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Gastroduodenal Trichobezoar: A Case Report

Esperence Jonathan Ongoka Ahouet[1*], Fakourou Sidibe[1], Btissam Zouita[1], Dounia Basraoui[1], Hicham Jalal[1]

[1]Radiology Department, Mother and Child Hospital, CHU Mohammed VI, Marrakech, Faculty of Medicine and Pharmacy of Marrakech, Cadi Ayyad University, Marrakech, Morocco

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***Corresponding author:** Esperence Jonathan Ongoka Ahouet
Radiology Department, Mother and Child Hospital, CHU Mohammed VI, Marrakech, Faculty of Medicine and Pharmacy of Marrakech, Cadi Ayyad University, Marrakech, Morocco

Abstract **Case Report**

Gastroduodenal trichobezoar is a rare condition, which is easily diagnosed in a suggestive setting. We report the case of a 12 year old female patient with a history of trichophagia, who was admitted to hospital with a large epigastric mass. Imaging was performed, including ultrasound, an unprepared abdomen and an abdominal CT scan, which revealed heterogeneous lesions occupying the entire stomach, not taking contrast and appearing independent of the gastric wall. The aim of our work is to show the interest of imaging in the positive diagnosis of trichobezoar as well as its extension to the gastrointestinal tract and the postoperative control.

Keywords: Gastroduodenal trichobezoar, trichophagia, heterogeneous lesions, gastrointestinal tract.

INTRODUCTION

The term bezoar refers to various foreign bodies found in the gastrointestinal tract. Most are formed in the stomach by the accumulation of non-digestible substances, such as certain plant fibres (phytobezoar), hair (trichobezoar), concentrated milk products (lactobezoar), and more rarely certain drugs (pharmacobezoar) [1-4]. Trichobezoars usually result from the accumulation of hair, but in rare cases they can be paper mache, wool from carpets or clothing [1-4]. Although rare but not exceptional, trichobezoar usually occurs in children or young adolescent girls with psychological disorders [5]. We report a case of gastroduodenal trichobezoar.

OBSERVATION

A 12-year-old girl with a history of trichophagia was referred to the pediatric ward for a large epigastric mass without other associated signs. Ultrasound visualized a large gastric mass in the form of a hyperechoic arcuate line with a posterior shadow cone (fig. 1), highly suggestive of bezoar [1-4]. However, the precise extent proved difficult to assess by ultrasound. An unprepared abdominal X-ray was also performed and showed a large opacity with distension of the colonic frame and a granular appearance reflecting air bubbles (fig. 2). In agreement with the pediatric surgery team, an abdominal CT scan without PDC injection was performed, which revealed a large gastric distension with a heterogeneous hypodense lesion formation, with regular contours measuring 14 x 6 x 20 cm, appearing to be totally independent of the gastric wall, containing air bubbles and calcifications consisting of a multitude of concentric circles of different densities distributed like onion bulbs (fig.3 and fig.4). She underwent surgical removal of the gastroduodenal trichobezoar through a longitudinal anterior gastrotomy (fig.5). The post-operative course was simple.

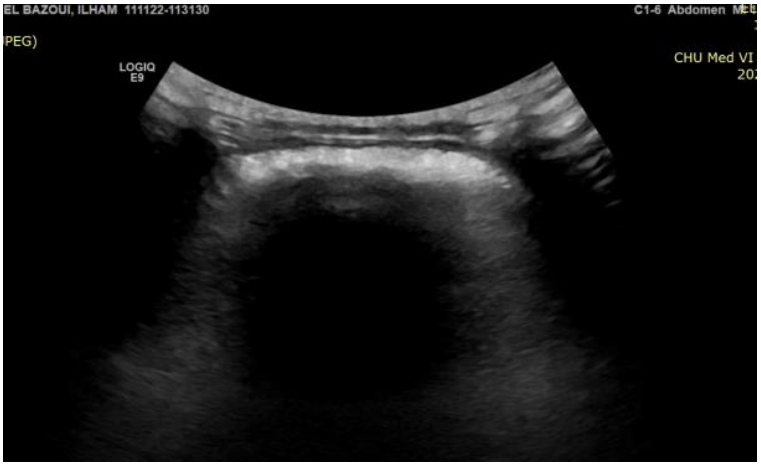

Figure 1: Cross-sectional abdominal ultrasound

Hyperechoic arciform structure followed by a frank posterior shadow cone cone in the epigastric region.

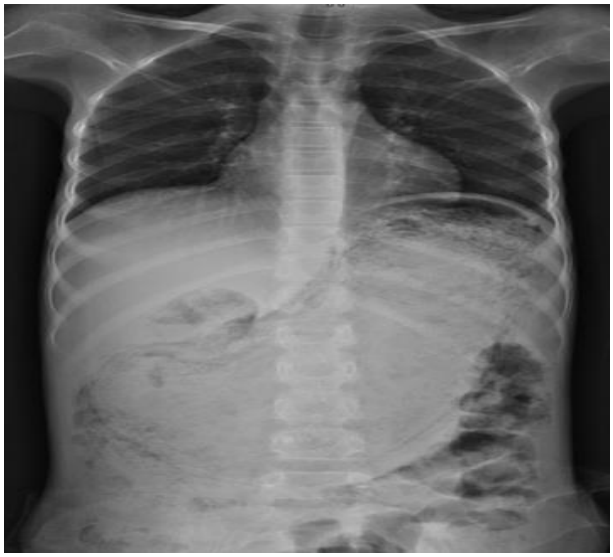

Figure 2: Unprepared Abdomen (UAP)

A voluminous opacity with distension of the stomach to the colonic framework with a granular appearance reflecting air bubbles.

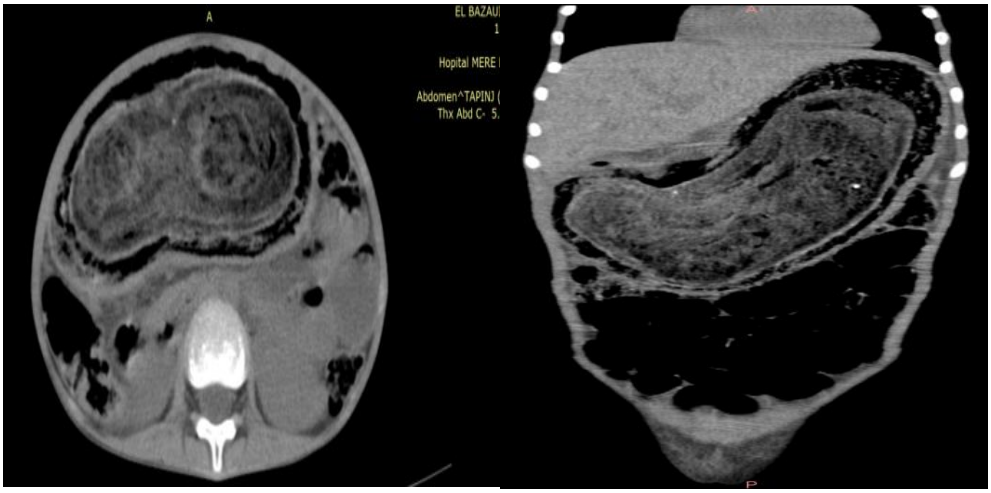

Figure 3 **Figure 4**

Figure 3 and 4: Abdominal CT scan without PDC injection in axial and coronal sections

Significant gastric distension with a heterogeneous hypodense lesion formation, with regular contours appearing to be totally independent of the gastric wall, containing air bubbles and calcifications consisting of a multitude of concentric circles of different densities distributed like onion bulbs.

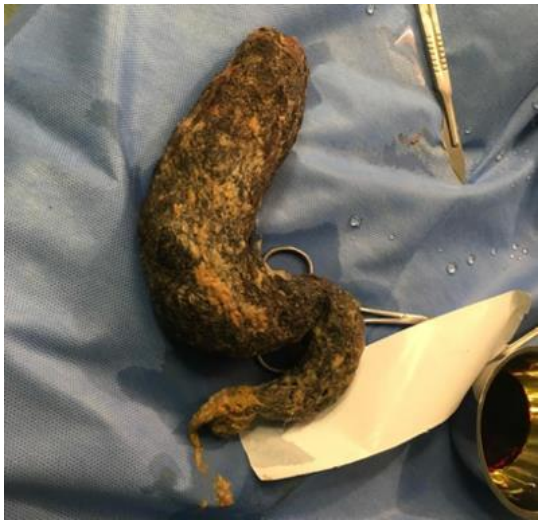

Figure 5: Gastroduodenal trichobezoar surgical specimen

DISCUSSION

Trichobezoar is a rare condition, and in children it represents 0.15% of gastrointestinal foreign bodies. The female sex is the most affected (90% of cases) and the age of onset is in 80% of cases less than 30 years, with a peak of incidence between 10 and 19 years [6], our patient is also included in this age group. It is important to note that certain environmental and psychological factors may predispose to the development of trichobezoar. The gastric location is the most frequent, the hair curls thus ingested are caught by the gastric mucosa to which they attach and form a more or less complex tangle, a sort of grid at the level of which the food agglomerates, creating a compact mass intimately attached to the gastric wall. The trichobezoar formed in this way may extend into the small intestine, sometimes reaching the last ileal loop, or even the transverse colon, thus creating Rapunzel's syndrome [7]. In our patient, it was a trichobezoar involving the stomach and duodenum. This condition can remain asymptomatic for a long time, which explains the delay in diagnosis, which can be up to several years. The clinical symptoms are very varied and non-specific [8]. Digestive disorders are the most common and include abdominal pain, mainly epigastric pain, nausea, vomiting, diarrhea, constipation, peptic esophagitis and sometimes an unbearable odour of the breath due to food putrefaction, anorexia and weight loss may be the major clinical feature [9-11]. It may be revealed at the outset by an acute complication; Such as gastrointestinal hemorrhage, acute intestinal obstruction, gastrointestinal perforation, or acute pancreatitis attributed to obstruction of the ampulla of Vater by a trichobezoar extension or to reactive oedema, acute appendicitis, cholestatic jaundice, gastric or duodenal ulcer, vitamin B12 deficiency, and, rarely, a large bowel volvulus [9-12]. Clinical examination, apart from complications, reveals an abdominal mass, usually in the left hypochondrium and/or epigastrium, which should not be missed in the diagnosis [13]. The discovery of a localized patch of alopecia, of a mechanical nature, is a major sign of orientation and should lead to a search for trichophagia [13]. Once the diagnosis of trichobezoar has been made, the examination of choice is oesogastroduodenal fibroscopy, which can be of diagnostic and therapeutic interest in small, localized gastric forms. In giant trichobezoar, fibroscopy is insufficient, as it does not allow the extension of the jejuno-ileal intestines to be assessed. The trichobezoar appears on CT scan as a mass of variable volume, heterogeneous, occupying almost the entire gastric lumen and consisting of a multitude of concentric circles of different densities distributed like onion bulbs. Two pathognomonic and consistent signs are the presence of tiny air bubbles scattered within the mass and the absence of any attachment of the mass to the gastric wall [1, 4, 14]. Magnetic resonance imaging (MRI) is also diagnostic. The mass is variable in signal in T1 and T2 weighting and does not take up contrast after injection of gadolinium [15]. Treatment depends on the size and the presence or absence of complications. For a small gastric trichobezoar, it is usually endoscopically removable, but if it is large and extensive to the bowels or at the stage of complications, surgery is the treatment of choice [16].

Laparotomy with extraction of the trichobezoar by gastrotomy, possibly supplemented by enterotomy, is the treatment for extensive forms and cases that fail endoscopic treatment.

CONCLUSION

Trichobezoar is a rare condition that usually occurs in adolescents with psychic disorders. The clinical symptomatology is very varied. The diagnosis is suspected by the association of alopecia, trichomania and digestive disorders, and is confirmed on the basis of oesogastroduodenal fibroscopy and imaging data, which guide the therapeutic approach. In addition to surgery, psychological care is an essential part of the treatment and especially of the prevention of recurrences.

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