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Epiploic Appendagitis Complicated by Intra-Abdominal Abscess: A Case Report

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Abstract **Case Report**

Epiploic appendagitis is a rare and benign inflammatory condition that typically presents as localized acute abdominal pain and is usually managed conservatively. Complications such as abscess formation are exceptional and rarely reported. We describe the case of a 36-year-old woman who presented with a four-day history of left iliac fossa pain associated with fever. Clinical examination revealed localized tenderness without signs of peritonitis, and laboratory tests showed an inflammatory syndrome. Contrast-enhanced abdominopelvic computed tomography demonstrated a 66×51 mm pericolonic collection with fat density, internal septations, and an enhancing rim, consistent with an abscess complicating epiploic appendagitis. Despite initial treatment with intravenous antibiotics, the persistence of septic symptoms required surgical intervention, including drainage of the abscess and resection of the necrotic epiploic appendage. The postoperative course was uneventful, with complete recovery and no recurrence during follow-up. This case highlights a rare complication of epiploic appendagitis and emphasizes the key role of computed tomography in diagnosis and detection of complications. Although the condition is usually self-limiting, invasive management may be necessary in complicated cases, underscoring the importance of close clinical and radiological monitoring.

Keywords: Epiploic appendagitis; Intra-abdominal abscess; Computed tomography; Acute abdominal pain; Case report.

INTRODUCTION

Epiploic appendagitis is a rare and benign inflammatory condition of the colonic epiploic appendages, most commonly resulting from torsion or spontaneous venous thrombosis of the central draining vein [1-3]. It typically presents as acute localized abdominal pain and may mimic other causes of acute abdomen such as appendicitis or diverticulitis [1,6-7]. Although its course is usually self-limiting with conservative management, complications such as abscess formation are extremely rare and poorly described in the literature [1,7].

We report a case of epiploic appendagitis complicated by an intra-abdominal abscess requiring surgical management, highlighting the diagnostic role of computed tomography and the need for appropriate therapeutic escalation in complicated forms.

OBSERVATION

A 36-year-old woman with no significant past medical or surgical history presented to the emergency department with acute pelvic pain that had progressively developed over four days. The patient had no history of obesity, recent trauma, or vigorous physical activity. The pain was continuous, localized to the left iliac fossa, non-radiating, and accompanied by moderate fever (38.2°C) and asthenia. On admission, physical examination revealed localized tenderness on palpation of the left iliac fossa, without guarding or abdominal rigidity, and there was no rebound tenderness. Gynecological examination was normal, and serum β-hCG was negative, ruling out ectopic pregnancy.

Laboratory tests revealed an inflammatory syndrome with C-reactive protein of 185 mg/L and leukocytosis of 18,000 cells/mm³. Contrast-enhanced abdominopelvic CT scan (Figure 1) demonstrated a 66×51 mm pericolonic collection with fat density, internal septations, and a hyper enhancing rim. The

lesion was associated with surrounding fat stranding and was in contact with a mildly thickened transverse colon wall. The presence of the ring sign supported the diagnosis of epiploic appendagitis complicated by abscess formation. No signs of diverticulitis, appendicitis, or adnexal pathology were identified.

The final diagnosis was intra-abdominal abscess complicating epiploic appendagitis. Differential diagnoses included diverticulitis, appendicitis, and gynecological pathology.

Initial treatment consisted of intravenous antibiotics (ceftriaxone and metronidazole) and analgesics. Due to persistent fever and lack of clinical improvement, surgical management was performed. Laparotomy revealed an approximately 8 cm abscess arising from the transverse colon with purulent content. Surgical treatment included drainage of the abscess and resection of the necrotic epiploic appendage (figure 2).

Histopathological examination confirmed acute inflammatory fat necrosis with extensive suppuration and a predominantly neutrophilic infiltrate, along with vascular thrombosis. No cellular atypia or malignancy was identified. Although histopathological images are not available for this report, the diagnosis was confirmed on tissue analysis. Microbiological cultures grew Escherichia coli and Bacteroides fragilis, confirming secondary infection.

The postoperative course was uneventful, with resolution of fever within 24 hours and progressive normalization of inflammatory markers. The patient was discharged on postoperative day 6 with oral antibiotics. Follow-up at 2 weeks, 6 weeks, and 6 months showed complete recovery without recurrence.

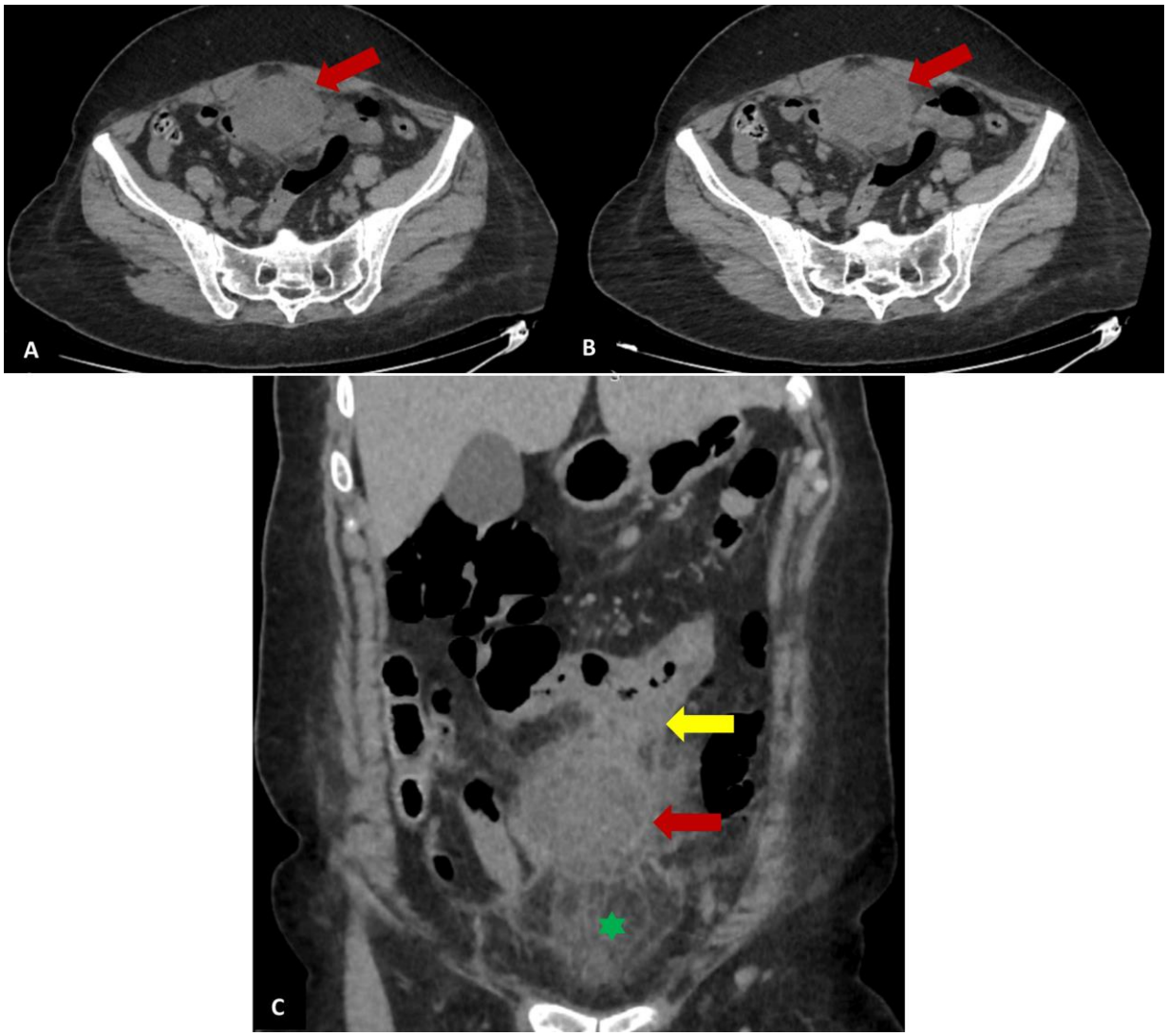

Figure 1 : Abdominopelvic CT scan without (A) and with contrast enhancement (B, C) showing an intra-abdominal collection (red arrow), with surrounding fat stranding (asterisk), in contact with a thickened transverse colon wall (yellow arrow), consistent with an abscess complicating epiploic appendagitis

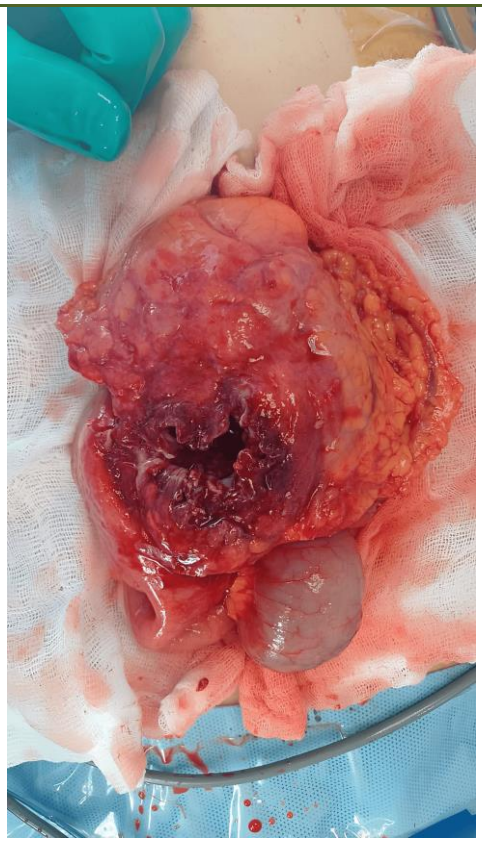

Figure 2: Intraoperative image of the collection

DISCUSSION

Primary epiploic appendagitis is an uncommon cause of acute abdominal pain whose true incidence is likely underestimated due to frequent misdiagnosis [1,8-9]. It typically affects adults between 30 and 50 years of age, with a male predominance reported in most series [7-8,10-11]. The underlying mechanism involves ischemic infarction of an epiploic appendage due to torsion or venous thrombosis. The pedunculated morphology and mobility of these appendages, particularly along the sigmoid and descending colon, increase their susceptibility to torsion [4-5]. Predisposing factors may include obesity, sudden movements, and anatomical variations [5,9].

Clinically, epiploic appendagitis presents with localized, non-radiating abdominal pain, often without marked systemic symptoms [1,6-7]. This contrasts with other causes of acute abdomen such as diverticulitis, which more frequently presents with fever, diffuse tenderness, and significant inflammatory response [6,12]. The differential diagnosis also includes appendicitis, omental infarction, gynecological conditions, renal colic, and inflammatory bowel disease [4,11].

Computed tomography remains the gold standard for diagnosis, allowing identification of characteristic features such as a pericolonic oval fatty lesion, a hyperattenuating rim known as the ring sign, and sometimes a central hyperdense focus corresponding to a thrombosed vein [1,4,9-10]. Associated inflammatory fat stranding is commonly observed. Ultrasound may demonstrate a hyperechoic, noncompressible mass with absent Doppler flow, but it is less specific than CT [1,8-10].

Complicated forms of epiploic appendagitis are exceedingly rare. Abscess formation likely results from extensive fat necrosis creating a favorable environment for bacterial proliferation, potentially in the context of delayed diagnosis or inadequate initial management [1,9]. Clinically, this should be suspected in cases of persistent pain, ongoing fever, and elevated inflammatory markers despite appropriate conservative treatment. Imaging findings such as a large collection greater than 5-6 cm with septations and rim enhancement further support this diagnosis. In the present case, these elements justified surgical intervention.

Management of uncomplicated epiploic appendagitis is primarily conservative, based on analgesics and observation, with most patients improving within one to two weeks [1,7-9]. Antibiotics are generally not required unless there is suspicion of infection. Surgical treatment is reserved for diagnostic uncertainty, failure of conservative management, or complications such as abscess formation. While laparoscopic resection is usually preferred, open surgery may be necessary in cases of extensive inflammation or

large collections. Image-guided percutaneous drainage represents a potential alternative in selected cases.

CONCLUSION

Epiploic appendagitis is usually a benign and self-limiting condition but can rarely be complicated by intra-abdominal abscess requiring surgical management. Computed tomography plays a key role in diagnosis and detection of complications. Awareness of this entity is essential to ensure appropriate management and avoid diagnostic errors. Careful clinical and radiological monitoring is required, particularly in atypical or complicated presentations.

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