

EPIPLOIC APPENDAGITIS: A CASE REPORT

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ABSTRACT

Epiploic appendagitis (EA) is a rare as well as self-limiting reason of acute abdomen. We present a case of a 34 year old male patient, who presented to the surgical department with a 3 days history of pain in right iliac fossa. On examination he was afebrile and vitally stable. However; there was typical guarding on palpation and rebound tenderness in right iliac fossa. Complete blood count was within normal limits. Ultrasound examination showed minimal free fluid in right iliac fossa along with probe tenderness. Appendix was of normal diameter. Computed tomography demonstrated typical features of epiploic appendagitis. The term was first used by Lynn et al. in the mid 1950s. With the increase in CT scanning radiologists need to be increasingly aware of the clinical and radiological appearances of epiploic appendagitis to avoid surgical intervention. This patient was treated with medication at home with the recommendation of rehydration and strict rest. Moreover, he was given prescription of oral medicines including metronidazole, ciprofloxacin and NSAIDs (ibuprofen) for 7 days to avert more complexities like gut adherence, intestinal obstruction, peritoneal inflammation and localized pus accumulation. Prompt recovery was noted after 5 days in the form of settling of his symptoms including pain. To end, it can be assumed that although exceptional in incidence with insufficient specific features on presentation, to diagnose EA has developed straight forward with investigations like computed tomography; thus, with previous observation for EA among doctors, nonessential surgeries can be prevented.

Introduction

Whenever there is pain in abdomen then there is a long list of differential diagnosis which can range from very benign conditions like gastroenteritis to acute surgical abdomen.² Epiploic appendages are peritoneum lined protrusions of subserosal fat that arise from the surface of the large bowel. Epiploic appendages typically measure 1.5 x 3.5 cm but have been reported to measure up to 15 cm in length.³ There are between 50-100 of them in the large bowel, from the cecum (where they may be absent) to the recto sigmoid junction. They are not normally visible on fluoroscopy, radiography or CT, unless they are surrounded by contrasting material (e.g. hemoperitoneum, ascites, or contrast medium).⁴ With broad based stalked character and venous drainage by one vein,

these fat components are prone to torsion, necrosis (both hemorrhagic and ischemic) & infection resulting in epiploic appendagitis.^{5,6,7} EA is a least common cause of acute abdomen having common location of sigmoid colon as well as at the junction of ileum & caecum resulting in discomfort at this specific area often resulting in misinterpretation of the case as diverticular inflammation or appendicitis, respectively.⁸ If diagnosis is not correctly made then it may result in futile hospital admissions along with antibiotic prescription as well as surgical procedures as CT scan is an important requirement for viewing and excluding other causes of pain.⁹

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Case

A 34-year old Asian man (BMI 28.2) presented to surgical department with history of pain in right iliac fossa for last three days. His visual analogue scale (VAS) score was 1/10 = 10.0 %. On examination there was guarding and tender right iliac fossa. There was no constitutional symptom of nausea, vomiting, pyrexia, rigors, skin rash, pain in joints, urinary complaint, weight reduction, or abdominal trauma. He did not travel abroad or there was contact with any person with disease. He refused any significant stress around. A differential of acute appendicitis was made and investigations were advised. Vitals were within normal limits. No fever spike was noted. His laboratory investigations revealed total leukocyte count (TLC) $8.9 \times 10^9/L$, hemoglobin: 13.5 g/dL, hematocrit: 40.5%, red blood cell level: $4.82 \times 10^{12}/L$, and platelet: $363 \times 10^9/L$. Neutrophil count was 50%, lymphocyte count 40%. Ultrasound abdomen showed mild free fluid in right iliac fossa with probe tenderness. Appendix was 5mm.

Urine analysis report showed WBC 2-4, epithelial cells: 0-1 & mucous: ++. Non enhanced computed tomography (NECT) of the abdomen as well as pelvis was done after preliminary examination. CT abdomen & pelvis (plain) showed unremarkable solid abdominal viscera. However; Epiploic appendages were bit prominent at the level of caecum (Fig.1).



Figure 1: Rounded lesion 11x7 mm in length, near caecum, in right lower quadrant on axial image.

After thorough assessment between clinico-radiological and laboratory results, definite diagnosis of epiploic appendagitis was made. He was given oral antibiotic (metronidazole & ciprofloxacin) as well as a NSAID (ibuprofen) for 7 days to prevent deterioration.

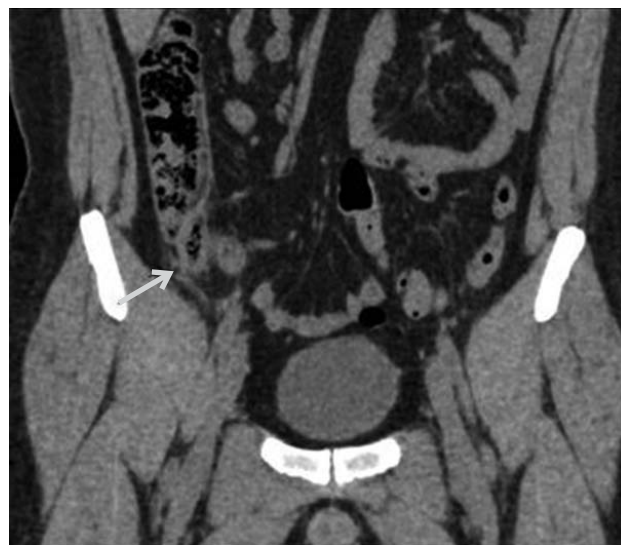


Figure 2: Ovoid lesion 11x7 mm in diameter, near caecum, in right lower quadrant (marked) on coronal image.

Discussion

Epiploic appendagitis was first defined in 1956 by Dockerty et al.¹⁰ There are two subtypes, primary epiploic appendagitis (PEA) & secondary. PEA (very unique incidence) is known to present after twisting of fat or obstruction of its vascular drainage.¹¹ At the same time secondary epiploic appendagitis may result due to infection in surrounding organs such as vermiform appendix, gut diverticula, pancreases and post-operative adhesions.¹² Even though PEA can occur in wide age spectrum, however; mostly seen in patients in their 40s or 50s.¹³ It has male predilection with overweight individuals and those having undergone rapid reduction in weight over short time interval are at higher risk as well as people doing vigorous exercise.^{11,5,15} Our patient was above normal weight but was not obese (BMI 28.2 kg/m²). Regarding presenting symptoms of PEA,¹⁶ pain in abdomen without any associated pyrexia was the commonest feature to present in all study patients.¹² Although less often presentation complaints are sudden onset of pain in abdomen, loss of appetite, nausea, loose motions and constipation. Like the features mentioned above, this case has also presented to surgical department with sudden start of pain in right iliac fossa (specifically in right iliac fossa) with no associated pyrexia or diarrhea and bloating. On general physical examination, there was tender lower abdomen and

guarding which are frequent findings.¹⁷

There are no particular lab results for PEA except vague increase in inflammatory markers like CRP and sporadic leukocytosis; whereas other CBC components remain unremarkable.¹⁰ In our case, the TLC was within normal range (TLC:8.9 x10⁹/L). Therefore, absence of specific clinical and laboratory results and the disease being uncommon made the provisional diagnosis of EA very much burdensome. In most instances, patients of EA may be mislabeled as acute inflammation of appendix or diverticula depending on the location of pain in lower abdomen. In our patient, as the pain was in right iliac fossa, provisional diagnosis after preliminary examination was of appendicitis. Specific imaging features of PEA are seen on cross sectional imaging with respect to site as well as size and density of mass.

Singh along with his colleagues mentioned broad list of post contract CT characteristics in 50 patients who were labeled as acute epiploic appendagitis. As per their research, sigmoid colon was most commonly affected site (62%) after which was descending colon (18%) & least common was ascending colon (8%).⁶ EA is most commonly found patients ranging from 20 to 50 yrs of age with surprisingly four times male predominance.¹⁸ In our case, cross sectional scan showed the pathology to be near caecum. As PEA is a self-limiting condition, management is conservative which has been established as the treatment of choice and has seen to resolve most complaints of PEA within a week or up to a month.^{12,11,20,3} Ozdemir and colleagues research showed that the symptoms of PEA are seen to subside within 3 weeks with conservative management with no recurrence seen in the follow-up period of 7 weeks .

Conclusion

In conclusion, although uncommon in occurrence with vague presenting features, diagnosing PEA has become less difficult with the advent of cross sectional imaging modalities like computed tomography or magnetic resonance imaging; thus, the undue surgeries can be prevented by getting prior knowledge regarding this disease among doctors.

Conflict of interest: None

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