

Epiploic Appendagitis: Underappreciated, Easily Misdiagnosed and Often Masquerading as an Acute Abdomen

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Epiploic appendagitis, also known as appendicitis epiploica, is an uncommon, benign condition of the epiploic appendages that occurs due to torsion or spontaneous venous thrombosis of a draining vein. A self-limited condition, it often mimics other serious surgical conditions such as acute diverticulitis, appendicitis and even cholecystitis. Patients most commonly present with acute abdominal pain, more often in the left lower than right lower quadrant, without associated leukocytosis or fever. Epiploic appendagitis appears on CT scan as an oval-shaped fat density, paracolic mass with fat stranding and thickened peritoneal lining. Complete resolution of symptoms typically occurs within two weeks with conservative treatment, primarily anti-inflammatory agents. Improved awareness and recognition of epiploic appendagitis can lead to fewer misdiagnoses, thereby decreasing redundant medical procedures as well as unnecessary surgical interventions.

INTRODUCTION

Epiploic appendagitis (EA), also known as appendicitis epiploica, is an uncommon, benign condition of the epiploic appendages that occurs due to torsion or spontaneous venous thrombosis of a draining vein.³ The resulting strangulation and inflammation leads to localized abdominal pain.⁵ Moreover, EA is a self-limited condition that often mimics other serious surgical conditions such as acute

diverticulitis, appendicitis and even cholecystitis.³ We report a case of left lower quadrant pain presumed to be acute diverticulitis with possible abscess formation and diagnosed as epiploic appendagitis by computed tomography (CT) scan of abdomen/pelvis.

Case Description

A 44 year-old male with past medical history of gastroesophageal reflux and peptic ulcer disease presented with four days of severe left lower quadrant abdominal pain, nausea and constipation. At the onset of his symptoms he was seen at a local emergency department (ED) where he was diagnosed and treated for presumed diverticulitis with metronidazole and ciprofloxacin. However, the pain subsequently worsened

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A CASE REPORT

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and he was referred to our institution for evaluation and treatment.

His vital signs upon arrival in the ED were a temperature of 97.4°F, blood pressure 110/71 mmHg, heart rate 67 beats/min and respiratory rate of 18 breaths/min. He described his pain as sharp, 10/10 in intensity, localized to left lower quadrant (LLQ), non-radiating and it was associated with nausea, but no vomiting. On physical examination his abdomen was tense, non-distended, tender in the LLQ with positive guarding, but no rebound and normal bowel sounds were present. Laboratory analysis showed a white blood cell (WBC) count of 6.7 K/UL with 67% neutrophils. The remainder of the laboratory tests and physical exam were unremarkable.

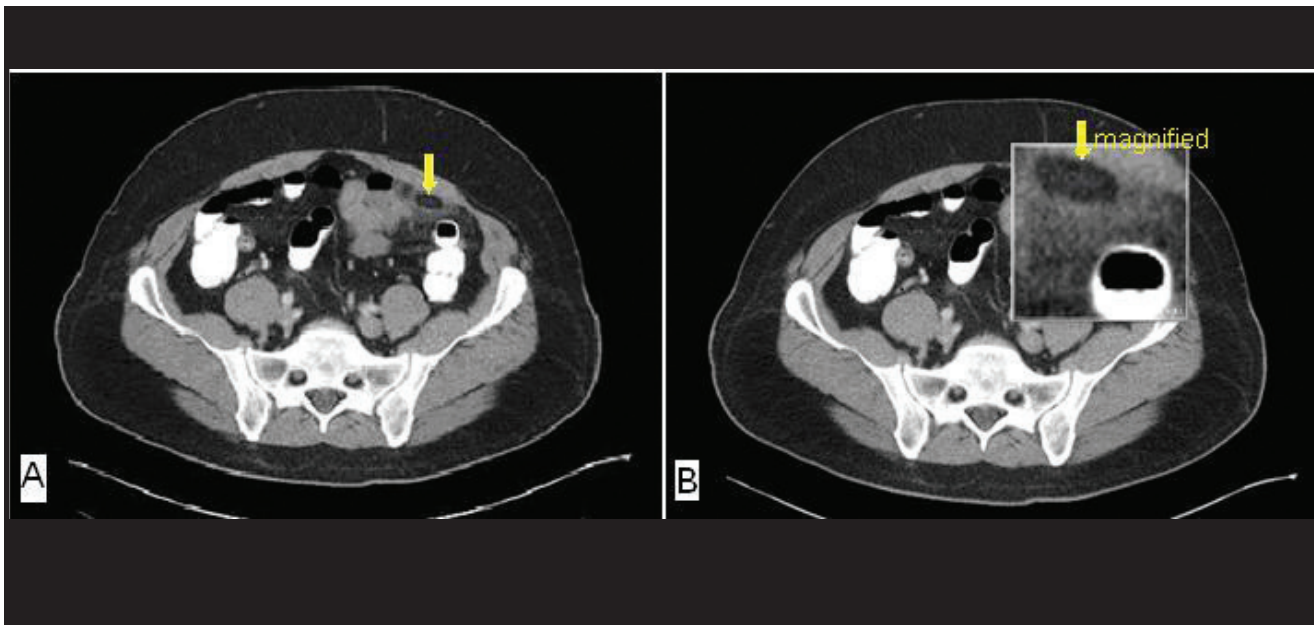
He was started on broad-spectrum antibiotics for presumed diverticulitis with possible abscess formation, and he was given morphine for symptomatic relief. CT scan of abdomen/pelvis with contrast was performed showing an oval-shaped fat density (Figure 1) in the left lower quadrant anterior to the sigmoid colon characteristic of epiplonic appendagitis. His clinical presentation improved with conservative treatment including non-steroidal anti-inflammatory drugs (NSAIDs) and he was discharged home after resolution of his symptoms.

Discussion

Epiplonic appendagitis can affect anyone including young and healthy individuals, although obesity and heavy exercise are thought to be potential risk factors.² It most commonly occurs in the second to fifth decades of life, with slightly higher incidence in middle aged males.^{1,3} First described by Vesalius in 1543, about 100 pedunculated fatty structures, also known as epiplonic appendages, protrude from the serosal surface of the colon from the cecum to the recto-sigmoid junction.³ In 1956, Lynn *et al.* created the term epiplonic appendagitis to describe inflammation of epiplonic appendages.¹ The size and number of epiplonic appendages increase in the lower abdominal quadrants, with the sigmoid colon accounting for approximately 57% of epiplonic appendages, followed by the cecum 26%, ascending colon 9%, transverse colon 6% and descending colon 2%.⁴

EA can be either primary or secondary. Primary EA is caused by torsion or spontaneous venous thrombosis of a draining vein of the epiplonic appendage.¹ Secondary EA is related to lymphoid hyperplasia or is secondary to an inflammatory process in adjacent organ such as appendicitis, diverticulitis, cholecystitis or colitis.⁴ Patients most commonly present with acute abdominal pain, more often in the left lower than right lower quadrant, without associated leukocytosis or fever.¹ Our

Figure 1.



patient presented with the classic presentation of EA. It is recognized and diagnosed with the use of ultrasound or CT scan, with CT scan being more sensitive and specific. EA should be entertained when diverticulitis, appendicitis and other causes of acute abdomen are ruled out. EA appears on CT as an oval-shaped fat density (Figure 1), paracolic mass with fat stranding and thickened peritoneal lining.² Complete resolution of symptoms typically occurs within two weeks with conservative treatment, primarily anti-inflammatory agents.⁴

CONCLUSION

The infrequency of epiploic appendagitis makes this condition an unusual and difficult diagnosis for many physicians. Therefore, improved awareness and recognition of EA can lead to fewer misdiagnoses,

thereby decreasing redundant medical procedures as well as unnecessary surgical interventions. ■

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