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Trichobezoar: Treatment in a Pediatric Patient: Case Report

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Abstract **Case Report**

The presentation of trichobezoar is rare, especially in pediatric populations, since most occur in young women or due to complications from other gastric surgeries. The present work shows the case of a 3-year-old female patient, with a history of chronic anemia who requires surgical management, which is carried out without complications. It is also evident that interdisciplinary management with Mental Health is crucial for follow-up and, above all, to avoid recurrence of the condition, acting on the patient and caregivers in the same way.

Keywords: Trichobezoar, pediatrics, surgery, mental, health.

1. INTRODUCTION

A bezoar is a mass that can occur due to accumulation of undigested material in the gastrointestinal tract. Trichobezoars (hair accumulation) are usually gastric, but can extend into the small intestine (Rapunzel syndrome) and are rare in the pediatric age group [1].

The origin of bezoars in children of nursery school age is due to the accumulation of substances such as hair from dolls, brushes, while the origin in adolescents occurs more frequently in females. This correlates with mental disorders such as trichotillomania, trichophagia and gastric dysmotility [2].

The occurrence of this disease is extremely rare; 90% of the cases occur in females, and 80% of these occur in those under 30 years of age and are related to anxiety behaviors and psychiatric disorders [8].

The clinical manifestations are related to the digestive system, may begin with dyspepsia, anorexia, diffuse abdominal pain and vomiting, and evolve to total mechanical occlusion accompanied by paralytic ileus that results in an acute abdomen requiring emergency surgery [9].

The objective of this document is to review the literature on the treatment of this particular pathological entity in a 3-year-old patient.

2. CASE PRESENTATION

Background

A 3-year-old chronically malnourished infant (weight Z-0, size Z-1, BMI Z0) with a history of severe anemia (hemoglobin 6.60 g/d), with 3 days of temperature increase, accompanied by colicky diffuse abdominal pain located in the left hypochondrium, associated with hyporexia and abdominal distension and hyporexia.

Clinical Findings

Conscious patient with vital signs within normal parameters, findings of teeth in very poor condition during physical examination, non-mobile, non-painful, palpable mass of hard consistency at abdominal level, in the left hypochondrium and hypogastrium. The admission paraclinical tests showed hemoglobin of 6.60 g/dL, hematocrit of 25%, mean corpuscular volume (MCV 50.3), which determined the presence of severe iron deficiency anemia. The abdominal X-ray showed a filling defect in the stomach with a swirling pattern of gas and solid material suggestive of gastric bezoar (Figure 1 and 2).

The study is complemented with simple and contrast tomography of the abdomen where a dilated

stomach with thickening of its walls is observed, presence of a heterogeneous mass with gas bubbles in its interior, compatible with trichobezoar.

Figure 1: Abdominal X-ray, supine position (Radiopaque image, left hypochondrium)
Source: Hospital Imaging Services. FFAA No. 1

Figure 2: Abdominal X-ray, standing position (Radiopaque image, left hypochondrium)
Source: Hospital Imaging Services. FFAA No. 1

Therapeutic Intervention

Due to the size of the trichobezoar, surgical procedure was decided through a laparotomy and gastrostomy, where the trichobezoar, 15 cm long and 8 cm in diameter, with the shape of the gastric silhouette (Figure 4), is extracted. After the intervention, the patient remained fasting for 72 hours, meanwhile intravenous fluid and electrolyte replacement as well as intravenous antibiotic therapy based on beta-lactamase inhibitor (Ampicillin plus Sulbactam) was maintained every 6 hours for 4 days. Subsequently, she started a diet without any complications. She was discharged on the 6th day of hospitalization with no further complications.

Figure 3: Abdominal tomography, coronal section (Image of intragastric mass)
Source: Hospital Imaging Services. FFAA No. 1

Figure 4: Abdominal tomography, cross section (Image of intragastric mass)
Source: Hospital Imaging Services. FFAA No. 1

Figure 5: Trichobezoar, intraoperative image (Image of trichobezoar)
Source: Dr. Daniel Manzano

Figure 6: Trichobezoar (Image of extracted trichobezoar)
Source: Dr. Daniel Manzano

FOLLOW-UP AND RESULTS

Seven days after her discharge from the hospital, she went to outpatient service for post-surgical control and was found to be asymptomatic, with adequate oral feeding, improved appetite and tolerating normal food portions for her age; also with paraclinical studies within normal parameters, complying with the oral antibiotic scheme with amoxicillin plus clavulanic acid (which she completed for 10 days).

3. DISCUSSION

Bezoars at the gastrointestinal tract level are infrequent entities in pediatric age. The clinical spectrum of these patients is variable and is evidenced at school age in most of them [8], contrary to the age of occurrence in our patient (3 years).

In general, trichobezoars constitute 50% of bezoars, with the highest percentage of this disorder being reserved for 90% of females, with an age range between 12 and 30 [9].

It should be emphasized that this case begins with the voluntary ingestion of the causative agent (hair), which, in turn, can go hand in hand with a psychiatric component. In pediatric ages, it is associated with a conflictive family environment, abandonment, or social isolation [5] or it can be associated with an organic component such as anemia or multivitamin deficiencies that are related to malnutrition, as in the case of our patient who has chronic malnutrition and iron deficiency anemia.

According to a study published by Blanco, Jauregui and Carvajal (2022), the extraction of large trichobezoars is achieved through an anterior abdominal gastrostomy, reserving endoscopic removal for small trichobezoars [9].

According to Alcántara and Espinoza (2021), the best approach is endoscopy of the upper digestive tract, as long as it is feasible, and in those cases in which it is not possible, the surgical approach becomes the treatment of choice [10].

Surgical treatment has a low mortality rate of less than five percent. In cases of Rapunzel syndrome, a gastrostomy is performed, but if there is small bowel involvement, multiple enterotomies could be performed; if there is small bowel obstruction secondary to a bezoar, the stomach should always be explored to rule out a gastric bezoar, as Reyes-Escobar (2021) and Bargas Ochoa (2018) agree. Although the treatment of bezoars is not standardized, trichobezoars are almost always candidates for surgical treatment [10].

Aside from the involvement and characteristics of this particular case, what is striking about it is the age at which it appeared in our patient, at the age 3, which is why the treatment should be interdisciplinary in conjunction with psychology and psychiatry.

4. CONCLUSION

We can conclude that the definitive treatment for large trichobezoars is surgical, through a gastrostomy, especially in the pediatric population where endoscopic or laparoscopic options would be reserved for small trichobezoars.

Multidisciplinary management with Mental Health Services such as Psychology and Psychiatry is also suggested, in addition to subsequent follow-up by Pediatric and Pediatric Surgery Services.

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