Intestinal Obstruction Caused by Recurrent Phytobezoar: Resolved With Non-surgical Treatment With Cellulase

Phytobezoars are hard masses of undigested plant material that accumulate in the stomach and small intestine. Although they may develop due to a fiber-rich diet in patients with poor teeth and insufficient chewing, and poor digestion due to gastric hypomotility and hypochlorhydria almost always present, with gastric stasis and vegetable fiber retention. This can occur as a consequence of previous gastrointestinal surgery, in cases of vagotomy with pyloroplasty or partial gastrectomy, and more rarely in other gastric motility disorders, such as diabetic gastroparesis, hypothyroidism or muscular dystrophy.

These masses can cause dyspeptic symptoms and can lead to complications, including digestive hemorrhage or gastric perforation. If they pass into the small intestine, a circumstance that is made easier when the pylorus is absent, an intestinal obstruction may occur.

Conventional treatment of bowel obstruction due to phytobezoar is surgical, by means of enterotomy and extraction. We present a case of complete intestinal obstruction due to a phytobezoar lodged in the distal ileum, which was successfully treated conservatively with the administration of cellulase through a nasogastric tube.

The patient was a 58-year-old male with a history of type 2 diabetes mellitus, HTN, hyperuricemia, previous vagotomy and pyloroplasty due to a bleeding peptic ulcer, appendectomy, septoplasty and arthroscopic meniscectomy. He had had bowel obstruction on 2 previous occasions due to phytobezoar impaction in the small intestine and had undergone surgical extraction of the bezoar by enterotomy. He was being treated with metformin, valsartan, allopurinol, pantoprazole, tetrazelam and metoclopramide.

He came to our Emergency Department due to symptoms during the previous 36 h that included pain, abdominal distension, nausea, vomiting and no bowel movements. Simple abdominal x-ray showed dilation of the loops of the small intestine with absence of distal gas, suggestive of intestinal obstruction. Abdominal CT (Fig. 1) showed intestinal obstruction due to a voluminous bezoar impacted in the distal ileum, accompanied by important distension of the intestinal loops. He was in good general condition and the work-up showed normal leukocyte count, mild neutrophilia and hyperglycemia, with the remaining parameters at normal levels.

We decided to take a conservative approach and to try to dissolve the bezoar with cellulase. While waiting for the cellulase, treatment was initiated with bowel rest, nasogastric tube suction and total parenteral nutrition. The symptoms were tolerated by the patient, but there was complete intestinal closure. Intestinal suction was applied through the nasogastric tube, with clear worsening of the obstruction.

**Fig. 1 – Abdominal CT: bowel obstruction due to a voluminous bezoar impact in the distal ileum; important distension of the small bowel loops.**
Conservative treatment of phytobezoars, either endoscopic or with dissolution, has been used in gastric bezoars or in proximal portions of the small intestine, such as the effenter loop of a Billroth II gastrectomy. We have not found references about its use as a solvent in distal bezoars in the small intestine with bowel obstruction.

Although the treatment of bowel obstruction due to a bezoar is surgical, in selected cases with a firm diagnosis, good clinical tolerance, where decompression is possible through a nasogastric tube and in the absence of criteria of intestinal ischemia, the administration of cellulase could be an alternative.

REFERENCES


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