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CLINICAL VIGNETTE

Epiploic Appendagitis: An Uncommon Cause of Recurrent Abdominal Pain

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Case Presentation

A 71-year-old female with diabetes mellitus, fibromyalgia, and remote history of clostridium difficile colitis presented for evaluation of acute left lower quadrant abdominal pain. The pain started four days prior and was progressively getting worse. It was constant, dull, non-migratory, and radiated to her left flank. She denied fevers, chills, nausea, vomiting, diarrhea, constipation, blood in her stool, dysuria, and urinary frequency, and denied a history of prior abdominal or pelvic surgeries. She reported having had similar symptoms five years prior, when imaging had shown epiploic appendicitis. The patient reported multiple prior colonoscopies without awareness of diverticulosis.

On exam, she was hemodynamically stable. Her temperature was 36.8°C, her pulse was 84 beats/min, her blood pressure was 158/78, and her respiratory rate was 17 breaths/min. Abdominal exam showed a soft and non-distended abdomen, normoactive bowel sounds, and tenderness in the left lower quadrant to deep palpation. No rebound tenderness or guarding was noted. There was no costovertebral angle tenderness and pulmonary and cardiac exams were unremarkable.

Diagnostic Tests

Lipase: 23 (N: 9 – 63 U/L)
Procalcitonin: < 0.10 (N: < 0.10 ug/L)
WBC: 9.75 (N 4.16 – 9.05 x10E3/uL)
Hemoglobin: 14.1 (N: 11.6 – 15.2 g/dL)
Platelet count: 352 (N: 143 – 398 x10E3/uL)
Creatinine: 0.60 (N: 0.60 – 1.30 mg/dL)
AST 18 (N: 13 – 47 U/L)
ALT: 20 (N: 8 – 64 U/L)
Urine Blood: Negative
Urine Bilirubin: Negative
Urine Protein: Negative
Urine Nitrite: Negative
Urine Leukocyte: Negative
CT Abdomen and Pelvis Without IV Contrast showed focal inflammatory change in the left side of the abdomen, on the antimesenteric side of the colon consistent with epiploic appendagitis. No evidence of obstruction and normal appendix.

Discussion

Left lower quadrant pain is a common presenting complaint in adults in both the outpatient and inpatient settings. The differen-

tials can range widely from gastrointestinal to genitourinary and gynecological causes.

Epiploic appendicitis is a less commonly known cause of left lower quadrant pain. The epiploic appendages are pouches of subserosal fat that line the entire length of the colon in adults. The term, *epiploic appendagitis*, was introduced in 1956 by Dockerty et al.¹ The term describes inflammation caused mainly by torsion of the appendages or spontaneous thrombosis of a draining appendageal vein causing fat necrosis. The condition presents as lower abdominal pain and more specifically left lower quadrant pain in about 80 percent of cases. Incidence is reported as high as 1 to 7 percent of patients initially suspected of having acute diverticulitis and 1 percent of those initially suspected of having acute appendicitis, due to similarities in presentations. The mean age of those affected is 40 to 45 years old.²⁻⁴ Males are affected at a slightly higher rate than females.⁵ Risk factors for developing epiploic appendagitis may include obesity and strenuous exercise;^{6,7} however, these could not be reproduced in subsequent studies.^{5,8}

Pain from epiploic appendagitis typically presents as constant, dull, localized, non-migratory, non-radiating pain in the lower quadrants. Physical exam reveals localized tenderness without rebound or guarding. Routine laboratory testing is usually within normal limits, with occasional mildly elevated C-reactive protein and elevated neutrophil count. Due to the non-specific nature of presentation, exam, and laboratory findings, diagnosis is made through imaging, with computed tomography being the preferred modality for diagnosis^{2,8} and for differentiating it from acute diverticulitis, which is the most common cause of acute left lower quadrant pain in adults.⁹ The ACR Appropriateness Criteria recommends CT as the most appropriate imaging test for patients with acute, severe left lower quadrant pain with or without fever; for patients with chronic, intermittent, or low-grade left lower quadrant pain; and for patients who are obese with left lower quadrant pain. Although ultrasonography can be used to diagnose acute diverticulitis and even epiploic appendagitis, it is not as sensitive nor specific as CT is. Pelvic and transvaginal ultrasound is, however, the preferred imaging technique in females of childbearing age to evaluate for gynecologic pathology, such as ectopic pregnancy and pelvic inflammatory disease.⁹⁻¹²

Epiploic appendagitis is self-limiting, and most cases are treated conservatively without need for surgery, hospitalization, or antibiotic therapy.² NSAIDs can be used for pain relief, and symptom resolution with conservative treatment is achieved in 3 to 14 days with a mean of 4.7 days.^{4,8,13}

Case Treatment and Follow-up

The patient was initially started on emperic amoxicillin-clavulanic acid for presumed acute diverticulitis until laboratory studies and imaging could be performed. However, the patient declined the medication due to her remote history of clostridium difficile colitis. Her pain was treated conservatively with NSAIDs. Her symptoms were completely resolved by day 7 after onset of pain.

Conclusion

When an adult patient presents with localized left lower quadrant pain and tenderness without associated symptoms such as fever and vomiting, or laboratory abnormalities typically seen with acute diverticulitis, epiploic appendagitis should be considered. In acute diverticulitis, the pain is more evenly distributed throughout the lower abdomen, and findings like nausea, vomiting, fever, and leukocytosis are more frequently present. CT abdomen and pelvis with oral and IV contrast is recommended to make the diagnosis and to evaluate for other causes of acute left lower quadrant pain.^{3,8,10}

REFERENCES

1. Dockerty MB, Lynn TE, Waugh JM. A clinicopathologic study of the epiploic appendages. *Surg Gynecol Obstet.* 1956 Oct;103(4):423-33. PMID: 13360649.
2. Schnedl WJ, Krause R, Tafeit E, Tillich M, Lipp RW, Wallner-Liebmann SJ. Insights into epiploic appendagitis. *Nat Rev Gastroenterol Hepatol.* 2011 Jan;8(1):45-9. doi: 10.1038/nrgastro.2010.189. Epub 2010 Nov 23. PMID: 21102533.
3. Hwang JA, Kim SM, Song HJ, Lee YM, Moon KM, Moon CG, Koo HS, Song KH, Kim YS, Lee TH, Huh KC, Choi YW, Kang YW, Chung WS. Differential diagnosis of left-sided abdominal pain: primary epiploic appendagitis vs colonic diverticulitis. *World J Gastroenterol.* 2013 Oct 28;19(40):6842-8. doi: 10.3748/wjg.v19.i40.6842. PMID: 24187459; PMCID: PMC3812483.
4. Rao PM, Rhea JT, Wittenberg J, Warshaw AL. Misdiagnosis of primary epiploic appendagitis. *Am J Surg.* 1998 Jul;176(1):81-5. doi: 10.1016/s0002-9610(98)00103-2. PMID: 9683140.
5. Sand M, Gelos M, Bechara FG, Sand D, Wiese TH, Steinstraesser L, Mann B. Epiploic appendagitis--clinical characteristics of an uncommon surgical diagnosis. *BMC Surg.* 2007 Jul 1;7:11. doi: 10.1186/1471-2482-7-11. PMID: 17603914; PMCID: PMC1925058.
6. Boulanger BR, Barnes S, Bernard AC. Epiploic appendagitis: an emerging diagnosis for general surgeons. *Am Surg.* 2002 Nov;68(11):1022-5. PMID: 12455800.
7. Singh AK, Gervais DA, Hahn PF, Sagar P, Mueller PR, Novelline RA. Acute epiploic appendagitis and its mimics. *Radiographics.* 2005 Nov-Dec;25(6):1521-34. doi: 10.1148/rg.256055030. PMID: 16284132.
8. Son HJ, Lee SJ, Lee JH, Kim JS, Kim YH, Rhee PL, Kim JJ, Paik SW, Rhee JC, Choi KW. Clinical diagnosis of primary epiploic appendagitis: differentiation from acute diverticulitis. *J Clin Gastroenterol.* 2002 Apr;34(4):435-8. doi: 10.1097/00004836-200204000-00010. PMID: 11907356.
9. Hammond NA, Nikolaidis P, Miller FH. Left lower-quadrant pain: guidelines from the American College of Radiology appropriateness criteria. *Am Fam Physician.* 2010 Oct 1;82(7):766-70. PMID: 20879699.
10. Expert Panel on Gastrointestinal Imaging:, Garcia EM, Camacho MA, Karolyi DR, Kim DH, Cash BD, Chang KJ, Feig BW, Fowler KJ, Kambadakone AR, Lambert DL, Levy AD, Marin D, Moreno C, Peterson CM, Scheirey CD, Siegel A, Smith MP, Weinstein S, Carucci LR. ACR Appropriateness Criteria® Right Lower Quadrant Pain-Suspected Appendicitis. *J Am Coll Radiol.* 2018 Nov;15(11S):S373-S387. doi: 10.1016/j.jacr.2018.09.033. PMID: 30392606.
11. Expert Panel on Gastrointestinal Imaging:, Galgano SJ, McNamara MM, Peterson CM, Kim DH, Fowler KJ, Camacho MA, Cash BD, Chang KJ, Feig BW, Gage KL, Garcia EM, Kambadakone AR, Levy AD, Liu PS, Marin D, Moreno C, Pietryga JA, Smith MP, Weinstein S, Carucci LR. ACR Appropriateness Criteria® Left Lower Quadrant Pain-Suspected Diverticulitis. *J Am Coll Radiol.* 2019 May;16(5S):S141-S149. doi: 10.1016/j.jacr.2019.02.015. PMID: 31054740.
12. Cartwright SL, Knudson MP. Evaluation of acute abdominal pain in adults. *Am Fam Physician.* 2008 Apr 1;77(7):971-8. PMID: 18441863.
13. Qudsiya Z, Lerner D. Acute Epiploic Appendagitis: An Overlooked Cause of Acute Abdominal Pain. *Cureus.* 2020 Sep 29;12(9):e10715. doi: 10.7759/cureus.10715. PMID: 33145124; PMCID: PMC7598218.