

Epiploic Appendagitis: A rare cause of acute abdomen

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Abstract

Background: Epiploic appendagitis is a rare cause of acute abdomen that may manifest with acute onset of pain in the lower abdomen. Its symptoms may be mistaken for acute diverticulitis, appendicitis, omental infarct, or caecal perforation. In this case report, we discuss a 30-year-old man who presented with sharp left lower quadrant abdominal pain, for which he had an urgent abdominal computed tomography (CT) scan. On CT images, epiploic appendagitis will appear as oval lesions with a central area of fat attenuation may be accompanied by surrounding inflammation. Despite the rarity of the condition and its common omission from differential diagnoses, the ability to recognize and diagnose epiploic appendagitis from its imaging is important for treating surgeons. If not diagnosed correctly, epiploic appendagitis can result in unnecessary surgical intervention. In this case, the diagnosis of epiploic appendagitis using CT allowed the patient to avoid surgery and other invasive treatment, and the patient was eventually discharged on conservative medical management.

Keywords: Epiploic appendagitis, Acute abdomen, Computed tomography

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I. Introduction

Epiploic appendages are pedunculated, fat-filled peritoneal pouches supplied by small blood vessels that form vascular stalks that contain branches of a circular end-artery and a central draining vein that supply the corresponding segment of the colon [1]. They are found spread all over the serosal surface of the colon, but they are much more abundant and larger on the sigmoid and transverse colon walls [2]. Surgical events arising from epiploic appendages are a rare occurrence, and these include inflammation, torsion, internal herniation and obstruction, and colonic intussusception [3]. Epiploic appendagitis is an ischemic infarction of an epiploic appendage caused by torsion or thrombosis of the central draining vein. In fact, it is an unusual presentation and often a misdiagnosed cause of acute localized abdominal pain mimicking other relatively common entities such as left- or right-sided acute diverticulitis, acute appendicitis, acute cholecystitis, and possibly omental fat infarction and thus causing a real diagnostic dilemma [4]. This would arguably explain its importance as a possible, though rare, differential diagnosis for the acute localized abdominal pain. The misdiagnosis would lead to unnecessary hospitalizations and surgical intervention as the condition is benign and typically self-limiting with a favourable long-term outlook [5, 6].

II. Case Presentation

A 30-year-old man presented to the emergency department with a 2-day history of left-sided lower abdominal pain. The pain started suddenly around the central abdomen and then moved towards the left side; the pain was colicky to start with then became continuous. There was worsening of pain with movement and was associated with moderate to high grade continuous fever, nausea, one episode of non-bilious vomiting and anorexia. There was no diarrhoea, or rectal bleeding. He had normal bowel movements and had no previous similar presentations. Her past medical history was insignificant and does not have any allergies. On general examination, he looked unwell; was febrile. Vital signs on presentation were a pulse rate of 108 beats per minute, a blood pressure of 110/70 mmHg, and a respiratory rate of 14-16 breaths per minute. Systemic examination was essentially normal. Examination of the abdomen revealed marked tenderness in the LIF with rebound tenderness but no localized guarding or generalised rigidity. The rest of the abdomen was soft and nontender with normal bowel sounds. Blood tests revealed a Complete hemogram, Renal and Liver function tests were within the normal ranges. Urinalysis was normal. Based on the given history and relevant physical and laboratory findings, a presumptive clinical diagnosis of acute ureteric colic was suggested. The patient was admitted for observation. A computed tomography (CT) scan of the abdomen and pelvis was performed the next

morning, which revealed an epiploic appendagitis of the descending colon with surrounding fat stranding (Figure 1). He was managed conservatively with analgesia and antibiotics to which he responded well and was subsequently discharged from surgical care.

III. Discussion

Epiploic appendagitis is a rarely occurring surgical cause of abdominal pain, but the true incidence is not fairly known. However, it has been reported that, in 2-7% of patients with a presumed clinical diagnosis of acute diverticulitis and 0.3-1% of those suspected of having acute appendicitis [6]. Owing to the nonspecific nature of its presenting symptoms, physical signs, and laboratory findings, it is extremely difficult to diagnose it, before radiological investigations, and hence, most of the cases are identified incidentally on the CT scans while investigating or ruling out other intra-abdominal pathologies [7]. Historically, the diagnosis has been made during exploratory laparotomy, but nowadays, the radiological investigations have become the main diagnostic tool for epiploic appendagitis. Ultrasonography scan (USS) of the abdomen has some characteristic features to diagnose epiploic appendagitis. Nevertheless, the CT scan is the gold standard of diagnosis. Typical tomographic signs are 2-3 oval-shaped lesions with central hyper attenuation corresponding to a thrombosed draining vein, thickened peritoneal linings, and inflammatory changes within the surrounding fat. It is important to note that the epiploic appendages are not fairly seen on the CT scan, if they are not inflamed [8]. Magnetic resonant imaging (MRI) findings generally appear to correspond to CT ones; however, they are not well-studied and hence, less reliable [9]. Furthermore, the use of MRI in the diagnosis of appendagitis is limited by its unavailability in many emergency settings. Identifying epiploic appendagitis diagnosis would undoubtedly avoid unnecessary surgical intervention and general anaesthetic risks, but due to its rarity, it should not be routinely sought in every patient with lower abdominal pain, especially when other clinical and laboratory findings clearly point to most evident causes of acute abdomen. The management of epiploic appendagitis is generally conservative with nonsteroidal anti-inflammatory drugs to control pain. Complete resolution usually occurs between 3 to 14 days. The role of antibiotics has been controversial in the literature, but many reports showed no added benefit of antibiotic use. Surgery is reserved for patients whose symptoms fail to improve with conservative management, or patients who develop complications that cannot be managed nonoperatively. In this case, the inflamed appendage would be ligated and resected [10].

IV. Conclusion

Despite the rarity of the condition and its common omission from differential diagnoses, the ability to recognize and diagnose epiploic appendagitis using various imaging modalities is important for health care providers especially treating surgeons and physicians. If not diagnosed correctly, epiploic appendagitis may cause an unnecessary hospital admission, and perhaps even unnecessary surgery.

DECLARATIONS

Consent: Well informed and written consent was taken from the patient to write and publish his case report along with the radiological images of his abdomen

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Ethical approval: Approved by Institutional Ethical Committee

References

- [1]. M. G. Rodríguez, V. V. Moreira, I. R. Gallego, M. F. Rivero, and E. G. Garrido, "Epiploic appendicitis: the other appendicitis," *Gastroenterología y Hepatología*, vol. 31, no. 2, pp. 98–103, 2008.
- [2]. T. A. Tabbara, O. Y. Alassaf, and M. C. Kaouas, "Acute epiploic appendicitis: diagnostic and laparoscopic approach," *International Journal of Surgery Case Reports*, vol. 44, pp. 157–160, 2018.
- [3]. E. A. Chu and E. Kaminer, "Epiploic appendagitis: a rare cause of acute abdomen," *Radiology Case Reports*, vol. 13, no. 3, pp. 599–601, 2018.
- [4]. M. Sand, M. Gelos, F. G. Bechara et al., "Epiploic appendagitis— clinical characteristics of an uncommon surgical diagnosis," *BMC Surgery*, vol. 7, no. 1, p. 11, 2007.
- [5]. J. Gandhi and N. Gandhi, "Rare disease: epiploic appendagitis," *BMJ Case Reports*, vol. 2009, 2009.
- [6]. W. J. Schnedl, R. Krause, E. Tafeit, M. Tillich, R. W. Lipp, and S. J. Wallner-Liebmann, "Insights into epiploic appendagitis," *Nature Reviews Gastroenterology & Hepatology*, vol. 8, no. 1, pp. 45–49, 2011.
- [7]. E. L. Legome, A. L. Belton, R. E. Murray, P. M. Rao, and R. A. Novelline, "Epiploic appendagitis: the emergency department presentation," *The Journal of Emergency Medicine*, vol. 22, no. 1, pp. 9–13, 2002.
- [8]. M. Rioux and P. Langis, "Primary epiploic appendagitis: clinical, US, and CT findings in 14 cases," *Radiology*, vol. 191, no. 2, pp. 523–526, 1994.
- [9]. M. Şirvanci, N. C. Balci, K. Karaman, C. Duran, and E. Karakaş, "Primary epiploic appendagitis: MRI findings," *Magnetic Resonance Imaging*, vol. 20, no. 1, pp. 137–139, 2002.
- [10]. Patel VG, Rao A, Williams R, Srinivasan R, Fortson JK, Weaver WL. Cecal epiploic appendagitis: a diagnostic and therapeutic dilemma. *Am Surg* 2007;73(8):828–30.



Fig 1. Axial CT abdomen showing an ovoid (~15mm x 8mm) high attenuating fatty lesion with surrounding fat stranding adjacent to the descending colon. (Black arrow)

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