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# Cystic intestinal pneumatosis in the context of gastric trichobezoar

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***Abstract*—** *As the name implies, the trichobezoar is a consolidation of hair, which, due to its structural properties, it is resistant to digestive enzymes and accumulates in the folds of the gastric mucosa, impacting with food remains and mucus. The starting frame is usually nonspecific and late, patients may remain asymptomatic for several years. Thus, the initial manifestations can range from symptoms common symptoms, such as epigastric discomfort, abdominal pain, nausea and vomiting, to severe cases of malnutrition and anemia due to ulceration of the gastric mucosa or abdomen acute, by intestinal occlusion or viscera perforation. The objective examination highlights in 80% of patients a palpable abdominal mass, typically epigastric, but without distinctive features on palpation, which makes it difficult to differentiate between a possible hepatomegaly or chorda colic, as initially seen in this patient. Halitosis or alopecia can coexist, which often go unnoticed, and require a more detailed anamnesis and subsequent investigation. Because of this presentation, the diagnosis can become difficult, as verified in the clinical case exposed, which eluded the initial clinical and imaging evaluation.*

***Keywords*— Abdominal pain, gastrointestinal, laparotomy, obstruction, perforation trichotillomania, trichophagia**

## I. INTRODUCTION

Gastric trichobezoar corresponds to the presence of a foreign body consisting of hair inside the stomach, being more commonly associated with trichotillomania (impulse to pull out hair) and trichophagia (hair ingestion) behaviors. It represents a rare condition, more present in young females with psychiatric disorders. The initial clinical presentation is usually nonspecific, such as abdominal pain and distension, vomiting, hyporexia, anorexia, weight loss and asthenia. But it can have a late diagnosis with obstruction of the gastrointestinal tract and hollow viscera perforation, with increased morbidity and mortality. We present the case of an adolescent with a psychiatric disorder, who sought the emergency room of the Hospital Universitário Clemente Faria with an acute obstructive abdomen, who underwent exploratory laparotomy, with an incidental finding of cystic intestinal pneumatosis, a rare disease characterized by accumulation of gas in the abdominal wall of the organ.

## II. CASE REPORT

This is the patient B.Y.R.A, 14 years old, accompanied by her mother, with abdominal pain, vomiting and belching for four days, accompanied by an epigastric mass. Trichophagia 4 years ago. She uses fluoxetine and risperidone due to anxiety disorder and schizophrenia. Computed tomography of the entire abdomen was performed, showing a giant mass with a twisted appearance occupying the entire gastric lumen and duodenal bulb, in addition to cystic pneumatosis in the small intestine. Exploratory laparotomy was indicated, with an intraoperative finding of a greatly enlarged stomach and intact walls, in addition to cystic formations on the wall of the small intestine. A gastrostomy was performed with removal of a voluminous trichobezoar, in the shape of a "J", with a putrid odor. Gastrorrhaphy with absorbable suture and excisional biopsy of some cystic lesions of the small intestine, whose anatomopathological study showed formation of reactive mesothelial pseudocysts. The patient had a good evolution and was discharged on the third postoperative day, being referred to the psychiatry outpatient clinic.

## III. DISCUSSION

Trichobezoar formation is a very rare event, estimated to develop in only 1% of trichophagic patients. It originates from the indigestible composition of the hair, with slippery ribbons entangled in the stomach folds, which stand out during peristalsis, allowing the volumetric increase of the hair mass. Depending on the size and location, the trichobezoar may present total or partial

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obstructive symptoms. Intestinal cystic pneumatosis, which is the accumulation of air in the subserosal and submucosal layers, whose etiopathogenesis may correspond to obstruction of the gastrointestinal tract. This theory, the mechanical one, is not the only one, since the bacterial, pulmonary and intestinal mucosa lesions constitute other causes. The basis of treatment is surgical or endoscopic removal of the trichobezoar (the first for bulky conglomerates and the second for smaller ones) and prevention of recurrence, with due psychiatric follow-up.

## IV. FIGURES AND TABLES

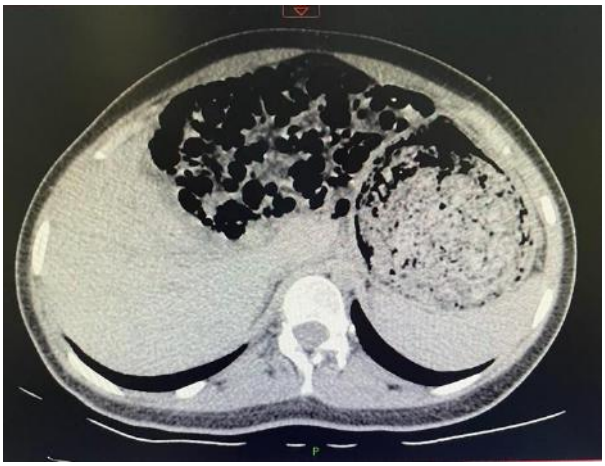

*Fig 1. Tomographic section showing a large gastric heterogeneous mass and cystic intestinal pneumatosis*

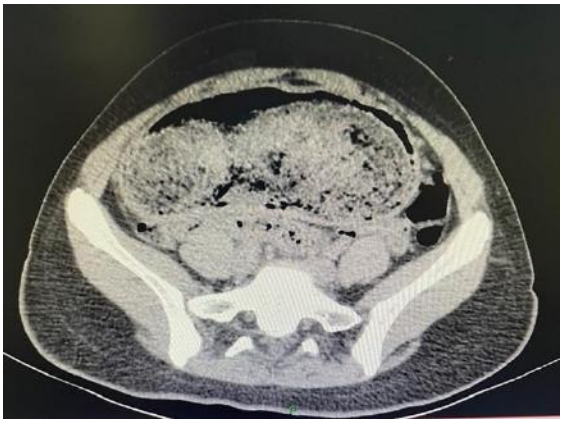

*Fig 2. Tomographic section with voluminous intragastric heterogeneous mass*

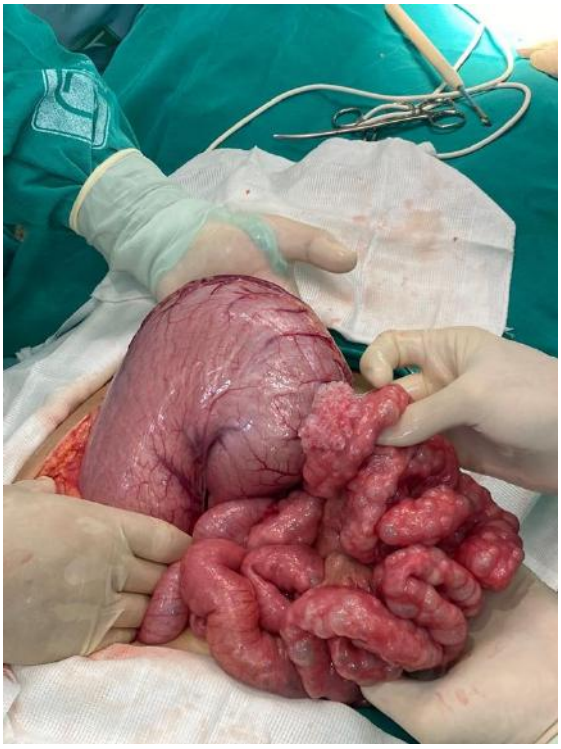

*Fig 3. J-shaped distended stomach and cystic pneumatosis in jejunum*

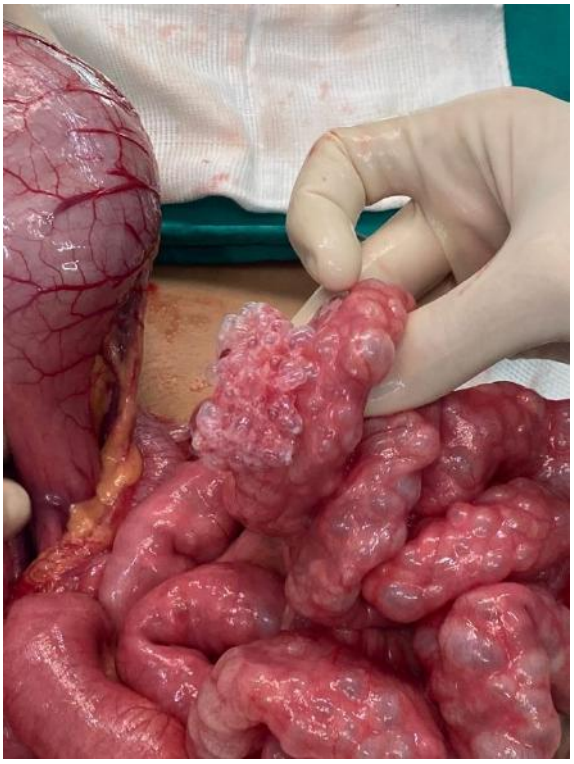

*Fig 4. More detailed image of cystic intestinal pneumatosis*

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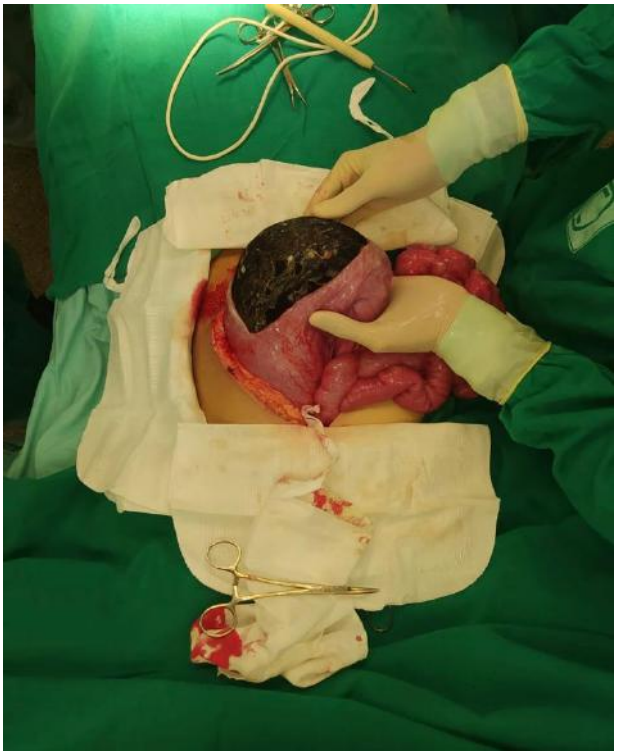

*Fig 5. Gastrostomy showing a voluminous dense mass of twisted dark threads*

*Fig 6. Image of the voluminous trichobezoar that shaped the entire stomach and duodenal bulb*

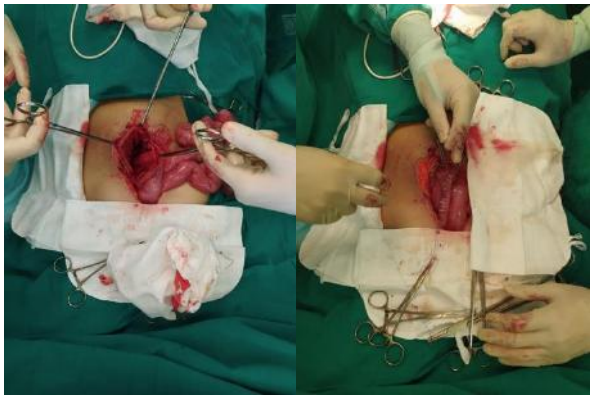

*Fig 7. Details of gastrostomy and gastrorrhaphy*

## V. CONCLUSION

Trichobezoar therapy involves extracting it and resolving the condition and for the prevention of its recurrence, with the intervention of psychology and psychiatry, being essential to perform cognitive-behavioral therapy and social and family support to eliminate pathological behaviors. The trichobezoar turns out to be a serious physical expression of a bigger problem: a psychiatric pathology that, without proper treatment can seriously impair development and future life.

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