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Letter to the Editor

PHYTOBEZOAR IN THE TERMINAL ILEUM: AN UNCOMMON CAUSE OF BOWEL OBSTRUCTION

Fitobezoar em íleo terminal: uma causa rara de obstrução intestinal

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INTRODUCTION

Phytobezoars, although rare, are known to cause mechanical obstruction in the digestive tract[1,2,7]. They are responsible for approximately 2% to 3% of all small intestine obstructions[1,2]. They are composed of agglomerated matter indigestible to humans, such as hairs, seeds and fibers from vegetables and fruit[2], especially persimmon and pineapple[2,3,4]. They mainly occur in patients who have had abdominal surgery[2], mainly gastric operations[1,2,3,6,7]. In patients without prior surgery, reports in literature show the main cause as ingestion of persimmon and orange with the pith; other less frequent causes are nuts, coconut, tomatoes, cherries and raisins[7].

Depending on site, clinical manifestations can vary between acute abdominal syndrome and the patient being completely asymptomatic[4,8]. Imaging is useful in diagnosis[4,6,8], but most cases are only diagnosed during surgery[1]. The objective of treatment is removal and preventing recurrence[1,3,4,5].

CASE REPORT

A female 85 year old patient sought medical attention with four months of diffuse moderate colicky abdominal pain, with lulls and stronger periods. It was associated to nausea and food vomiting. She denied prior operations. At examination she presented dehydrated (++/4+), anicteric, no fever, AP=90X60 mmHg, abdominal distention, increased abdominal rumbling noises, abdominal hypertympanism, and pain to palpation in the hypogastrium, characterizing intestinal occlusion.

Biochemistry exams showed no alterations. Abdominal computer tomography of the ileocecal valve region showed the presence of an oval image suggestive of enteroenteric intususception (Figure 1).

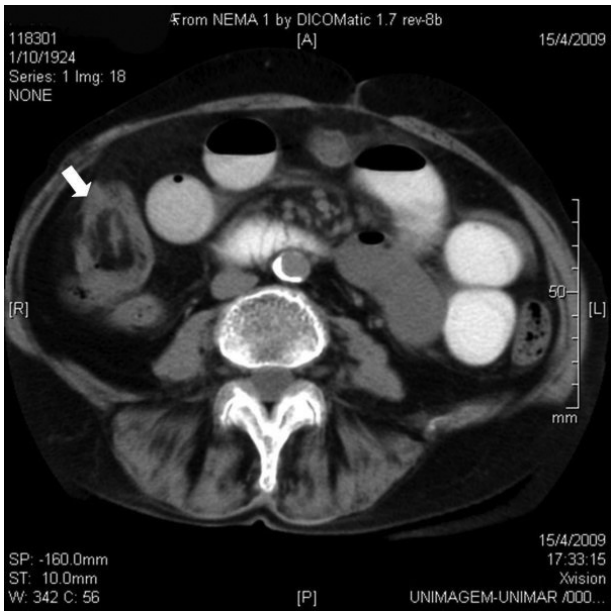

FIGURE 1 - Abdominal computed tomography scan showing dilated loops of small bowel proximal to the obstruction by enteroenteric intussusception (arrow)

After venous rehydration, the patient underwent exploratory laparotomy, during which an intra-luminal mobile structure was found in the terminal ileum. An attempt to manipulate the foreign body towards the ileocecal valve was unsuccessful. Enterotomy was then performed and a yellow colored, about 6 cm long and 2 cm diameter material was removed. More careful examination showed to be a phytobezoar of pineapple. Anatomopathological examination revealed degenerated vegetable matter.

The patient's condition deteriorated after surgery, needing intensive care unit treatment and died on the 5th day after surgery.

DISCUSSION

Small intestine involvement is rare[2,3,5,8], making up only 5% of all phytobezoar cases[2,3]. Retrospective study

showed that from a total of 375 intestine obstruction cases, only 15 were caused by phytobezoars, of which 13 were in the terminal ileum[1], as in this case.

Its development is a multifactor process which involves anatomical, dietetic, and food factors[1]. The main predisposing factors are gastric operations[1,2,3,5,6,7], as they can cause disturbances in gastric motility, secondary to vagotomy, which accelerates gastric emptying and reduces gastric acid secretion, leading to more viscous stomach contents for the intestine. In addition, gastrectomy and gastroenterostomy allow large diameter solid material to pass from the stomach to the small intestine[1,3,4].

The terminal ileum region being the narrowest part of the small intestine with relatively weak peristalsis[3,5], phytobezoars are more likely to be lodge in this site[3]. In this location, the main causes are persimmon and oranges (pith)[7].

Other predisposing factors include diabetic gastroparesis, poor mastication, poor dental health, hypothyroidism, food abuse with high fiber content, and medication which affects gastric motility[1,3,4,6]. One of the main symptoms is intestinal occlusion[4,5,8], with abdominal and epigastric pain, vomiting and nausea, abdominal plenitude or distension, dysphagia, and anorexia with weight loss, while some patients can even present gastrointestinal hemorrhage[3,4].

Intestinal occlusion, the most frequent cause, can be found in up to 60% of phytobezoar[4] cases and generally requires surgical treatment[5]. Generally this occlusion results from gastric phytobezoar migration, or could first form in the small intestine, often in association with other diseases of diverticulum, stenosis, or tumor origin[4,5,6].

These cases are often not diagnosed before surgery due to the absence of specific signs, require clinical or complimentary examinations[1,3,8]. Most published series have emphasized a typical triad for diagnosis: clinical exam, abdominal X-ray, and small intestine study[1]. However the triad only gives a pre-surgical diagnosis in 10% of cases[1]. However abdominal tomography allows confirmation of obstruction diagnosis, obstruction site, and eventual identification of the cause[1,3,6,8]. Laparoscopy can also be useful in diagnosis and treatment of intestinal phytobezoar[3]. The aim of treatment is to empty the intestinal lumen, treat possible complications and avoid recurrence[1,3,4,5]. If the phyobezoar is soft, it can probably be manipulated through the ileocecal junction[1,2,3,7]. If not, enterotomy must follow with direct extraction[1,3,4,7]. However, this should be avoided at all costs due to the risk of contaminating the abdominal or cutaneous cavity[3]. Intestine resection is rarely indicated and should be reserved for cases of intestinal necrosis[1,3,4]. Also the entire gastrointestinal tract should be carefully examined during surgery[2,3,5,7], to exclude the presence of a synchronous phytobezoar[2,3,4,5,7].

In relation to the unfavorable evolution in this patient, Erzurumlu et al.[4] described this evolution as common (32%) and generally caused by multiple organ failure or sepsis.

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