SAGE Open Medical Case Reports
Volume 9: 1–4

DOI: 10.1177/2050313X211020220
journals.sagepub.com/home/sco
SAGE

Hair loss in an infant presenting with failure to thrive

Baninder Kaur Baidwan and Cara J Haberman

Abstract

An 11-month-old male child with a complex past medical history presented for admission due to failure to thrive. He had hair loss throughout his scalp, and his abdomen was distended. There was parental report of hair pulling and hair in his stool. An upper gastrointestinal (GI) radiograph with fluoroscopy was performed and showed a filling defect in the gastric lumen. On endoscopy, he was found to have a gastric bezoar consisting of hair, nail, and food material. The trichobezoar was removed, and he began to tolerate feeds and showed consistent weight gain. There were no recurrence of symptoms 8 months following removal. While inadequate caloric intake is a common reason for failure to thrive, mechanical obstruction from a trichobezoar as a cause is rare and to our knowledge has not been reported in a child this young.

Keywords

Gastroenterology/hepatology, pediatrics, failure to thrive

Date received: 5 February 2021; accepted: 6 May 2021

Introduction

While inadequate caloric intake is a common reason for failure to thrive,[1] mechanical obstruction from a trichobezoar as a cause is rare and to our knowledge has not been reported in infancy. There are many reported cases of trichotillomania and trichobezoars in infants and young children,[2–6] but our patient's case is unique as he is an 11-month-old male child who developed failure to thrive secondary to an obstruction from a trichobezoar. While trichotillomania is not very well understood, there seems to be a better understanding of the underlying etiology in adolescents and adults than in the younger pediatric population.[2,7–9] In infants and young children, trichotillomania is a heterogeneous condition, and determining the cause may not be as straightforward.[2,7] We review the available literature on trichobezoars and trichotillomania in the pediatric population.

Case report

An 11-month-old male child with a past medical history of hypoxic ischemic encephalopathy, Pierre Robin Sequence, and G-tube dependence, presented to the emergency department for 6 months of poor weight gain. The patient was appropriately following his growth curve without any issues until 6 months ago. His length and head circumference remained uninterrupted. In an attempt to improve his weight, the caloric density of the patient's formula was increased which resulted in only a short-term improvement in his weight. Formula frequency was increased via his G-tube, but the patient developed discomfort and fussiness with feeds, and formula would come out his nose. To help improve his fussiness, the patient's mother decreased the frequency of his feeds 1 month prior, and he tolerated this better. Throughout this 6-month period, he had no problem with his continuous night-time feeds which were a smaller volume than his daytime bolus feeds. Per his last swallow evaluation, which was several months prior, he was restricted to small amounts of baby food by mouth and not yet cleared to take formula by mouth due to moderate oropharyngeal dysphagia. The patient's mother reported that he enjoys eating by mouth and gets upset when his oral feedings are stopped. She did not feed him more frequently by mouth than what was recommended and aside from decreasing the feeding frequency 1 month ago, she strictly followed his feeding regimen. The parent also reported she was spending less time with her son over the past few months due to longer work hours. On exam, he was agitated, inconsolable, and thin appearing. He

Wake Forest Baptist Medical Center, Winston-Salem, NC, USA

Corresponding Author:
Baninder Kaur Baidwan, Wake Forest Baptist Medical Center, Winston-Salem, NC 27157, USA.
Email: baninderkaur@gmail.com

Figure 1. Hair loss in the patient.

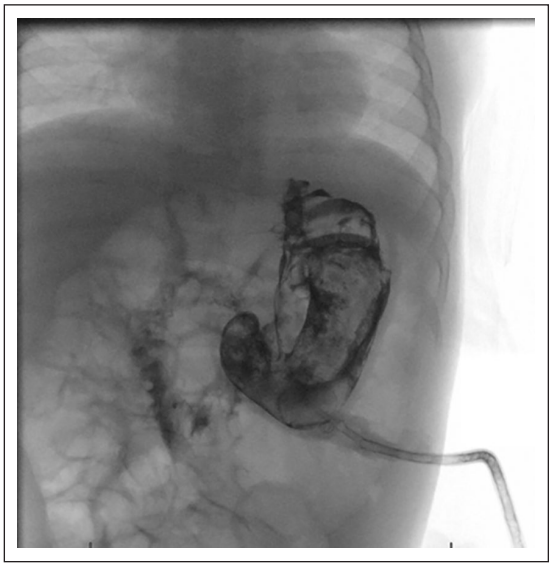

Figure 2. Upper GI with fluoroscopy.

sucked on his entire right hand throughout the exam. The skin on the dorsum of his right hand was thickened and hyperpigmented. Very sparse hair was noted throughout his scalp (Figure 1). His abdomen was soft and nontender but appeared distended. The patient was particularly fussy when he was alone in his room and would settle down when he was held and around others. On admission, the patient had normal vitals and a normal complete blood count (CBC) with hemoglobin of 11.2 g/dL, normal comprehensive metabolic panel (CMP), normal thyroid-simulating hormone (TSH) of 1.58 uIU/mL, and Free T4 of 0.9 ng/dL, normal urinalysis, and normal abdominal radiograph which showed a nonobstructive bowel gas pattern. He was admitted to the hospital for further management and workup.

Hospital course

The patient's unusually sparse hair raised concerns about micronutrient deficiencies or other genetic disorders, but upon further questioning, the patient's mother reported that he started pulling his hair several months ago and she has found strands of hair in his stool. Given this new piece of information, feeding intolerance, and exam findings of hair loss, an Upper gastrointestinal (GI) with fluoroscopy was performed and showed a 4.2 × 1.8 cm mobile filling defect in the gastric lumen, concerning for a gastric bezoar (Figure 2). An endoscopy was performed to assist with removal of the bezoar through his G-tube, and the patient was found to have a 10 cm × 3 cm gastric bezoar consisting of hair, nail, and food material (Figure 3). After removal of the trichobezoar (Figure 4), the patient showed improvement in his fussiness, he was able to tolerate feeds without discomfort, and began to show consistent weight gain. The parent also initiated behavioral interventions by limiting access to his hair with headwear and placing socks on his hands. Eight months following removal of the trichobezoar, he continued to have appropriate weight gain via G-tube feeds and advancement of his oral feeds without any return of symptoms.

Final diagnosis

Gastric trichobezoar causing feeding intolerance and failure to thrive.

Discussion

While inadequate caloric intake is a common reason for failure to thrive in infants,[1] mechanical obstruction from a trichobezoar as an underlying cause is quite rare and to our knowledge has not been reported in a child this young. There are reported cases of trichotillomania and trichobezoars in infants and early childhood,[2–6] but the youngest reported case found in our literature review of a trichobezoar causing failure to gain weight, was in a 4-year old.[10]

Trichotillomania results either from automatic or focused hair pulling.[5] Young children more commonly fall in the automatic category while older children tend to have more awareness of their hair pulling.[5] In older children and adolescents, their behavior may be a result of some form of negative emotions and the behavior may be preceded by an urge to pull hair followed by a sense of gratification, though the latter is no longer required criteria in diagnosing trichotillomania.[5,8,11,12]

Less than a quarter percentage of children with trichotillomania engage in trichophagia,[13] and in infancy, hair pulling can be associated with thumb-sucking,[7] or sucking on the whole hand as seen in our patient. This behavior occurs during periods of boredom or distress or while

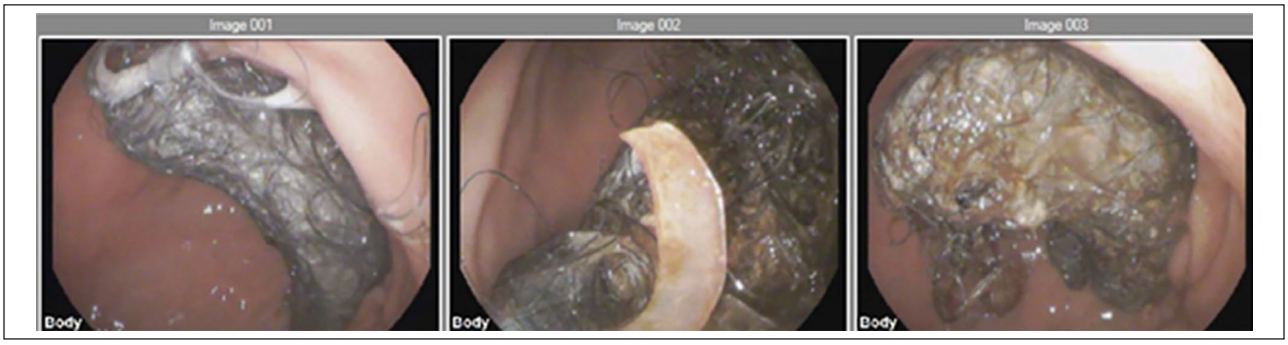

Figure 3. Endoscopic image of bezoar.

Figure 4. Removed trichobezoar.

falling asleep.[7] Nail biting can also be a comorbid finding with trichotillomania.[8,13] In older children and adolescents, trichotillomania has been associated with psychiatric conditions such as obsessive compulsive disorder or generalized anxiety.[8,12] Hair pulling has been considered a benign habit in infants and young children that self-resolves[8,14] and in some cases has been associated with the need for tactile stimulation and self-soothing behavior or used as a stress-coping mechanism.[7,13] There are some reports, however, that it may be associated with anxiety, emotional deprivation, or neurodevelopmental factors in infants and toddlers,[2,6,15,16] and this habit in small children may not always be benign.[2,17]

Once trichotillomania is identified, non-pharmacological treatment such as behavioral therapy should be introduced to help reduce symptoms.[5] Behavioral therapy or response prevention initiated in childhood or adolescence has shown to have a decreased risk of relapse as compared to adults seeking treatment, suggesting the importance of identifying and diagnosing trichotillomania and beginning treatment as early as possible.[5] Though there is not much research on treatment in very small children and infants, those who do receive treatment, including infants, have achieved success in either eliminating or reducing their behavior.[2,5,14]

Our patient had limited oral stimulation and oral intake due to multiple surgeries and had not had a feeding evaluation in several months during a period of typical rapid development in infancy, so he may have been over-restricted. He enjoyed being fed by mouth as he would become upset at the end of his oral feeds. The cause of our patient's hair pulling is unclear, whether it was self-soothing behavior, related to underlying anxiety from parental separation or emotional deprivation or other psychosocial stressors, if he was increasing his oral feeding behavior himself, or many other possible explanations. The trichotillomania and trichophagia resolved after the removal of the obstruction and advancement of his oral feeds, while also introducing response prevention techniques.

Conclusion

This report is unique, as there are no reported cases of trichobezoar causing failure to thrive in a patient as young as the one presented in this case. In addition, this case report demonstrates that finding the underlying cause of failure to thrive is not always straightforward, but with a broad differential and thorough physical exam and history, one can reach a diagnosis. Trichotillomania is not a well-understood disorder and requires more research[7,9] and what makes it difficult to understand particularly in infants and children is that it is a heterogeneous condition that can result from various etiologies.[2,7] The importance, however, is identifying the behavior and beginning treatment as soon as possible.[5]

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

The patient's parent provided written consent to the publication of the patient's case and images. Patient anonymity was maintained.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Informed consent

Written informed consent was obtained from a legally authorized representative(s) for anonymized patient information to be published in this article.

ORCID iD

Baninder Kaur Baidwan https://orcid.org/0000-0002-1880-8310

References

1. Larson-Nath C and Biank VF. Clinical review of failure to thrive in pediatric patients. *Pediatr Ann* 2016; 45(2): e46–e49.
2. Keren M, Ron-Miara A, Feldman R, et al. Some reflections on infancy-onset trichotillomania. *Psychoanal Study Child* 2006; 61: 254–272.
3. Rahman O, Toufexis M, Murphy TK, et al. Behavioral treatment of Trichotillomania and Trichophagia in a 29-month-old girl. *Clin Pediatr* 2009; 48(9): 951–953.
4. Cintolo J, Telem DA, Divino CM, et al. Laparoscopic removal of a large gastric trichobezoar in a 4-year-old girl. *JSLS* 2009; 13(4): 608–611.
5. Chandran NS, Novak J, Iorizzo M, et al. Trichotillomania in children. *Skin Appendage Disord* 2015; 1: 18–24.
6. Snorrason I, Ricketts EJ, Stein AT, et al. Sex differences in age at onset and presentation of trichotillomania and trichobezoar: a 120-year systematic review of cases. *Child Psychiatry Hum Dev*. Epub ahead of print 8 January 2021. DOI: 10.1007/s10578-020-01117-y.
7. Santhanam R, Fairley M and Rogers M. Is it Trichotillomania? Hair pulling in childhood: a developmental perspective. *Clin Child Psychol Psychiatry* 2008; 13(3): 409–418.
8. Woods DW and Houghton DC. Diagnosis, evaluation, and management of trichotillomania. *Psychiatr Clin North Am* 2014; 37(3): 301–317.
9. Bruce TO, Barwick LW and Wright HH. Diagnosis and management of trichotillomania in children and adolescents. *Paediatr Drugs* 2005; 7(6): 365–376.
10. Phillips MR, Zaheer S and Drugas GT. Gastric trichobezoar: case report and literature review. *Mayo Clin Proc* 1998; 73(7): 653–656.
11. Walther MR, Snorrason I, Flessner CA, et al. The trichotillomania impact project in young children (TIP-YC): clinical characteristics, comorbidity, functional impairment and treatment utilization. *Child Psychiatry Hum Dev* 2014; 45(1): 24–31.
12. King RA, Scahill L, Vitulano LA, et al. Childhood trichotillomania: clinical phenomenology, comorbidity, and family genetics. *J Am Acad Child Adolesc Psychiatry* 1995; 34(11): 1451–1459.
13. Tay YK, Levy ML and Metry DW. Trichotillomania in childhood: case series and review. *Pediatrics* 2004; 113(5): e494–e498.
14. Byrd MR, Richards DF, Hove G, et al. Treatment of early onset hair pulling as a simple habit. *Behav Modif* 2002; 26(3): 400–411.
15. Wright HH and Holmes GR. Trichotillomania (hair pulling) in toddlers. *Psychol Rep* 2003; 92(1): 228–230.
16. Mannino FV and Delgado RA. Trichotillomania in children: a review. *Am J Psychiatry* 2006; 126(4): 505–511.
17. Park JM, Rahman O, Murphy TK, et al. Early childhood trichotillomania: initial considerations on phenomenology, treatment, and future directions. *Infant Ment Health J* 2012; 33(2): 163–172.