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GI IMAGE

Giant Meckel's Diverticulum

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Case Presentation

A 63-year-old patient was diagnosed with asthenia evolving since few months. Past medical history revealed an appendectomy through McBurney's incision in childhood and laparoscopic cholecystectomy performed 6 years ago. No abdominal anomalies were found at the exploration during this procedure, nor on the CT scan performed at this moment. The patient had no complaints. At physical examination, there was no abdominal pain, no anal bleeding, and no palpable mass and the pelvic exam was normal. Blood test demonstrated an iron-deficiency anemia. The patient was referred to a gastroenterologist who performed EGD and colonoscopy: both were normal. A CT scan was performed (Fig. 1).

We decided to perform an explorative laparoscopy. At 30 cm from the ileocecal valve, we discovered a dilated segment of the ileum (Fig. 2). An 18-cm small-bowel resection followed by a side-to-side anastomosis was performed. The outcome was uneventful and the patient was discharged on the first postoperative day. The final pathologic diagnosis was a giant Meckel's diverticulum (MD) with an inflamed and hemorrhagic ileal mucosa and presence of ulcers, without any aspect of gastric mucosal tissue.

Discussion

MD, described for the first time in 1809, is an embryonic remnant of the vitelline duct, also called omphalomesenteric canal, which connects the yolk sac and the midgut lumen of the developing fetus.[1] It results from the absence of involution of this vitelline duct and is the most frequent intestinal congenital malformation, found in 0.14 to 4.5% of cadaver dissections.[2] It appears as a blind recess on the anti-mesenteric side of the terminal ileum, located at a distance from 15 to 120 cm of the ileocecal junction, with an average size of 2 to 3 cm. From histological point of view, MD is most of the time the same type as the ileum. However, ectopic mucosal tissue can develop: the most common is gastric mucosal tissue, but other types like pancreatic, duodenal, colonic, and hepato-biliary have been described in the literature.[1,3]

Most of the time, MD remains asymptomatic and is discovered accidentally during surgery or radiologic exam, but complication can lead to the diagnostic in up to 7% of the patient: the most common are bleeding, intestinal obstruction, diverticulitis, and perforation.[1]

Giant MD is a particular and very rare form of MD. Few cases are described in the literature associated with specific complications such as axial torsion or compression of mesenteric root responsible for ileal gangrene.[2]

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Fig. 1 CT scan showing a large fluid- and air-filled pouch arising from the ileocecal area

Fig. 2 Dilated segment of the ileum, 30 cm from the ileocecal valve at operation

Authors' Contributions Adrian Mancini: acquisition, analysis, and interpretation of data for the work; drafting the work; final approval of the version to be published; agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Fabian Reche: substantial contributions to the design of the work; revising the work critically for important intellectual content; final approval of the version to be published; agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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