

Acute inflammation of a solitary cecal diverticulum mimicking appendicitis

A Rodrigues, L Meguins, D Rolo

Citation

A Rodrigues, L Meguins, D Rolo. *Acute inflammation of a solitary cecal diverticulum mimicking appendicitis*. The Internet Journal of Surgery. 2007 Volume 17 Number 1.

Abstract

Acute inflammation of a solitary diverticulum of the cecum (SDC) is an extremely rare condition that presents clinically similar to appendicitis. In the majority of cases, the diagnosis is only made at surgery. We report on a 24-year-old Brazilian Amazon man presenting acute abdominal pain and a palpable mass at the right iliac fossa. An initial suspicion of acute appendicitis was made and the patient underwent surgical exploration of the abdomen. However, during operation the appendix was found to be normal, whereas a SDC was found to be necrotic. Ileocelectomy with primary end-to-end ileocolic anastomosis was performed and the patient presented an uneventful recovery.

Department where the work was done: Departamento de Cirurgia Geral. Hospital de Pronto Socorro Municipal Dr. Humberto Maradei Pereira. Belém, Pará, Brazil.

INTRODUCTION

Solitary diverticulum of the cecum (SDC) is an uncommon condition and an extremely rare cause of abdominal pain in Western countries (1, 2). It is often clinically indistinguishable from acute appendicitis (3,4,5,6). The condition is usually identified only during surgical exploration, as a correct preoperative diagnosis is difficult to achieve (1, 4, 7).

The aim of this report is to describe the case of a Brazilian Amazon man who was thought to have acute appendicitis pre-operatively; however, at operation a necrotic SDC was found.

CASE REPORT

A 24-year-old Brazilian Amazon man was admitted to our hospital presenting a four days history of constant abdominal pain, which began in the peri-umbilical region and latter irradiated to the right iliac fossa (RIF). The patient referred also intermittent fever, nausea, vomits and absence of passage of stool and gas. The patient's past medical history was unremarkable. On physical examination, marked tenderness was observed on the right lower abdominal quadrant, with rigidity and spasm of muscles of this quadrant. A palpable mass was identified in the RIF. Laboratory blood investigation revealed leukocytosis

(26,900 WBC/mm³). Abdominal radiograph was normal.

As no other structural abnormalities were identified, a provisional diagnosis of acute appendicitis was made and the abdominal dolorous syndrome was attributed to it. Based on this diagnosis, the patient underwent an exploratory laparotomy.

At operation, through an infra-umbilical median incision, the appendix was found to be normal. A gangrenous solitary diverticulum projecting from the cecum was identified (Figure 1 and 2).

Figure 1

Figure 1: Solitary diverticulum of the cecum.

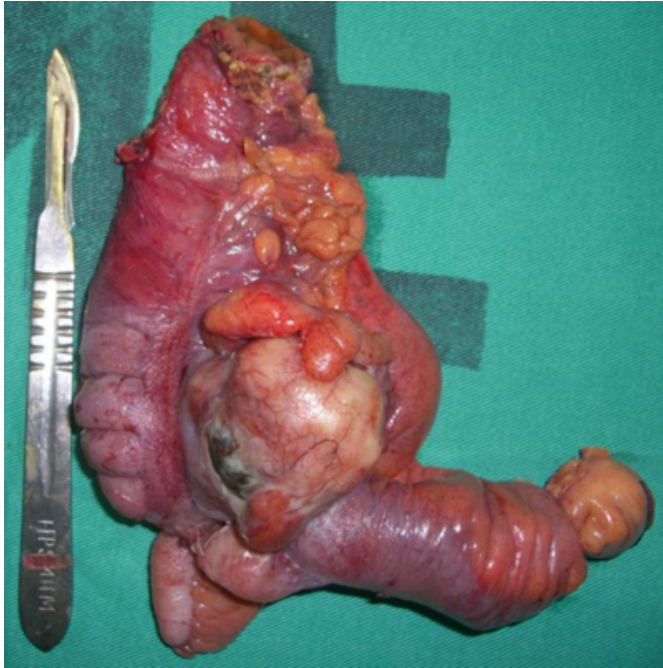
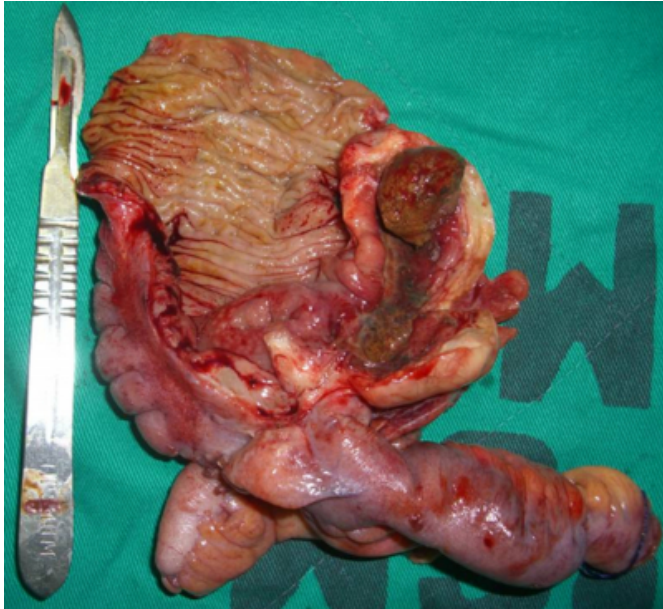


Figure 2

Figure 2: Open solitary diverticulum of the cecum presenting fecaliths.



Ileocelectomy with primary end-to-end ileocolic anastomosis was performed. The patient's recovery was uneventful and he was discharged home on the seventh post-operative day.

DISCUSSION

SDC is an extremely rare condition that is found in 3.6% of

cases of colonic diverticulae (2, 3). The first case of a SDC was reported in 1983 and catalogued at the pathological specimens in the Hunterian collection of the Royal College of Surgeons (5, 8). It is believed to be a congenital anomaly that arises at the sixth week of gestation from an out-pouching of the cecum (4). As inflammatory complications of SDC may resemble many diseases characterized by RIF pain, such as Crohn's disease or ulcerated cecal carcinoma, correct diagnosis before surgical exploration of the abdomen is made only in about 9% of patients (5). Acute appendicitis is by far the most common preoperative diagnosis (9).

Although in most cases there are no specific physical symptoms or signs that can help differentiate between SDC and acute appendicitis, both ultrasound and computer tomography have been shown to be accurate in diagnosing SDC preoperatively (4, 10, 11). Additionally, early laparoscopy in patients presenting acute abdominal pain may be a useful tool allowing the correct diagnosis and appropriate therapy (10). However, when all diagnostic methods are inconclusive and preoperative diagnosis is uncertain, surgical exploration is recommended (1).

When a preoperative diagnosis of SDC is possible, conservative management with antibiotics may be the appropriate therapy (1, 11). However, if malignant disease cannot be excluded as a differential diagnosis of inflammatory masses at the cecum, right hemicolectomy is recommended as the best surgical approach (1, 5, 10). In our case, ileocelectomy with primary end-to-end anastomosis was performed and the postoperative period was uneventful.

In conclusion, the present report reinforces that SDC is an extremely rare event and highlights the importance of being aware of SDC as a differential diagnosis of a patient with palpable mass and acute abdominal pain on the RIF.

References

1. Chedid AD, Domingues LA, Chedid MF, Villwock Mde M, Mondelo AR. Solitary diverticulum of the cecum: experience of a Brazilian general hospital. [Portuguese] *Arq Gastroenterol.* 2003; 40: 216-9.
2. Ruiz-Tovar J, Reguero-Callejas ME, González Palacios F. Inflammation and perforation of a solitary diverticulum of the cecum. A report of 5 cases and literature review. *Rev Esp Enferm Dig.* 2006; 98: 875-80.
3. Connolly D, McGookin RR, Gidwani A, Brown MG. Inflamed solitary caecal diverticulum - it is not appendicitis, what should I do? *Ann R Coll Surg Engl.* 2006; 88: 672-4.
4. Griffiths EA, Date RS. Acute presentation of a solitary caecal diverticulum: a case report. *J Med Case Reports.* 2007; 9: 129.
5. Kurer MA. Solitary caecal diverticulitis as an unusual cause of a right iliac fossa mass: a case report. *J Med Case*

Reports. 2007; 10: 132.

6. Griffiths EA, Bergin FG, Henry JA, Mudawi AM. Acute inflammation of a congenital cecal diverticulum mimicking appendicitis. *Med Sci Monit.* 2003; 9: CS107-9.

7. Gatewood JW. Solitary diverticulitis of the cecum: report of two cases. *Ann Surg.* 1945; 122: 52-8.

8. No authors listed. Solitary diverticulum of the caecum. *Br Med J.* 1968; 4 (5632): 659-60.

9. Leonardo RA. Primary solitary diverticulitis of caecum.

Ann Surg. 1930; 91: 540-3.

10. Bianco A, D'Ambra L, Bonfante P, Bianchi C, Magistrelli P, Berti S, Giaquinto D, et al. Covered perforation of solitary cecal diverticulum: case report. [Italian]. *G Chir.* 2007; 28: 432-4.

11. Karatepe O, Gulcicek OB, Adas G, Battal M, Ozdenkaya Y, Kurtulus I, Altioek M, et al. Cecal diverticulitis mimicking acute Appendicitis: a report of 4 cases. *World J Emerg Surg.* 2008; 3: 16.

Author Information

André L.S. Rodrigues, M.D.

Departamento de Cirurgia Geral, Hospital de Pronto Socorro Municipal Dr. Humberto Maradei Pereira

Lucas C. Meguins

Faculdade de Medicina, Universidade Federal do Pará

Daniel F. Rolo

Faculdade de Medicina, Universidade Federal do Pará