Case Report

Cecal diverticulitis or appendicitis. When should I suspect? A case report

Ricardo Pastore[1], Roberto da Mata Lenza[2], Flávio Batista Rodrigues[3], Lucas Vieira Tostes[3], Natalia Cavasini Guerra[3], Eduardo Crema[4]

[1]Professor, Discipline of General Surgery and Surgical Technique at the Universidade Federal do Triângulo Mineiro (UFTM) – Uberaba (MG), Brazil. [2]Digestive Tract Surgeon and Physician at the Emergency Service at the UFTM – Uberaba (MG), Brazil. [3]Academicians of Medicine at the UFTM – Uberaba (MG), Brazil. [4]Full Professor, Discipline of Digestive Tract Surgery at the UFTM – Uberaba (MG), Brazil.

Pastore R, Lenza RM, Rodrigues FB, Tostes LV, Guerra NC, Crema E. Cecal diverticulitis or appendicitis. When should I suspect? A case report. **J Coloproctol**, 2011;32(2): 180-183.

ABSTRACT : The objective of this article was to report a case of cecal diverticulitis and point out the differential diagnosis of acute appendicitis. The clinical manifestations of these pathological conditions are similar, and the accurate diagnosis of cecal diverticulitis before the surgery is difficult. Therefore, most diagnoses are made during the surgery. Moreover, cecal diverticulum is uncommon in western countries, but it is prevalent in Asian people and their descendants. We report a case of a 55-year-old female patient, whose imaging exams (ultrasonography and computed tomography) and blood tests were not enough to diagnose the affection, requiring laparotomy and pathological exams for the final diagnosis. Some studies suggesting the best practice in case of diverticulum of the cecum were revised, as the diagnosis usually occurs during the surgery.

Keywords: appendicitis; diverticulitis; cecum; diverticulum.

RESUMO: O objetivo deste trabalho foi relatar um caso de diverticulite no ceco e chamar a atenção para o diagnóstico diferencial com apendicite aguda. As manifestações clínicas das duas afecções são semelhantes, dificultando o diagnóstico exato de diverticulite cecal, além de ser incomum, em nosso meio, o aparecimento de divertículo em cólon direito, sendo essa entidade mais comum em asiáticos e em seus descendentes. Relata-se atendimento a uma paciente de 55 anos, cujos exames de imagem (ultrassonografia e tomografia computadorizada) e de sangue não foram suficientes para o diagnóstico. Houve necessidade de realizar-se laparotomia exploradora e exames anatomopatológicos para a confirmação. Também foram revisados alguns trabalhos que sugerem qual a melhor conduta a ser tomada quando se encontra divertículo cecal no perioperatório, já que, na maioria das vezes, o diagnóstico é feito neste momento.

Palavras-chave: apendicite; diverticulite; ceco; divertículo.

INTRODUCTION

Cecal diverticulitis is a rare condition[1,2,3], with prevalence of 0.004 to 2.1%[4], affecting more often the Asian people[3,5,6] and their descendants[1,7,8]. The first description was reported in 1863[3]. The preoperative diagnosis is difficult, as its signs and symptoms can be confused with the signs and symptoms of acute appendicitis[1,5,7,9-12]. Consequently, the diagnosis is most of the times during the surgery[2,9,11-13] and confirmed only with an anatomopathological exam[1].

CASE REPORT

M.A.C., female, 55 years old, came to the emergency service at the Hospital das Clínicas da Universidade Federal do Triângulo Mineiro complaining of pain in the right iliac fossa and gradual worsening for

Study carried out at the Discipline of General Surgery, Universidade Federal do Triângulo Mineiro (UFTM) – Uberaba (MG), Brazil.
Financing source: none.
Conflict of interest: nothing to declare.

Submitted on: 10/14/2010
Approved on: 11/18/2010

a week. She said she had no nauseas, vomiting or alteration to bowel habits. She presented anorexia and no fever since the beginning of this condition. The physical examination showed peritoneal reaction in the right iliac fossa (positive Blumberg sign).

Pelvic ultrasonography (US) showed fecalith in the right iliac fossa, with peritoneal reaction around it (Figure 1) and no collections. The report suggested appendicitis as the most probable diagnosis or focal diverticulitis near the cecum. Abdominal computed tomography (CT) showed a tubular shape posterolaterally to the cecum. The lesion area was highlighted after the intravenous infusion of contrast medium and calcified focus in its proximal segment, as well as densification of surrounding mesenteric fat. No colonic diverticular formations with evidence of acute inflammatory were observed. Then, based on CT, the patient's condition was compatible with acute appendicitis. Two complete blood tests were performed, which did not present alterations.

Infraumbilical median exploratory laparotomy was the selected method and a tumor mass was found in the cecum. Then, segmental colectomy was performed, with removal of the cecum and the mass involving it, as well as the appendix, which presented unaltered aspect. In addition, termino-terminal ileocolic anastomosis was performed. The anatomopathological exam showed ulcerated and abscessed diverticulum in the wall of the large bowel and contained by the peri-intestinal adipose tissue (Figure 2).

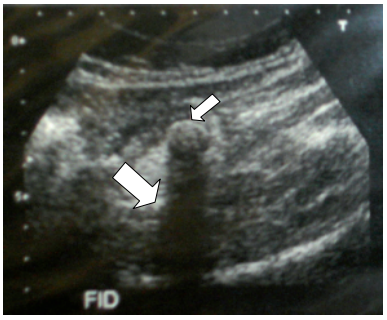

Figure 1. *Ultrasonography of the patient, showing fecalith (smaller arrow) in the right iliac fossa. The larger arrow shows the acoustic shadow of the dense material.*

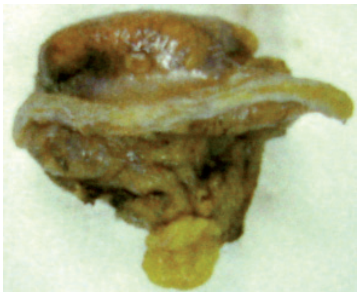

Figure 2. *Picture of cecal diverticulum at the anatomopathological exam.*

DISCUSSION

The (false) left colon diverticulosis occurs predominantly in the sigmoid and affects the western population more often[9,14,15], while the (true) right colon diverticulosis occurs predominantly in the cecum and affects the young population and descendants of Asians more often[1,9]. Cecal diverticulitis is rare in western population, but it is prevalent in Asian countries.[6,7,14]. The preoperative diagnosis is difficult[9] and infrequent, despite de use of radiological imaging. The diagnostic certainty is obtained only with the anatomopathological exam[16]. The differential diagnoses are: Crohn's disease, actinomycosis, perforation by a strange body, amebiasis, carcinoid tumor, tuberculosis, gastroenteritis, ureteral colic, ectopic pregnancy, ovarian cyst rupture, pelvic inflammatory disease and, especially, acute appendicitis[2,17]. The clinical presentation of cecal diverticulitis with fever and abdominal pain in the right lower quadrant is practically indistinguishable from acute appendicitis[1], but there are some differences: the pain in diverticulitis starts directly in the right iliac fossa, instead of starting vaguely in the periumbilical region, as it occurs in appendicitis. Diverticulitis is more insidious and extended, and its systemic toxic signs are mild, with rare nauseas and vomiting[7]. A case has been reported of cecal diverticulitis initially causing pain in the periumbilical region, and the patient presented recurrent abdominal pain for six months, without alteration to bowel habits or systemic toxic signs[3], compatible with the clinical condition suggested for cecal diverticulitis. The blood test may show elevated white blood cell count[1,9]. However, in our case, no alteration was observed in the absolute number of leucocytes.

US and CT are very helpful, enabling the correct diagnosis and preventing unexpected findings

during the surgery[2]. A study that analyzed 934 patients[18] with pain of undetermined nature in the right iliac fosse showed that US presented 100% accuracy when distinguishing diverticulitis from appendicitis. However, this is a limited exam, as it depends on the examiner's experience, a fact that becomes a problem, particularly in western countries, where the experience with cecal diverticulitis is low[2]. CT offers good cost-benefit ratio at the differential diagnosis of abdominal pain conditions involving suspicion of acute appendicitis[19]. Helical CT may suggest or define the diagnosis of cecal diverticulitis[18].

In this report, only ultrasonography suggested that it was cecal diverticulitis. When the diagnosis of cecal diverticulitis is secured, antibioticotherapy can be applied in patients without signs of peritonitis[1,9,20,21]. As the right colonic diverticulitis is benign, the conservative treatment with minimal surgical intervention should be the best therapeutic option[10]. Exploratory laparotomy is suggested in cases without diagnostic certainty[1]. However, the greatest dilemma is what to do when cecal diverticulitis is incidentally found during appendicectomy[3]. There is no standard procedure for the treatment of solitary cecal diverticulitis[3]. The surgical resection of diverticulum is recommended[9] plus colectomy, if the histopathological exam shows the presence of neoplasm[9]. When the diagnosis is secured, the procedure of diverticulectomy combined with appendicectomy is suggested[3]. Otherwise, colectomy is suggested[3]. In this case, the second approach was selected, with segmental colectomy.

A successful clinical treatment was reported in a case whose diagnosis was made without laparotomy, but the patient had history of appendicectomy for 15 years and no pain at rapid decompression[1]. In addition, emergency colectomy is well accepted in the treatment of complicated diverticulitis[10]. Two cases have been reported in which right hemicolectomy was performed, without complications in both cases[2,3]. Laparoscopy could be applied for diagnostic purposes, but it involves the risk of not detecting diverticula in the posterior wall of the cecum[22].

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Correspondence to:
Dr. Eduardo Crema
Disciplina de Cirurgia Geral
Universidade Federal do Triângulo Mineiro (UFTM)
Avenida Frei Paulino, 30 – Abadia
CEP: 38025-180 – Uberaba (MG), Brazil
E-mail: cremaUFTM@mednet.com.br