Perforated jejunal diverticulum, a case report

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Introduction
Diverticula are sacs formed by a fold of the lining of the intestinal wall, more often occurring in the colon, but may also be present anywhere in the gastrointestinal tract. Diverticula may be congenital when the intestinal wall architecture is preserved within the diverticular outpouching, the most common being Meckel’s diverticulum. Acquired diverticula form from herniation of the mucosa and submucosa through the muscular layer in the points of minimal resistance in which the vessels cross the intestinal wall. Although they may be present at any level of the gastrointestinal tract, localization in the small intestine is very rare, with an incidence of 0.06 to 1.3% in autopsy studies and 2 to 5% in imaging studies (Miller et al 1970; Patel et al 2008). Jejunal diverticula are usually asymptomatic, and they can rarely present nonspecific symptoms: nausea or abdominal discomfort or upper abdomen pain. Diverticula become symptomatic when complications such as diverticulitis, occlusion, hemorrhage, or perforation peritonitis occur (Alves Martins et al 2018; Aydın et al 2016).

This paper shows the case of a patient with no surgical history who presented with the symptoms of localized peritonitis produced by the perforation of a jejunal diverticulum.

Case report
A 64-year-old patient with a history of grade 3 hypertension with high cardiovascular risk, type II diabetes, presented to the emergency department with abdominal pain that had a sudden onset two days before. Pain was initially located in the upper abdomen, increased in intensity in the last 24 hours, and was accompanied by nausea. The patient also presented similar episodes in the past two years, but of much lower intensity and remission of symptoms in 1-2 days.

The patient had no surgical history. Upon admission, the patient was hemodynamically stable, with a slightly altered general condition, a heart rate of 100 bpm, 150/90 mmHg blood pressure, and subfebrile temperature of 37.8°C. The clinical exam revealed pain with palpation of the left upper abdominal quadrant and of the periumbilical region with involuntary muscle guarding at this level. Laboratory tests showed leukocytosis.

Abstract.
Jejunal diverticulosis is a rare condition, with an incidence lower than 1.3%. Often asymptomatic, it may lead to acute symptoms similar to appendicitis or colonic diverticulitis. Perforated jejunal diverticulum is one of the rare causes of the acute abdomen generally seen in the elderly. In case of perforation and peritonitis, exploratory laparotomy, segmental resection and primary anastomosis are still the preferred interventions.

Key Words: jejunal diverticulum, complication, perforation, localized peritonitis, acute abdomen

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Fig. 1. CT image showing thickening of the intestinal wall and infiltration of the fold at this level

Fig. 2. CT image of the diverticulum with thickened walls and free peridiverticular air, infiltration of adjacent fat
Jejunal diverticulosis presented with acute surgical abdomen is a rare pathology that raises diagnostic and treatment problems. Diagnosis is usually determined by abdominal CT performed to determine the cause of the acute abdomen. The preferred treatment is the exploration of the abdomen using laparotomy and the resection of the affected intestinal segment using T-T jejunoo-jejunal anastomosis. Although there have been cases successfully treated by laparoscopy alone, the role of laparoscopy in these cases is still limited (Garg et al 2009).

Conclusion
Jejunal diverticulosis with complications such as diverticulitis, hemorrhage, intestinal occlusion, or perforation with localized or generalized peritonitis. Apart from complications, jejunal diverticula are incidental findings during imaging investigations or surgery for other pathologies (Khan and Ayyaz 2015). In case of emergency presentation with diverticulitis or diverticular perforation, there are clinical signs of acute abdomen. Because of the rarity of jejunal diverticulitis, the etiologic diagnosis of acute abdomen is unlikely to be established on clinical grounds alone. Contrast-enhanced computed tomography seems to be the most effective investigation used in emergency. CT identifies the thickening of the intestinal wall, omentum infiltration and pneumoperitoneum.

In most cases, complications of jejunal diverticulosis require surgical treatment. The preferred surgical treatment for diverticulum perforation is exploratory laparotomy, resection of the affected intestinal segment (usually limited), and termino-terminal anastomosis of the jejunum (Sehgal et al 2016). Although there have been cases successfully treated by laparoscopy alone, the role of laparoscopy in these cases is still limited (Garg et al 2009).

References


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