

Letters to the Editor

Intestinal obstruction secondary to endoscopic capsule retention

Key words: Endoscopic capsule. Intestinal obstruction. Crohn's disease. Mechanical obstruction.

Dear Editor,

Endoscopic capsule (EC) allows images to be obtained of the small bowel mucosa. The main indication is the study of the gastrointestinal bleeding of obscure origin (1). Capsule retention is uncommon, for which reason we present a case that developed intestinal obstruction after capsule ingestion.

Case report

An 83-year-old female patient was studied for intestinal bleeding of obscure cause. An EC was carried out and showed its retention in a small-bowel stenosis. Eight days after ingestion of the EC, the patient came to the emergency room because of obstructive symptoms that lasted 8 hours. Laboratory test results were as follows: $9,400 \times 10^3$ leukocytes/ μL ; hemoglobin 11.2 g/dL; platelets and coagulation normal. An abdominal radiography showed: distension of the small bowel and an artefact corresponding to an endoscopic capsule. Computed tomography scan (Fig. 1) was informed as a complete mechanic intestinal obstruction secondary to EC. As a result, open abdominal surgery was indicated. It showed small-bowel distension proximal to four inflammatory intestinal stenosis. One of these stenosis was blocking completely the small-bowel and within it the EC was palpable. Approximately, 30 cm of ileum were resected (including three of the four stenosis) and a mechanic latero-lateral anastomosis was performed. The forth stenosis was repaired by a stricture-

plastie. The patient progressed favourably and was discharged seven days after the surgery. The histology of the specimen was compatible with the diagnose of Crohn's disease.

Discussion

The incidence of capsule retention (defined as presence of the capsule in the gastrointestinal tract at least 2 weeks after ingestion) varies widely, as it depends on the indication for which EC was performed (2): occult intestinal bleeding, 2.2% (3); suspected Crohn's disease, 5.4% (4); confirmed Crohn's disease, 13% (5); celiac disease, less than 1%. Furthermore, there is a series of individual risk factors (6) for retention: enteritis following radiotherapy, previous abdominal surgery, intussusception, stricture due to NSAIDs (non-steroidal anti-inflammatory drugs). In the presence of any of these factors EC can be contraindicated or an intestinal transit performed to rule out stenosis. However, bearing



Fig. 1. Transversal CT image showing complete bowel obstruction at the ileum. Note the sudden change in calibre of the ileal loops secondary to the presence of a foreign body causing partial distortion compatible with an endoscopic capsule.

in mind that it has a low sensitivity (5) and that some patients with retention will be false negatives on exploration, it is debated whether it should be performed or not. Some authors recommend the Patency[®] or Agile[®] capsule (Givenimaging, Israel), which dissolves inside the small bowel some 30-80 hours after ingestion, leaving a small remnant (3 x 31 mm) which is excreted spontaneously.

Our case had no risk factors, previous surgery or clinical suspicion of Crohn's disease. In fact the patient had no previous abdominal pain, asthenia, or weight loss; the indication was for occult bleeding (which has the lowest incidence of retention). The patient's clinical features were complete obstruction, which is exceptional as most of the retentions reported are asymptomatic (the odd case of transitory abdominal pain due to the capsule passing spontaneously through a stricture). With asymptomatic retention, conservative management is usually proposed (4), as it will be excreted spontaneously or with medical treatment (corticosteroids if the strictures are inflammatory) or with endoscopy. Programmed surgery would be indicated in the event of an asymptomatic retention that cannot be resolved using endoscopic methods. Emergency surgery is reserved for exceptional cases of complete bowel obstruction.

We conclude that despite the existence of risk factors that facilitate the suspicion of this complication and the possibility of using an alternative diagnostic method, there are a small number of atypical cases that must be taken into consideration.

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