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CLINICAL VIGNETTE

Epiploic Appendagitis: An Unusual Cause of Abdominal Pain

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A 52 year-old male with a history of hypertension presented to the office with right lower quadrant pain for 1 day. The pain was acute in onset, constant, and increasingly severe. It was not relieved by over-the-counter analgesics. He denied fevers, chills, nausea, vomiting, or anorexia. He never had any appendicitis or diverticulitis

On physical examination, the patient was afebrile. Palpation of the abdomen revealed localized tenderness in the right lower quadrant with rebound and guarding. Laboratory studies did not show any leukocytosis. His urine analysis was normal. The patient was referred to the emergency department due to concern for appendicitis. Computed tomography (CT) scan of the abdomen and pelvis showed inflammatory changes along a portion of the ascending colon consistent with epiploic appendagitis (Fig. 1 and 2). The appendix was visualized and appeared normal.

Figure 1. Axial CT scan image of the abdomen showing inflammatory changes surrounding the ascending colonic epiploic appendage (marked by arrow).

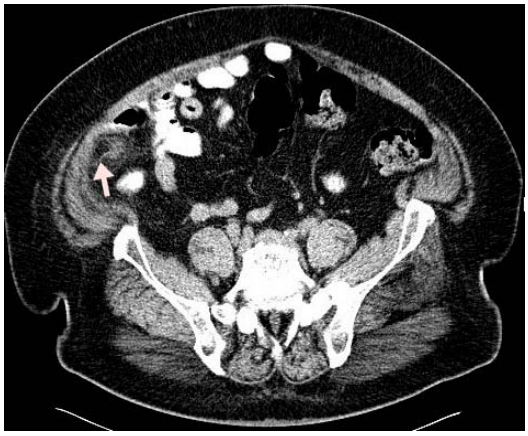
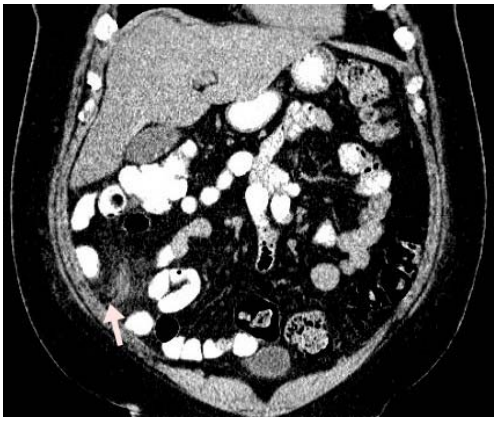


Figure 2. Coronal CT scan image of the abdomen showing inflammatory changes surrounding the ascending colonic epiploic appendage (marked by arrow).



The patient was discharged with close follow-up. He took some ibuprofen for the pain control. His pain gradually resolved over the next week. He did not experience any recurrence following resolution of the condition.

Epiploic appendagitis is a rare clinical entity that can be easily misdiagnosed as acute appendicitis or diverticulitis. The condition can occur at any age and there is a slight propensity for males over females[1]. Epiploic appendages are small, serosa-covered fat pads attached on the outer surface of colonic wall. Measuring from 0.5 to 5 cm long and 1 to 2 cm wide, these structures are scattered throughout the peritoneal cavity. There are approximately 100 appendages, with a predilection for the beginning and the end of the colon (26% on the ileocecum and 57% are located on the sigmoid colon)[2,3]. Possible physiologic functions of epiploic appendages include flexible cushion support for the colon, immune response, and colonic absorption[4].

The vasculature of an appendage is typically composed of two arteries and one vein. Epiploic appendagitis occurs as a result of torsion of the venous component within one of the appendages, which in turn leads in ischemia and subsequent

inflammation of the peritoneum[1,5]. The cause of the torsion has not been clearly established.

Given the predominance of the appendices on the cecum and the sigmoid colon, the pain usually localizes to the left or right lower abdominal quadrant, mimicking diverticulitis or appendicitis. The abdominal pain is often rapid in onset and exacerbated by movement. In one study, all the patients presented with abdominal pain within hours up to 1 week, and the majority did not have any associated symptoms such as fever, anorexia, nausea, vomiting, diarrhea, or constipation[6]. Localized abdominal tenderness and guarding are usually found on physical examination. The leukocyte count can be normal or slightly elevated[4,6].

Given the nonspecific presentation and the lack of distinctive clinical features, the diagnosis of epiploic appendagitis without imaging can be challenging. Additional imaging such abdominal ultrasound or CT is usually necessary to establish the diagnosis. Historically epiploic appendagitis was primarily a surgical diagnosis, but advances in radiological techniques allowed for the first report of epiploic appendagitis on CT scan in 1986[7]. Pathognomonic CT findings are a 1 to 4 cm oval-shaped fat density lesion surrounded by inflammatory changes[8]. Thickening of the parietal peritoneum wall can sometimes be observed. In contrast to diverticulitis, the diameter of the colonic wall is mostly regular without signs of thickening[8]. These radiographic changes can last for weeks after the initial diagnosis[9].

Epiploic appendagitis is generally a self-limiting disorder, with patients spontaneously recovering within 10 days[10]. Conservative management with oral anti-inflammatory medication is indicated after an accurate radiological diagnosis has been established. Antibiotics or surgical treatments are rarely warranted. However, the findings of one study suggested that the condition can recur with conservative management, and surgical option should be considered[1]. Complications including inflammation induced adhesions, secondary abscess, or intestinal occlusions are uncommon[1,10].

Although epiploic appendagitis is a rare condition, the diagnosis should be considered in patients who present with lower quadrant abdomen pain with the lack of associated symptoms or significant laboratory findings because the treatment is generally non-surgical. Radiolographic studies are helpful to distinguish this condition from the more common causes of acute abdomen.

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