



Trichobezoar as a Rare Cause of Intestinal Obstruction and Surgical Emergency: Case Report

Falcon-Cancino LA^{1*}, Yopez-Vallejo S¹, Reyna Juarez R² and Padron Arredondo G¹

¹General Surgeon, Department of General Surgery, Playa del Carmen General Hospital. Constituyentes Avenue, s/n with 135th Street, Ejidal Colony, Playa del Carmen, Quintana Roo, México

²Medical Student, Department of General Surgery, Playa del Carmen General Hospital. Constituyentes Avenue, s/n with 135th Street, Ejidal Colony, Playa del Carmen, Quintana Roo, México

*Corresponding author: Falcon-Cancino LA, General Surgeon, Department of General Surgery, Playa del Carmen General Hospital. Constituyentes Avenue, s/n with 135th Street, Ejidal Colony, Playa del Carmen, Quintana Roo, México. Zip Code 77712; E-mail: luisarturofalconcancino@gmail.com

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Abstract

Introduction: Gastric bezoars are accumulations of ingested material that can cause gastrointestinal obstruction. They are rare and may be associated with psychiatric and behavioural disorders, such as trichotillomania. This case report describes the clinical presentation, diagnosis, and management of a patient with a gastric bezoar and a psychiatric history.

Clinical case: A 30 years-old female with a psychiatric history who suffered from trichotillomania since adolescence, which caused abdominal pain, vomiting, lack of gastric drainage, marked abdominal distension, and intestinal obstruction. Palpation in the epigastrium revealed a mass with well-defined edges. After suspicion, blood tests, and laboratory findings confirmed, an exploratory laparotomy performed, which confirmed the diagnosis of trichobezoar.

Discussion: Gastric trichobezoar primarily caused by hair ingestion and is more common in women and patients with psychiatric disorders. Symptoms begin later because the ingested material accumulates chronically. Therefore, once a gastric or intestinal obstruction develops, it requires surgical resolution.

Conclusion: Multidisciplinary management and prompt surgical intervention led to the successful resolution of the gastric bezoar in this patient. Education and ongoing follow-up are essential to prevent recurrence in patients with risk factors.

Keywords: Trichobezoars; Diagnosis; Surgery

Introduction

Gastric bezoars are accumulations of ingested material that can cause gastrointestinal obstruction and, although uncommon, represent a significant diagnostic and therapeutic challenge [1]. These foreign bodies can form from plant fibers (phytobezoars), hair (trichobezoars), medications (pharmacobezoars), among other materials, and usually occur in patients with a history of psychiatric or behavioral disorders, such as trichotillomania and pica [2]. Trichotillomania, a disorder characterized by a

compulsive hair-pulling disorder, can lead to hair ingestion and, so, the formation of trichobezoars [3]. Although this condition is most common in adolescents and young women, it can occur in any age group and have grave consequences if not diagnosed and treated promptly [4]. Early diagnosis and multidisciplinary management are essential in the treatment of gastric bezoars. Endoscopy is the diagnostic tool of choice, allowing direct visualization and, in some cases, removal of the bezoar [5]. However, in cases of large or complicated bezoars, such as the

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present one, surgical intervention is necessary to avoid serious complications such as gastric perforation or intestinal obstruction [6].

Clinical Case

A 30 years-old female with a history of moderate intellectual disabilities, organic schizophreniform disorder, and trichotillomania, and checked by the Psychiatric Service of this unit and treated with risperidone and sertraline. She reported delayed developmental milestones in childhood, which needed a stay in a Special Education Center from ages 2 to 15. She also had two earlier cesarean sections; she denied allergies and any other significant medical history; she came to our unit with her mother due to abdominal pain. A family member reported the onset of generalized abdominal pain 1 month earlier, which she self-medicated with metamizole and hyoscine, without improvement. In the last 4 days, she began vomiting countless amounts of food, with an increase intensity of abdominal pain and intolerance to oral intake, which is why she came to our unit.

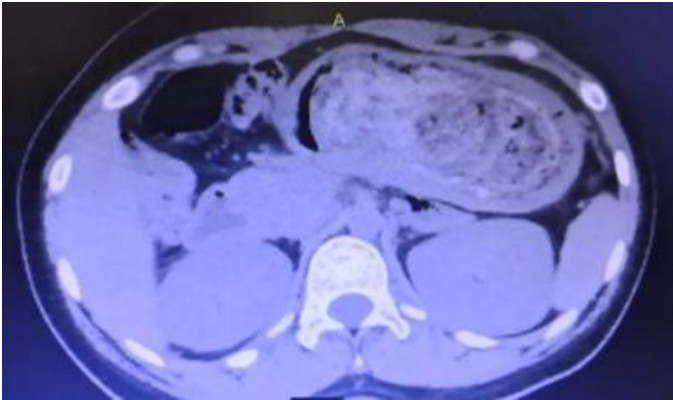


Figure 1: Axial section of computed axial tomography of the abdomen showing distension and occupation of the gastric chamber.



Figure 2: Gastrostomy incision.



Figure 3: Trichobezoar removal with ring forceps.



Figure 4: Complete specimen of trichobezoar.

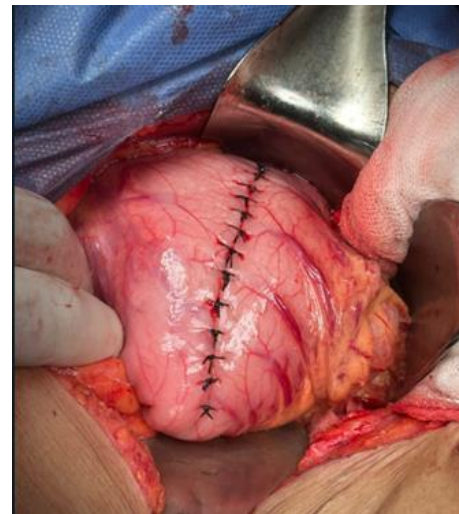


Figure 5: Gastrostomy closure.

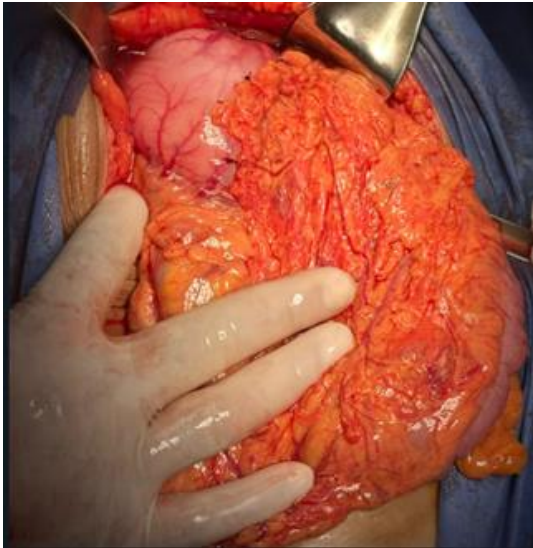


Figure 6: Graham patch.

During physical examination, the patient was awake, conscious, alert, with dehydrated mucous membranes and integuments with marked pallor. She was normocephalic, had a symmetrical cylindrical neck, and no palpable adenomegaly. The chest was intact, with increased frequency of respiratory movements and use of accessory muscles. The abdomen distended, tympanic, painful to superficial and deep palpation in all four quadrants, with decreased peristalsis, and no evidence of peritoneal irritation. The lower and upper extremities were intact and symmetrical, with preserved sensitivity, palpable distal pulses, and a delayed capillary refill of >3 seconds. Upon admission, the patient underwent routine blood tests and imaging studies, obtaining the following data: hemoglobin 18 g/dL, hematocrit 51%, leukocytes 8,900/mm³, platelets 514,000/mm³, sodium 128 mEq/L, potassium 4.2 mEq/L, chloride 82 mEq/L, central glycemia 110 mg/dL, urea 77 mg/dL, BUN 36 mg/dL, creatinine 0.7 mg/dL, normal liver function tests, coagulation times and pancreatic enzymes. A simple abdominal computed tomography scan showed significant gastric distension (Figure 1), with complete occupation of the gastric chamber with heterogeneous material, thickening of the wall and intestinal distension with air-fluid levels. The patient evaluated by the surgical service, who decide urgent management by exploratory laparotomy.

After general anesthesia by the anesthesiology service, a supra-umbilical incision was made on the midline, after exposing the peritoneal cavity, a systematic review was started with no evidence of tumors, gastric or intestinal material, the stomach had a semi-solid tumor inside, so a vertical gastrotomy of 8 centimeters in greater curvature was performed (Figure 2) and a gastric bezoar covers the entire stomach, so its extraction conducted with ring forceps (Figure 3). The intact gastric mucosa verified and passed to the duodenum; the gastrotomy closed in

two planes with non-absorbable material [Prolene] (Figure 5). Adequate closure verified without leaks with the pneumatic test; the omental patch using the Graham technique and fixed with silk stitches (Figure 6). After confirming hemostasis, the abdominal cavity cleaned, and an abdominal drain in the surgical bed before closing the cavity in layers. The patient admitted to the general surgery ward where he received antibiotic therapy (IV cephalosporin), scheduled analgesia, a nasogastric tube bypass, and fasting for three days. He later tolerated a liquid diet and switched to a soft diet. Discharged due to improvement six days after surgery. Outpatient evaluations revealed no complications.

Discussion

The presented clinical case highlights a complex medical situation involving the formation of a gastric bezoar in a patient with a psychiatric history. Bezoars are accumulations of indigestible material in the gastrointestinal tract, which can cause obstruction and other serious symptoms [7]. The patient in question has a history of moderate intellectual disabilities, organic schizophreniform disorder, and trichotillomania, which increased her risk of developing a trichobezoar. Trichotillomania is an impulse control disorder characterized by a compulsion to pull out hair, which can lead to hair ingestion and, so, trichobezoar formation [8]. Up to 20% of patients with trichotillomania may develop trichobezoars. The clinical presentation of abdominal pain and uncontrollable vomiting is typical in cases of gastric bezoars. Abdominal distension and decreased peristalsis seen during physical examination are common findings in these cases [9]. Computed tomography is essential for diagnosis, as it allows direct visualization of the bezoar and assessment of the extent of the obstruction [10]. Endoscopy is the method of choice for diagnosis and, for treatment, allowing for direct removal of the bezoar [11]. However, in cases of large or complicated bezoars, such as the present one, surgical intervention is necessary [12]. The incidence of bezoars is low, but their impact on patients can be significant, especially in those with added risk factors [13].

The association between psychiatric disorders and bezoar formation is well documented, with studies suggesting that trichotillomania and pica are the main predisposing factors [14]. In addition, abdominal ultrasound can be helpful in finding the nature and location of the bezoar [15]. In this case, the patient underwent an urgent exploratory laparotomy, which allowed for successful removal of the trichobezoar. Studies have shown that laparotomy and laparoscopy are effective in the management of large bezoars [16]. Complications of bezoars include gastric perforation, intestinal obstruction, and hemorrhage. 10 The patient's postoperative recovery was favourable and there were no complications, underscoring the importance of prompt intervention and proper postoperative management. Patient and family education is essential to prevent recurrence, especially in



patients with psychiatric disorders that predispose to bezoar formation [7]. Cognitive-behavioural therapy and other psychiatric interventions may be useful to address the underlying behaviours that lead to bezoar formation [17].

Conclusion

This case highlights the importance of early diagnosis and multidisciplinary management in patients with gastric bezoars, particularly those with a psychiatric history. Surgical intervention was crucial for successful treatment in this case, and ongoing education is vital to prevent recurrences. Furthermore, a comprehensive approach that includes both medical treatment and psychiatric support is essential to ensure a full recovery and prevent future episodes.

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