

Letters to the Editor

Duodenal vascular compression syndrome: Cause to be considered in cases of intestinal obstruction

Key words: Superior mesenteric artery syndrome. Intestinal obstruction.

Dear Editor,

A 18-years-old female referred, for to the last 6 months, epigastric pain associated with food intake, nausea and occasional vomiting, which relieve the symptoms. Upper gastrointestinal series was normal and endoscopy reported follicular gastritis and *Helicobacter Pylori* positive. She was treated with eradication therapy and prokinetic drugs.

Two months later, she presented more frequent vomiting and she lost 5 kg. Transglutaminase antibodies were normal. We repeated the upper gastrointestinal series: gastroesophageal reflux until the middle third of the esophagus, gastric hypertonus, dolichogastry, pyloric peristalsis, normal evacuation and intermittent detention at level of L2, independent of changes in supine position, without significant prestenotic dilatation. We required an abdominal tomography where a duodenal vascular compression was objectified with an aortomesentérico space of less than 5 mm and dilated duodenal flexure (Fig. 1).

The patient was admitted for electrolyte replacement and was operated on electively. We performed a duodenojejunostomy with Roux-en-Y reconstruction, by laparotomy. The evolution was satisfactory, with complete oral intake in 3 days and recovery of 8 kg of weight at 6 months. We repeated endoscopy: gastritis was resolved and upper gastrointestinal series showed gastroduodenal normal passage through the anastomosis.

Discussion

Duodenal vascular compression syndrome is a rare condition first described in 1861 by Rokitansky. It consists in reducing the angular space between the aorta and superior mesenteric artery at its origin, where the third duodenal portion is situated. It mainly affects women between 10 and 25 years of age (1), with an incidence of 0.1 to 0.33% (2).

The duodenum crosses the spine at the level of L3 and the superior mesenteric artery arises from the aorta at the level of L1; therefore, every condition that causes decrease in the paraduodenal fat or alters the normal disposition of the lumbar spine can favor this obstruction. Thus, there are predisposing factors, such as spinal cord injury, sudden weight loss... (2), and anatomical variations including changes in the insertion of the ligaments or changes in vascular structures (3).

The clinical manifestations are postprandial epigastric pain, nausea and vomiting that relieve the symptoms, and weight loss (4). The diagnosis is made with upper gastrointestinal series and abdominal CT with intravenous contrast (5). The normal range is an area greater than 10 mm and an angle of 38-65° (6). Endoscopy reports only pangastritis (3).



Fig. 1. Tomography.

The most accepted treatment is shunting duodenojejunal with mobilization of the duodenum after Kocher maneuver. The published results are good, even by laparoscopy (7). In patients who have had a sudden weight loss (6), artificial recovery is stimulated, in order to increase the retroperitoneal fat. It has also proposed to release completely the duodenum, sectioning it and establishing termino-terminal duodeno-duodenal anastomosis ahead of the mesenteric artery (8).

In conclusion, this is a condition with vague symptoms and difficult diagnosis, sometimes made by exclusion. However, the surgery is simple and evolution is good, so we believe essential to consider always this possibility in the presence of a bowel obstruction.

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