

Cecal Diverticulitis: A Rare Cause of Right Lower Quadrant Pain

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ABSTRACT

Cecal diverticula and diverticulitis are rare conditions, which present with pain in the lower quadrant of the abdomen. It is a rare cause of acute abdomen and is more often seen in young female adults. The diagnosis of cecal diverticulitis requires advanced radiological imaging techniques because physical examination and routine laboratory blood tests may be inconclusive. Cecal diverticulitis has been most frequently misdiagnosed as acute appendicitis. There is no consensus on the optimal clinical management.

Keywords: Cecum, diverticula, diverticulitis

Introduction

Cecum diverticula (CD) are true diverticula, often involving all layers of the colon, and are a rare cause of right lower quadrant pain that can be confused with acute appendicitis. The first case of solitary cecum diverticulum was described by Potier in 1912.¹ CD often requires emergency surgery because it is difficult to diagnose clinically and radiologically in the preoperative period. CD is often diagnosed during the operation, and varies depending on the additional conditions associated with the management and operation procedure. The aim of this case report is to describe and discuss this rare disease.

Case Report

A 26-year-old male patient was admitted to our emergency department complaining of abdominal pain, nausea and loss of appetite for two days. On physical examination, there was defense, rebound and tenderness in the right lower quadrant. It was learned that the patient had the same complaints about two years earlier, but did not attend the hospital. In the laboratory tests of the patient, white blood cell count was 11,800/mm.³ Other parameters were within normal limits. There were intense gas shadows on direct radiography. Ultrasonography (US) was evaluated as suboptimal due

to intense gas shadows. On oral and intravenous contrast-enhanced computed tomography (CT) the appendix appeared normal but there was a 1.5 cm diverticulum formation in the posterior wall of the cecum and intense inflammation around it, consistent with acute diverticulitis (Figure 1). Intravenous hydration and appropriate antibiotherapy treatment was initiated.

Diagnostic laparoscopy was performed because physical examination findings had not improved during the 3-day follow-up. On intraoperative observation, the highly hyperemic, inflamed and edematous appearance of the diverticulum, located 1 cm from the appendix and on the posterior aspect of the cecum was compatible with diverticulitis. Other parts of the cecum were normal in appearance. Due to the close proximity of the appendix, the patient underwent laparoscopic diverticulectomy and appendectomy with endoscopic linear stapler. An oral regimen was started on the second postoperative day for the patient, who had gas and stool output during the service follow-up. The patient was discharged on the third postoperative day without complication.

Histopathological examination confirmed perforated cecum diverticulitis with normal appendix vermiformis (Figure 2). Informed consent was obtained.

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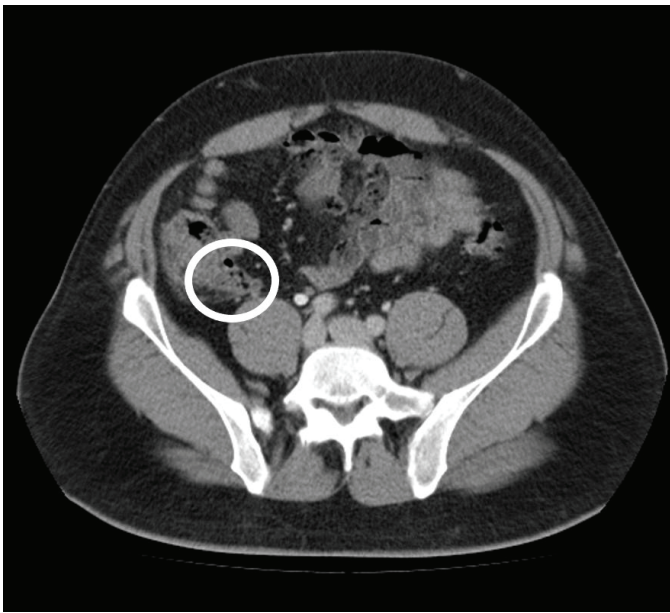


Figure 1. CT image of the cecum, diverticulitis formation showed in the white circled area
CT: Computed tomography



Figure 2. Specimen image of cecum diverticulitis and appendix vermiformis

Discussion

While 85% of all colon diverticula are asymptomatic, approximately 4-15% present with an acute diverticulitis attack.² In the differential diagnosis of right lower quadrant pain, cecum diverticulitis should be considered, together with pathologies such as acute appendicitis, cecum tumors, inflammatory bowel diseases, ovarian pathologies, pelvic inflammatory disease, ameboma, and gastrointestinal tuberculosis involvement.³ Although the exact frequency of CD is unclear, it is seen in approximately 1:300 appendectomy cases.⁴ As CDs are congenital, they differ

from distal colon diverticula.⁵ They are mostly located on a single and anterior face.⁶ However, in our case, the CD was located on the posterior face. CD are often seen in young and female patients.⁷ Clinical management of the cases described varies. Medical follow-up, including broad spectrum antibiotherapy was recommended in some cases, while right hemicolectomy or isolated diverticulectomy was recommended in other cases.⁸ In our case, laparoscopic diverticulectomy and appendectomy were preferred due to the patient's age and the location of the diverticulum. In the diagnosis of CD, the utility of US and CT have been reported to be insufficient so that diagnosis was made intraoperatively. However, thanks to advances in technology including improvements in the resolution achievable with new CT devices, it is now easier to make preoperative diagnosis with radiological evaluation. In our case, it was found that the appendix was clearly normal and CD was identified on CT. There is no consensus regarding the clinical management of CD. In our case, medical treatment was applied in the first place and surgical treatment was performed due to persistent severe abdominal pain. We believe that decisions about treatment and surgical timing should be made according to the clinical condition of the patient.

CD is a disease that mimics acute appendicitis, and deficiencies in diagnosis and treatment can cause mortality and morbidity. Laparoscopic diverticulectomy may be an appropriate option in some patients. Colonoscopy should be recommended to the patients in the first six weeks after an acute attack of diverticulitis in order to investigate possible right colonic lesions.⁹

Ethics

Informed Consent: It was obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: M.A., A.R., Concept: M.A., A.O.D., A.R., Design: M.A., A.O.D., A.R., Data Collection or Processing: M.A., A.O.D., Analysis or Interpretation: M.A., A.O.D., A.R., Literature Search: M.A., A.O.D., Writing: M.A., A.O.D., A.R.

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