Superior Mesenteric Artery Syndrome: An Acute Complication 10 Years after Laparoscopic Adjustable Gastric Banding

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Clinical Image

A 58-year-old female patient presented to the emergency department with a 3-day history of abdominal pain and distension associated with persistent nausea.

Her previous medical history was significant for adjustable gastric banding placed 10 years earlier. Following bariatric surgery, the patient had lost 46 kg, reaching a weight and body mass index of 60 kg and 22.6 kg/m², respectively (% excess weight loss 92.9%).

The gastric band was deflated and a Nasogastric Tube (NGT) inserted for decompression with prompt improvement of symptoms (24 hr NGT drainage: 7000 mL). A plain abdominal X-ray was performed (Figure 1) followed by CT-scan which demonstrated an abrupt cut-off at the third portion of the duodenum, where a reduction of the aorto-mesenteric distance (3.08 mm) was observed (Figure 2). The patient was diagnosed with a Superior Mesenteric Artery Syndrome (SMAS).

The patient was kept nil orally for bowel rest, total parenteral nutrition with high caloric content and prokinetic drugs were used to improve gastric emptying with resolution of symptoms.

Figure 1: A: Abdominal X-ray showing dilation of the stomach and proximal duodenum with large air-fluid levels. Note the correct positioning of the gastric band with no related local complications. B: Upper gastrointestinal series showing substantial reduction of gastroduodenal dilation with a delayed transit time through the third-fourth part of duodenum. C: The duodenum displays normal caliber in its distal portion and progression of barium to the jejunum is documented.

Figure 2: Axial CT scan demonstrating a significantly dilated stomach and duodenum with cut-off sign at the level of the third-fourth portion and a reduced aorto-mesenteric distance of 3.08 mm causing duodenal compression (a,b).

AGB: Adjustable Gastric Banding; SMA: Superior Mesenteric Artery; A: Aorta; D: Duodenum.