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Chronic Abdominal Pain Uncovers Pediatric Gastric Trichobezoar: A CT Scan Case Report

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Abstract **Case Report**

A trichobezoar is a mass of hair accumulated in the gastrointestinal tract. It is a rare, though not exceptional, condition that predominantly occurs in young females. The diagnosis of gastrointestinal trichobezoar is primarily based on imaging techniques, which allow the identification of the typical characteristics of the intragastric mass. We report the case of a 10-year-old girl, with no significant medical history, presenting with chronic epigastric pain and vomiting for the past 6 months. Clinical examination reveals a painful epigastric mass without any other signs. The biological tests are normal. An abdominal X-ray reveals a localized opacity in the gastric area. Ultrasound shows an antrum-pyloric intragastric mass with hyperechogenicity and acoustic shadowing. Abdominal CT scan revealed findings consistent with a gastrointestinal trichobezoar, confirmed by surgery.

Keywords: CT scan, Gastrointestinal trichobezoar, chronic epigastric pain.

INTRODUCTION

A trichobezoar is a mass of hair accumulated in the gastrointestinal tract. It is a rare but not exceptional condition, primarily occurring in young girls, often associated with a psychological disorder such as pica, which may or may not be linked to an underlying mental condition and/or intellectual disability [1,2].

The diagnosis of gastrointestinal trichobezoar is primarily based on imaging, which allows for the identification of the typical characteristics of the intragastric mass. These non-invasive and accessible tests are crucial for differentiating between other causes of abdominal masses, thus enabling quick and tailored management [3].

We report the case of a girl in whom the diagnosis of a gastrointestinal trichobezoar was confirmed by CT scan and abdominal ultrasound.

CASE PRESENTATION

A 10-year-old girl with no significant medical history presents to the pediatric emergency department with chronic abdominal pain in the form of epigastric pain, persisting for 6 months, associated with vomiting and no other accompanying signs. On clinical examination, the patient is afebrile, hemodynamically and respiratory stable, with the presence of a tender epigastric mass on palpation, without rigidity or other associated signs.

The laboratory tests are normal.

The abdominal X-ray reveals an opacity projected onto the gastric region. Abdominal ultrasound shows an antrum-pyloric intragastric mass, hyperechoic with posterior acoustic shadowing, measuring 11.7 cm in its largest diameter, suggestive of a trichobezoar.

Abdominal CT scan revealed findings consistent with a gastrointestinal trichobezoar, confirmed by surgery.

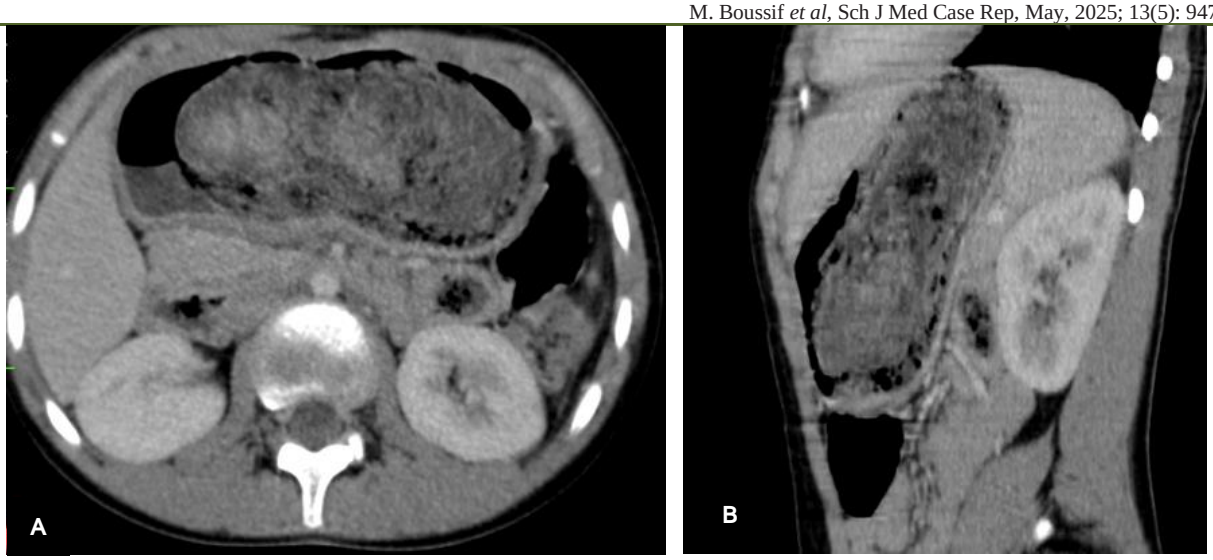

Figure 1: Abdominal CT scan showing a gastric trichobezoar. Axial view (A): Heterogeneous intraluminal mass with trapped air. Sagittal view (B): Elongated filiform lesion along the greater curvature, without enhancement after contrast agent administration

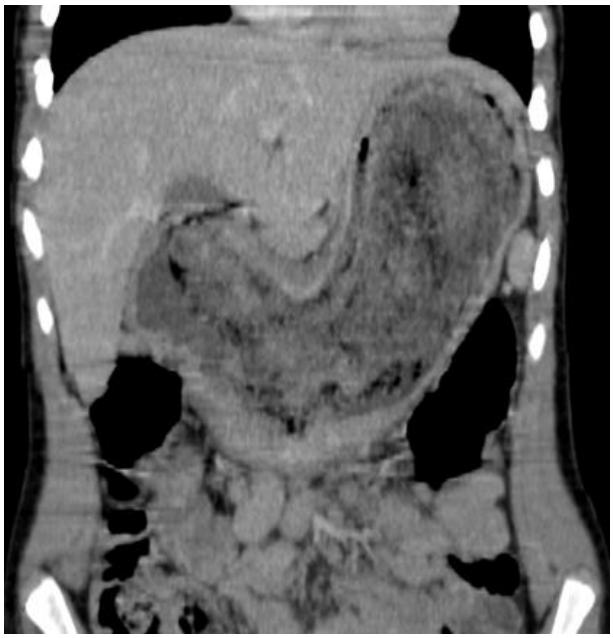

Figure 2: Abdominal CT, coronal view – gastrointestinal trichobezoar. Heterogeneous intragastric mass with air inclusions, extending through the pylorus into the duodenum, without adhesion to the gastric wall

DISCUSSION

A trichobezoar is the presence of a mass composed of hair and food debris in the gastrointestinal tract, most commonly in the stomach. This rare and underrecognized condition primarily affects females under the age of 30, particularly adolescents with a history of trichotillomania and/or trichophagia [1].

The most frequently observed symptoms of trichobezoar in children, in order of frequency, include abdominal pain, often in the form of epigastric pain, followed by nausea and vomiting. Loss of appetite, gastrointestinal disturbances, early satiety, and foul-smelling breath are also common. Clinical examination reveals a firm and sometimes mobile abdominal mass, often palpable in the epigastric region. Signs of trichotillomania, such as areas of alopecia, may also be present [4]. Biological tests have no diagnostic specificity, even when they are abnormal [2].

Once the diagnosis of trichobezoar is clinically suspected, it is necessary to confirm it through additional tests.

On the abdominal X-ray (AXR), the trichobezoar appears as a heterogeneous radio-opaque mass of soft tissue, following the curvature of the stomach. This opacity has a granular appearance due to air trapped within the bezoar, and it is mobile with changes in position, appearing as a dome-shaped

protrusion at the level of the gastric fluid, creating an 'iceberg' appearance [1]. Abdominal ultrasound is the first-line imaging modality to be performed when evaluating an abdominal mass in children [1]. It allows diagnosis in approximately 25% of cases by visualizing a superficial curvilinear hyperechoic band with a clear posterior acoustic shadow, occupying the gastric region. The mass is mobile with changes in the position of the ultrasound probe, the patient's position, and during liquid ingestion [5,6,7]. This sonographic appearance of the mass results from the hyperechogenicity of the hair and the presence of multiple acoustic interfaces [1].

CT can be considered the imaging modality of choice for confirming a gastrointestinal bezoar [8]. On CT, a trichobezoar appears as a heterogeneous mass of variable size, occupying nearly the entire gastric lumen, composed of multiple concentric rings of varying densities arranged in an onion bulb pattern. Two constant and pathognomonic signs are the presence of tiny air bubbles scattered within the mass and the absence of any attachment to the gastric wall. CT also allows precise assessment of the bezoar's size and extent [9].

These imaging techniques complement endoscopy in confirming the diagnosis and assessing the extent of the trichobezoar [10].

The treatment of trichobezoar is primarily surgical, whether open or laparoscopic, allowing for its removal through gastrotomy and/or enterotomy. [2]

CONCLUSION

Trichobezoar is a rare gastrointestinal condition that should be suspected in cases of chronic abdominal pain and a palpable mass in the epigastric region, particularly in young girls exhibiting signs of trichophagia. Radiological exploration, particularly ultrasound and computed tomography, plays a crucial role in confirming the nature of the mass, determining its extent, and guiding management.

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