

Iatrogenic superior mesenteric artery syndrome

Key words: Duodenal obstruction. Scoliosis. Adolescent.

Dear Editor,

We have carefully read the article "Superior mesenteric artery syndrome: an uncommon cause of intestinal obstruction" by José Barquín-Yagüez et al. (1) and we would like to report one case with the same diagnosis but with another etiology.

A previously healthy 15-year-old girl underwent posterior T2-L3 fusion with instrumentation due to idiopathic scoliosis. Subsequently, she presented with nausea, intermittent bilious vomiting and anorexia on day four of the postoperative period. Eight days later, she presented to the Emergency Department and an 11.5% weight loss was noted, which corresponded to a body mass index (BMI) of 20 kg/m² (Z-score: -0.11). The abdominal X-ray showed a distended stomach and intra-abdominal air. Abdominal computed tomography scan (CT-scan) (Fig. 1A) revealed an angle and aortic-mesenteric distance reduction (3 mm) and duodenal obstruction with abrupt cutoff in third portion that confirmed the diagnosis of superior mesenteric artery syndrome (SMAS). During placement of a nasojejunal feeding tube (NJT), upper gastrointestinal endoscopy showed a pulsatile extrinsic compression of the third portion of the duodenum (Fig. 1B). Enteral nutritional support via NJT was maintained until she was able to tolerate progressive oral nutrition intake. The patient was discharged 32 days after admission, asymptomatic with a BMI of 23.02 kg/m² (z-score: -0.14).

Discussion

SMAS is a rare entity and the diagnosis requires a high level of suspicion. However, the incidence after spine surgery is 1% to 4.7% (2-4). About 50% of patients present symptoms during the first week after spine surgery (4). The treatment is usually conservative but surgical intervention should be considered if this fails. In this particular case, weight loss plus an anatomic change could indicate a high probability

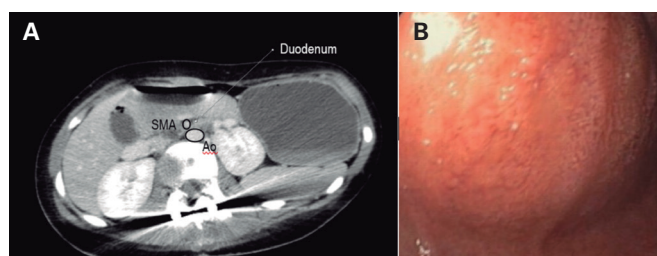


Fig. 1. A. Abdominal CT-scan. Proximal distension of the second portion of the duodenum and compression of third portion (arrow) with a reduced distance between the superior mesenteric artery (SMA) and aorta (Ao). B. Upper gastrointestinal endoscopy. Extrinsic compression of the third portion of the duodenum.

of the need for surgical treatment. The early recognition of this entity and prompt therapy played a key role in preventing a worse outcome.

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References

1. Barquín-Yagüez J, Abadía-Barno P, García-Pérez JC. Superior mesenteric artery syndrome: an uncommon cause of intestinal obstruction. *Rev Esp Enferm Dig* 2017;109(1):60.
2. Lam DJ, Lee JZ, Chua JH, et al. Superior mesenteric artery syndrome following surgery for adolescent idiopathic scoliosis: a case series, review of the literature, and an algorithm for management. *J Pediatr Orthop B* 2014;23(4):312-8. DOI: 10.1097/BPB.0000000000000050
3. Hutchinson DT, Bassett GS. Superior mesenteric artery syndrome in pediatric orthopedic patients. *Clin Orthop Relat Res* 1990;(250):250-7. DOI: 10.1097/00003086-199001000-00034
4. Tsirikos AI, Anakwe RE, Baker AD. Late presentation of superior mesenteric artery syndrome following scoliosis surgery: a case report. *J Med case Rep* 2008;2:9. DOI: 10.1186/1752-1947-2-9