Foresee Your Next Patient

Epiploic Appendagitis: An Often Unrecognized Cause of Abdominal Pain

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A 35-year-old woman with no pertinent past medical history presented to the emergency department with a 1-month history of nonbilious, nonbloody emesis and a 1-week history of intractable lower left-sided abdominal pain, bloating, and an inability to tolerate oral intake. She was unemployed and had not taken any medications prior to admission. She denied fever, chills, diarrhea, constipation, dysuria, hematuria, weight loss, and recent travel.

Physical examination. At presentation, her abdomen was tender to palpation in the left lower quadrant with no guarding or rebound. Her abdomen also was slightly distended, and bowel sounds were present although slightly decreased. A rectal examination was performed, the findings of which were unremarkable. Vital signs included a blood pressure of 117/68 mm Hg, a temperature of 36.4°C, and a pulse rate of 68 beats/min. She was obese, with a body mass index of 35 kg/m^2.

Diagnostic tests. Results of a chemistry panel, liver function test, and a complete blood cell count were normal. Urine pregnancy test results were negative, and urinalysis results were normal. Imaging included transvaginal ultrasonography, the findings of which were unremarkable. She also underwent contrast-enhanced computed tomography (CT) of the abdomen and pelvis, the results of which showed epiploic appendagitis of the mid-descending colon as evidenced by an inflamed fat-density ovoid lesion along the antimesenteric border of the descending colon with a central hyperdensity (**Figures 1 and 2**).

Axial contrast-enhanced CT image demonstrating an inflamed fat-density ovoid lesion (arrow) along the antimesenteric border of the descending colon with a central hyperdensity (arrowhead).

Treatment. The patient's pain was managed with alternating acetaminophen, ibuprofen, and tramadol. The gastroenterology team was consulted out of concern for the patient's prolonged symptoms, and they agreed to continue conservative management. Over her hospital course, the patient was slowly able to tolerate oral intake without emesis, and her pain, although still present, had improved by the time of discharge.

Discussion. Epiploic appendagitis is an uncommon but clinically important cause of acute lower abdominal pain. The incidence rate is 8.8 per 1 million people per year, although this may be an underestimate, since some patients with a clinical diagnosis of diverticulitis or appendicitis may actually have appendagitis.[1] Misdiagnosis can lead to unnecessary hospitalization, antibiotic use, and surgical procedures. The differential diagnosis may also include constipation, colitis, inflammatory bowel disease, ovarian torsion, and pelvic inflammatory disease.

Epiploic appendages are predominantly adipose-containing ovoid structures that arise on the antimesenteric serosal surface of the colon connected by a vascular pedicle. They can range in size from 0.5 to 5 cm, can occur anywhere along the colon, and are oriented in 2 rows typically parallel to the taenia coli. These structures can become twisted, inflamed, or thrombosed, causing acute pain. There is an increased concentration of the

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Coronal contrast-enhanced CT image demonstrating an inflamed fat-density ovoid lesion (arrow) along the antimesenteric border of the descending colon with a central hyperdensity (arrowhead).

appendages in the sigmoid colon and cecal region; thus, appendagitis in these areas can mimic diverticulitis or appendicitis, respectively.[2] Appendages also tend to be larger in obese individuals and those who have recently lost weight.[3,4] The condition more commonly occurs in 30- to 50-year-old men and is associated with strenuous exercise, obesity, and hernia.[5] More specifically, left-sided appendagitis has been shown to occur more often in those who are obese (body mass index >24.5 kg/m^2) and younger than age 60, and laboratory test results may show a mildly elevated C-reactive protein level.[6] The exact function of the appendages is unclear, but they may serve as a blood reservoir, provide cushioning, and help in colonic absorption.[7]

Patients with epiploic appendagitis present with acute, constant, localized, nonmigratory lower abdominal pain, in most cases occurring in the left lower quadrant. The pain is usually worse after eating and may be associated with nausea and vomiting, but there are usually no concerning features such as fever, change in bowel movements, weight loss, dysuria, or hematuria. Physical examination reveals tenderness to palpation without rebound or guarding. Laboratory test results are generally normal, without leukocytosis. Because localization of the pain to the left and right lower quadrants can mimic diverticulitis and acute appendicitis, respectively, CT of the abdomen and pelvis is performed to evaluate for these conditions, and epiploic appendagitis is usually discovered as an alternative diagnosis.

Normal epiploic appendages are imperceptible on CT imaging but become visible when they are inflamed or are outlined by abutting fluid. They most commonly present on CT imaging as an ovoid fat-density structure arising from the antimesenteric border of the colon with associated inflammatory fat stranding within the lesion and the surrounding area. Typically, the lesions demonstrate a hyperdense rim of inflammation and most commonly arise from the sigmoid or descending segments of the colon. They may also demonstrate a thrombosed vascular pedicle manifesting as a central hyperdense dot; however, this feature is not necessary for imaging diagnosis.[8] In addition, spread of inflammation may cause localized parietal peritoneal thickening. The adjacent colonic wall is usually normal and, if involved, only demonstrates minimal wall thickening.

Epiploic appendagitis is generally a benign and self-limiting condition. Conservative management without antibiotics and pain control with nonsteroidal anti-inflammatory drugs is recommended. Patients typically recover within 1 to 4 weeks.[9,10] Surgical treatment may be recommended if the patient's condition is refractory to conservative management or in occasional cases in which appendagitis results in adhesions, obstruction, peritonitis, abscess formation, or an intraperitoneal loose body.

Outcome of the case. Over the next few weeks, our patient's left lower abdominal pain improved with conservative management. This case highlights the importance of accurate diagnosis, especially since the clinical presentation of epiploic appendagitis can mimic more serious conditions such as acute diverticulitis or appendicitis, leading to unnecessary hospitalization, antibiotics, or even surgical procedures. Clinicians need to be aware of this often misdiagnosed cause of abdominal pain. ■

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