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LETTER TO THE EDITOR

Perforated Meckel's diverticulitis in an adult as an atypical cause of abdominal pain☆

Diverticulitis de Meckel perforada en un adulto como causa atípica de dolor abdominal

To the Editor,

With a prevalence of just 2%, Meckel's diverticulum is still the most common congenital anomaly to affect the gastrointestinal tract. It is a true diverticulum formed by all layers of the small intestine resulting from the remnant of the vitelline duct.[1–3]

We present the case of a 34-year-old male with a history of eosinophilic oesophagitis who attended the Emergency Department following a nine hours of abdominal pain in the hypogastrium and right iliac fossa accompanied by nausea and vomiting, with no irregular bowel movements or fever. During the physical examination, the patient experienced pain upon palpation of this area with positive decompression. Blood tests were performed in the Emergency Department, finding leukocytosis of 14,800, neutrophilia of 12,400 and CRP of 23. An abdominal ultrasound was ordered, which revealed inflammation and free fluid in the ileal region. The study was completed with an abdominal CT scan, resulting in a diagnosis of ileitis and ruling out diseases of the appendix. *Yersinia* and *Anisakis* serology tests were also requested, both of which came back negative. Finally, a colonoscopy with ileoscopy was performed, finding no evidence of disease in the colon or in the last 15 cm of the terminal ileum. After empirical antibiotic therapy, the patient progressed favourably with reduced abdominal pain and diminished acute-phase reactants. As a result, he was discharged and scheduled for outpatient follow-up with a view to completing the ileitis assessment with capsule endoscopy or enteroscopy.

However, he returned to the Emergency Department six hours later due to diffuse abdominal pain of an increasing intensity, as well as abdominal distension. His blood tests revealed leukocytosis with neutrophilia and elevated CRP levels. A chest X-ray was performed that showed pneumoperitoneum. The abdominal CT scan (Fig. 1) showed pneumoperitoneum predominantly in the hypogastrium/right iliac fossa, in close association with ileal bowel loops that exhibited inflammatory changes, as well as dense areas and locoregional fat involvement. In addition, a diverticular image with intense enhancement and wall thickening of the distal ileal loop was identified, consistent with acute perforated Meckel's diverticulitis. The patient underwent emergency surgery, confirming the finding of Meckel's diverticulitis with local inflammatory signs as well as secondary peritonitis, which was resected. The patient was discharged five days later. The pathology results revealed a diverticular formation with mucosa of gastric appearance, as well as a perforated area of the mucosa, although the biopsy did not clearly identify diverticular inflammation but rather surrounding acute purulent peritonitis.

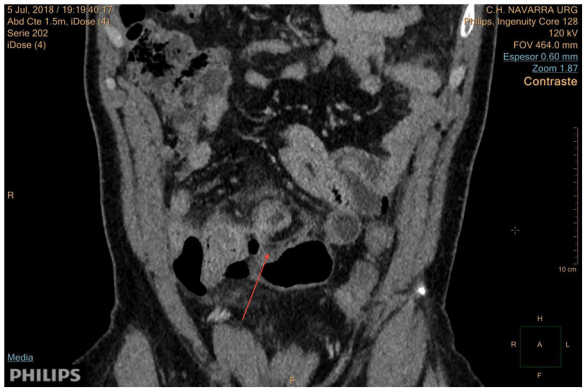

Figure 1 Perforated diverticulum; coronal slice. The image shows a diverticulum with signs of inflammation and perforation at the preterminal ileum in an abdominal CT scan.

Meckel's diverticulum is most often found in the ileum, some 100 cm from the ileocaecal valve. It is mostly asymptomatic, particularly in adults, and is usually an incidental finding in imaging tests. Its complication rate is around 2%. In order from most common to least common, its associated complications include bleeding, bowel obstruction, diverticulitis, intussusception and neoplasia.[1]

Acute diverticulitis is characterised by diverticular inflammation generally secondary to its obstruction by a foreign body (appendicolith, neoplasia, etc.) or to gastric ectopic mucosa. Spontaneous perforation is an uncommon

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complication that mimics acute appendicitis, although pain tends to be localised to the periumbilical region rather than the right iliac fossa.[1,4] Its pre-operative detection represents a real challenge given its clinical and analytical non-specificity, as well as the difficulty of radiological diagnosis, which explains why many cases are diagnosed following a laparotomy.[1] In our case, both the radiological image as well as the surgical findings were consistent with perforated diverticulitis. Nevertheless, pathology only identified the presence of diverticulum and did not indicate wall inflammation, perforation or secondary peritonitis. As such, this radiological image could in fact have been adjacent inflammatory involvement due to peritonitis. Finally, the role that prior colonoscopy may have played in the perforation of our patient remains unclear.

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Lucía Zabalza San Martín*, Saoia Rubio Iturria, Miren Vicuña Arregui, Cristina Rodríguez Gutiérrez

Complejo Hospitalario de Navarra, Pamplona, Navarra, Spain

* Corresponding author.
E-mail address: lucia.zabalza.sanmartin@navarra.es (L. Zabalza San Martín).