A. Celiac disease: A review. *JAMA Pediatr*. 2014;168(3):272-278. <https://doi.org/10.1001/jamapediatrics.2013.3858>
- Hill ID, Fasano A, Guandalini S, et al. NASPGHAN guidelines for diagnosis and treatment of celiac disease in children. *J Pediatr Gastroenterol Nutr*. 2005;40(1):1-19. <https://doi.org/10.1097/01.mpg.0000181841.51374.4c>
- Irastorza, I., Tutau, C., & Vitoria, J. C. (2014). A trichobezoar in a child with undiagnosed celiac disease: a case report. *World journal of gastroenterology*, 20(5), 1357–1360. <https://doi.org/10.3748/wjg.v20.i5.1357>
- Freeman H. J. (2015). Iron deficiency anemia in celiac disease. *World journal of gastroenterology*, 21(31), 9233–9238. <https://doi.org/10.3748/wjg.v21.i31.9233>
- Miao, D., Young, S. L., & Golden, C. D. (2015). A meta-analysis of pica and micronutrient status. *American journal of human biology : the official journal of the Human Biology Council*, 27(1), 84–93. <https://doi.org/10.1002/ajhb.22598>
- Elnaim, A.L.K., Shareef, S.M., Ebrahim, M.A.A. et al. Gastric trichobezoar as first presentation of psychiatric disorders in young women: case series. *Discov Med* 1, 112 (2024). <https://doi.org/10.1007/s44337-024-00132-5>

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER



**Submit your manuscript to American Journal of Case Reports and Clinical Images CODEN: USA**

**and benefit from:**

- ▶ Convenient online submission
- ▶ Rigorous peer review
- ▶ Immediate publication on acceptance
- ▶ Open access: articles freely available online
- ▶ High visibility within the field
- ▶ Retaining the copyright to your article

Submit your manuscript at:  
<https://amejcaserepclinimag.com/>

&  
[wjcasereports@gmail.com](mailto:wjcasereports@gmail.com);  
[submission@amejcaserepclinimag.com](mailto:submission@amejcaserepclinimag.com)