

CASE REPORT

Cecal diverticulitis with atypical presentation in a 57-year-old man: a case report

Maryam Hafazalla^{1*}, Thomas Coryndon¹, Heba Doudi²

ABSTRACT

Background: Right-sided diverticulitis, particularly cecal diverticulitis, is a rare condition that can mimic other causes of an acute abdomen and pose a diagnostic challenge.

Case Presentation: A 57-year-old man presented with acute tearing epigastric pain followed by lower abdominal pain. Examination revealed bilateral iliac fossa tenderness with guarding in the right iliac fossa and positive psoas and obturator signs. Laboratory testing showed elevated C-reactive protein (70 mg/l) with otherwise unremarkable results. Because of the initial tearing epigastric pain, there was concern for serious conditions, including acute coronary syndrome, pancreatitis, and aortic pathology; therefore, cardiac enzymes, Electrocardiogram, serum lipase, and contrast-enhanced computed tomography (CT) were obtained, which excluded these diagnoses. Abdominal ultrasound demonstrated focal bowel wall thickening in the right lumbar region. Contrast-enhanced CT identified a cecal diverticulum with surrounding pericolic fat stranding and localized inflammatory changes without abscess or perforation, consistent with Hinchey stage Ia cecal diverticulitis. The patient was managed conservatively with intravenous ceftriaxone and metronidazole, providing broad-spectrum gram-negative and anaerobic coverage, and showed rapid clinical improvement.

Conclusion: Cecal diverticulitis might present atypically and mimic other causes of acute abdomen. Early cross-sectional imaging is crucial for accurate diagnosis, and conservative antibiotic therapy is effective in uncomplicated cases.

Keywords: Cecal diverticulitis, right-sided diverticulitis, acute abdomen, conservative management, case report.

Introduction

Diverticular disease predominantly affects the left colon, whereas right-sided diverticulitis is relatively uncommon. Cecal diverticulitis presents a diagnostic challenge due to its overlap with other causes of acute abdominal pain, particularly acute appendicitis [1-3].

Although right-sided diverticulitis is more commonly reported in Asian populations and often occurs in younger individuals, it can also present in older patients, where atypical features might increase the risk of misdiagnosis [4,5]. Early recognition is important because uncomplicated cases can frequently be managed conservatively once the correct diagnosis is established [6].

A rare case of uncomplicated cecal diverticulitis was reported in a non-Asian older patient who presented with atypical abdominal pain and significant cardiovascular comorbidities.

Case Presentation

A 57-year-old man presented with acute-onset severe tearing epigastric pain lasting 30 minutes, followed by lower abdominal pain for 6 hours. His past medical history included hypercholesterolemia and a prior percutaneous coronary intervention (PCI) 2 years earlier. He was a non-smoker, physically active, and adhered to a healthy diet.

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Psoas and obturator signs were positive. Although these signs are classically associated with appendicitis, they might also occur in other inflammatory conditions involving the right lower abdomen.

Laboratory investigations demonstrated elevated C-reactive protein (70 mg/l) and mild thrombocytopenia (platelets $123 \times 10^9/l$), while white blood cell count, serum lipase, D-dimer, and creatinine were within normal limits. Electrocardiogram and cardiac enzymes showed no evidence of myocardial ischemia.

Abdominal ultrasound demonstrated focal thickening of the bowel wall in the right lumbar region with surrounding inflammatory changes and a diverticular out-pouching, raising suspicion for localized colonic inflammation (Figure 1).

Subsequent contrast-enhanced computed tomography (CT) of the abdomen and pelvis confirmed a cecal diverticulum with surrounding pericolic fat stranding and localized inflammatory changes involving the cecal wall. No abscess, perforation, or free intraperitoneal air was identified. These findings were consistent with uncomplicated Hinchey stage Ia cecal diverticulitis (Figures 2-4).

The patient was admitted to the surgical ward and treated conservatively with bowel rest and intravenous

antibiotics, including ceftriaxone (2 g daily) and metronidazole (500 mg three times daily). This regimen provided broad-spectrum coverage against gram-negative organisms and anaerobic bacteria commonly implicated in colonic diverticular infections and is widely used in the treatment of uncomplicated diverticulitis.

Discussion

Cecal diverticulitis is an uncommon cause of acute abdominal pain in Western populations, representing approximately 1%-2% of diverticular disease [1]. The condition is more prevalent in Asian populations, a geographic variation that might contribute to lower clinical suspicion and delayed diagnosis in Western and other settings [5,7].

Cecal diverticulitis has traditionally been described in younger patients, particularly in Asian cohorts [4,5]. Reports in older patients remain limited in the literature and might present atypical clinical features, increasing the likelihood of diagnostic uncertainty [4,8].

Pain localization can further complicate diagnosis. Typical cecal diverticulitis presents with right lower quadrant pain that closely resembles acute appendicitis [2,3]. In the present patient, the initial presentation consisted of severe epigastric pain followed by lower abdominal pain,

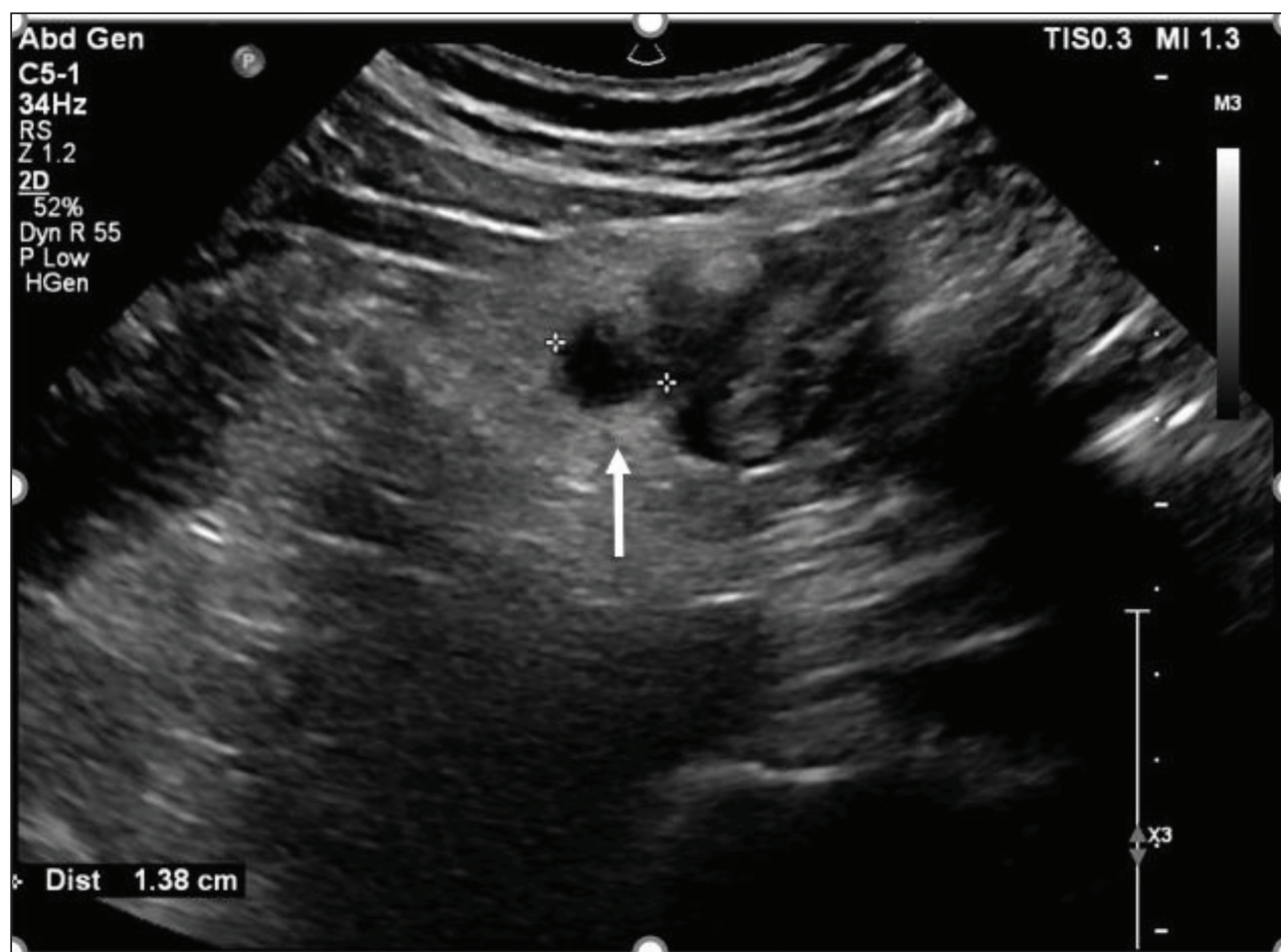


Figure 1. Abdominal ultrasound demonstrating focal thickening of the bowel wall in the right lumbar region measuring up to 10 mm, with surrounding inflammatory fat changes and a diverticular out-pouching (arrow), consistent with localized inflammatory changes.

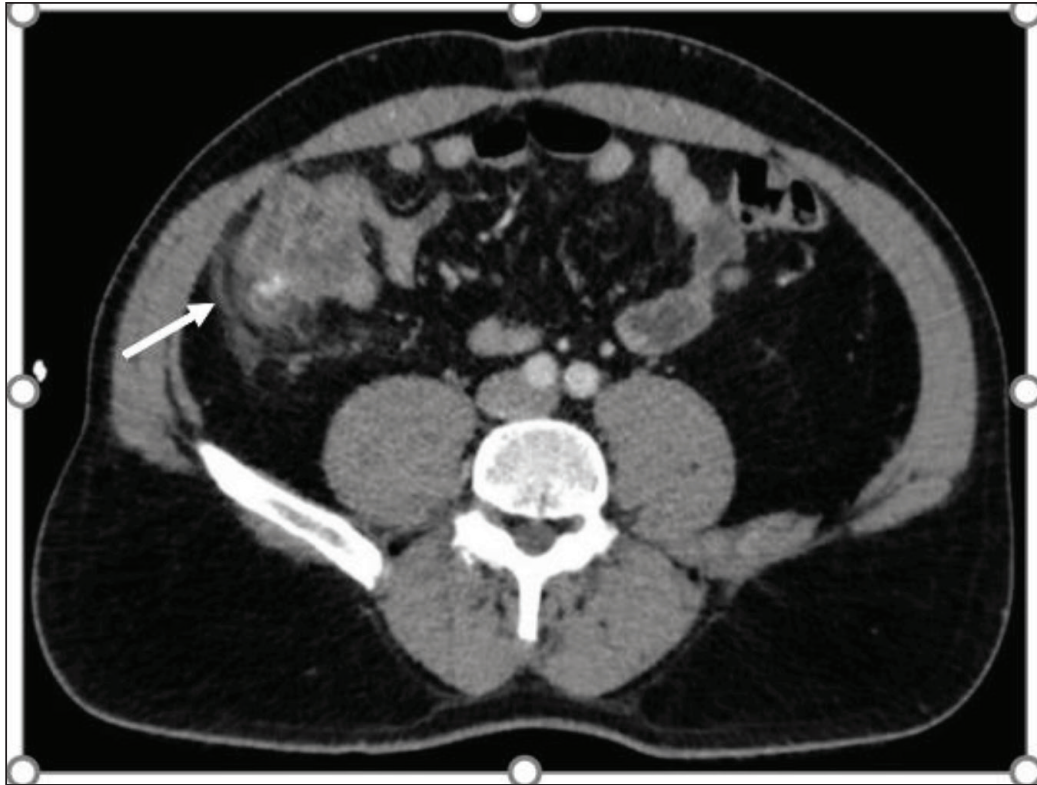


Figure 2. Axial view showing focal mural thickening of the cecum, predominantly involving its posterior aspect, with a diverticular out-pouching and surrounding pericolic fat stranding (arrow), consistent with localized inflammation.



Figure 3. Coronal view demonstrating mild reactive mural thickening at the base of the appendix (arrow) adjacent to the inflamed cecum.



Figure 4. Sagittal view confirming inflammatory changes confined to the cecum without evidence of perforation, abscess, or free intraperitoneal air.

which broadened the differential diagnosis. Atypical presentations of cecal diverticulitis have been reported in the literature but remain relatively uncommon, which might delay recognition of the condition [7,9]

A history of hypercholesterolemia and prior PCI raised concern for potential vascular or cardiac etiologies during the initial evaluation. As laboratory findings are often nonspecific in this context, imaging played a key role in establishing the diagnosis.

Imaging plays a central role in diagnosing cecal diverticulitis. Although abdominal ultrasound may demonstrate bowel wall thickening or localized inflammatory changes, contrast-enhanced CT remains the gold standard for diagnosis, disease staging, and exclusion of complications [6,8]. In our case, CT imaging demonstrated a cecal diverticulum with surrounding pericolic fat stranding consistent with uncomplicated Hinchey stage Ia diverticulitis, without evidence of perforation or abscess formation.

Management strategies depend on disease severity. Conservative treatment with bowel rest, intravenous fluids, and antibiotics is recommended for uncomplicated cecal diverticulitis and has demonstrated high rates of successful outcomes [6,8].

Surgical intervention is typically reserved for complicated cases, including perforation, abscess formation, or failure of conservative therapy [10].

This case contributes to the limited literature describing cecal diverticulitis in older patients and highlights the importance of considering this diagnosis even when patient age, pain location, or comorbidities are atypical.

Following recovery from acute diverticulitis, colonoscopic evaluation is recommended to exclude underlying malignancy or other colonic pathology, particularly in older patients or those with atypical presentations [6].

Conclusion

Cecal diverticulitis might present atypically and mimic other causes of acute abdomen. Early cross-sectional imaging is crucial for accurate diagnosis, and conservative antibiotic therapy is effective in uncomplicated cases.

List of Abbreviations

CT	Computed tomography
CRP	C-reactive protein
ECG	Electrocardiogram
PCI	Percutaneous coronary intervention

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent for publication

Written informed consent was obtained from the patient for publication of this case report and the accompanying images.

Ethical approval

Ethical approval is not required at our institution to publish an anonymous case report.

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