Epiploic Appendagitis: An often-unrecognized cause of acute abdominal pain

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Figure 1. Axial CT scan without contrast shows an oval shaped epiploic appendage with stranding of the adjacent mesentery (arrow) diagnostic of epiploic appendagitis, a non-surgical cause of abdominal pain.

CASE

A 54-year-old woman presented to her primary care physician with acute left lower quadrant abdominal pain. She had no fever or chills but did have nausea for several hours. She was on no medication and had no surgical history. On physical examination there was focal left lower quadrant tenderness with palpation but no rebound tenderness. The differential diagnosis for acute abdominal pain is vast and includes conditions treated both medically (such as gastroenteritis) and surgically (such as appendicitis). The patient was sent for a CT scan of the abdomen and pelvis which showed classic imaging features of epiploic appendagitis (Figure 1). The referring clinician was called and appropriate conservative management with NSAIDS was used. The patient was educated by the radiologist about the disease and the expected outcome prior to leaving the office.

DISCUSSION

Imaging plays a crucial role in triaging patients with abdominal pain toward appropriate treatment. One diagnosis to add to the differential diagnosis for acute abdominal pain is epiploic appendagitis (EA). First introduced by Lynn et al[1] in 1956, EA is a benign and self-limited inflammatory condition usually caused by torsion of an epiploic appendage or spontaneous venous thrombosis. EA may mimic surgical causes of acute abdominal pain, such as acute appendicitis or diverticulitis. Before the advent of CT imaging, EA was most commonly diagnosed at surgery. In 1986, Danielson et al[2] described the CT findings. The use of emergency abdominal CT scan can aid in the diagnosis of EA and its differentiation from other causes of lower quadrant abdominal pain in order to avoid unnecessary antibiotics, hospital admission, and surgical intervention. Here we review the significant signs, symptoms, radiologic findings, and treatment of EA.

Epiploic appendages are fatty pedicular structures found on the serosal surface of the normal colon. Each person has an estimated 50-100 epiploic appendages, most commonly found on the sigmoid colon and cecum. Although usually 3 cm in length, some can be up to 15 cm long.[3] The function of epiploic appendages is not known.

Symptomatic EA can occur in any part of the colon and most commonly presents in adult males and females in their second to fifth decade.[4] EA is thought to be more common in obese patients and those with recent significant weight loss.[5] Presenting symptoms are nonspecific. Abdominal pain is the leading symptom, often mimicking appendicitis and diverticulitis. In general, patients do not appear systemically ill and are afebrile. Nausea, vomiting, and diarrhea may occur. Rebound tenderness is usually not present. There are no pathognomonic diagnostic laboratory findings. The white blood cell count with differential and ESR are normal or moderately elevated.[6]

Early radiologic examination with an abdominal CT scan is essential to making the diagnosis. EA should be considered in the differential diagnosis of patients presenting with localized lower abdominal pain without associated leukocytosis or fever and in patients when exploration of the abdomen reveals none of the more common causes of acute abdomen. On CT, findings specific for EA are:[7]

1. Oval-shaped, well-defined focus of hypodense fat tissue
2. Thickened peritoneal ring (ring sign)
3. Periappendageal fat stranding (inflammatory change)
4. Central dot sign (thrombosed vessel)

On ultrasound, EA appears an as oval noncompressible hypoechoic mass at the site of maximal abdominal tenderness with no color Doppler blood flow.

When the diagnosis is not made before the patient undergoes surgery, the inflamed appendage is ligated and resected.[8] Otherwise, treatment is supportive and non-operative. Pain control should be provided. Antibiotics are not indicated. Most cases resolve in 3-14 days. Patients should be advised to seek medical attention if symptoms worsen after 2 days. Complications of EA are uncommon but include intestinal obstruction, intussusception, and abscess formation.[9]

CONCLUSION

The correct diagnosis of epiploic appendagitis can prevent unnecessary surgical intervention, hospitalization, and antibiotic use. This article describes the clinical and laboratory features of patients with epiploic appendagitis. History and physical examination characteristics in selected patients should prompt the clinician to consider the diagnosis of EA in patients with abdominal pain and to perform a CT scan examination to provide a definite diagnosis.

References

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