

Primary epiploic appendagitis: a rare cause of acute abdomen

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Section: Abdominal imaging

Area of Interest: Abdomen

Procedure: Contrast agent-intravenous

Imaging Technique: CT

Special Focus: Acute Case Type: Clinical Cases

Authors: Zhari B, Sator H, Boumdine H, Amil T, En-Nouali H

Patient: 36 years, female

Clinical History:

A 36-year-old woman presented in the emergency room with sharp and acute onset abdominal pain, and nausea without fever. She had tenderness of left iliac fossa on deep palpation. Her lab investigations, including white cell count, were in normal limits.

Imaging Findings:

Abdomino-pelvic contrast-enhanced CT was performed and showed a fat-density ovoid structure adjacent to sigmoid (2.5 cm in diameter), the centre of which was slightly hyperdense (representing the thrombosed vascular pedicle) with thin high-density rim (representing the inflamed visceral peritoneal covering of the epiploic appendage), and surrounding inflammatory fat stranding.

Mild thickening of adjacent visceral peritoneum was also noted. The rest of the abdominal organs were unremarkable.

A radiological diagnosis of primary epiploic appendagitis was made.

Discussion:

Epiploic appendagitis is an uncommon, self-limiting inflammatory process of the epiploic appendix. They are pedunculated fatty peritoneal pouches (1-2 cm thick and 2-5 cm long), which are attached to the external surface of the colon, extending from the caecum to the rectosigmoid junction. They are bigger in size and more prominent on the left colon. [1]

It is caused by torsion of an epiploic appendage or spontaneous venous thrombosis of a draining appendageal vein. It may be primary or secondary to adjacent pathology (diverticulitis), and occurs more frequently in the sigmoid colon than in the caecum or ascending colon. [2]

This case pertains to primary epiploic appendagitis. It is noted that it is frequently associated with obesity, hernia, and unaccustomed exercise, and affects patients in 2nd to 5th decades with a predilection for women. [3, 4]

Patients most commonly present with localized abdominal pain, often described as sharp. Nausea and vomiting are rare. The patient also may have a low-grade fever. Patients will present with localized tenderness without significant rigidity. WBC count is usually normal or slightly elevated.

Primary epiploic appendagitis is difficult to diagnose clinically because of the lack of pathognomonic clinical features and because symptoms may mimic those of acute appendicitis, diverticulitis, or cholecystitis. [3]

In a healthy patient, normal epiploic appendages have typically fat attenuation and blend in with the surrounding pericolic fat but become apparent when surrounded by intraperitoneal fluid or inflammation.

The most common CT appearance of epiploic appendagitis is a 1–4 cm ovoid fatty mass, which is connected to the

serosal surface of the colon, surrounded by inflammatory changes and abuts the anterior colonic wall. A 2–3 mm thin high-density rim represents the inflamed visceral peritoneal covering of the epiploic appendage. A central, hyperattenuating, round area, «central dot sign», corresponds to engorged or thrombosed central vessels. Thickening of the parietal peritoneum wall can be sometimes observed. [2, 3]

Epiploic appendagitis is a self-limiting disease and thus correct identification on CT prevents unnecessary surgery: conservative treatment with analgesics and NSAIs is usually sufficient. This was the case of our patient.

The presumed diagnosis is primarily based on the CT features, although it sometimes mimics acute abdominal diseases for which surgery is required. [4]

Finally, with the increasing use of cross sectional imaging for the assessment of acute abdominal pain, acute epiploic appendagitis is more commonly diagnosed, but many clinicians are not familiar with this entity, and the radiologist can provide guidance for supportive management. [2, 3]

Differential Diagnosis List: Primary epiploic appendagitis, Diverticulitis, Acute appendicitis, Mesenteric panniculitis, Omental infarction, Omental neoplasms: exophytic angiomyolipoma, Liposarcoma

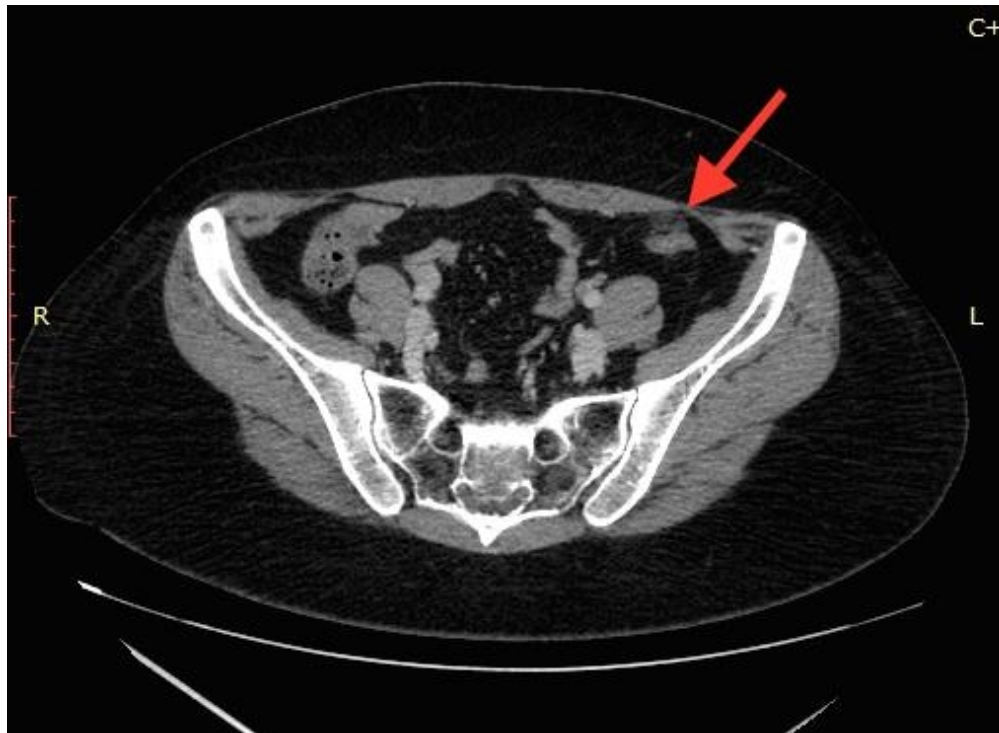
Final Diagnosis: Primary epiploic appendagitis

References:

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- Almeida AT1, Melão L, Viamonte B, Cunha R, Pereira JM (2009) Epiploic appendagitis: an entity frequently unknown to clinicians : diagnostic imaging, pitfalls, and look-alikes. AJR 193:1243–1251 (PMID: [19843737](#))
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Figure 1

a



Description: Control CT after 3 weeks of treatment showed a normal epiploic appendage. **Origin:** service d'imagerie médicale, hôpital militaire d'instruction rabat

Figure 2



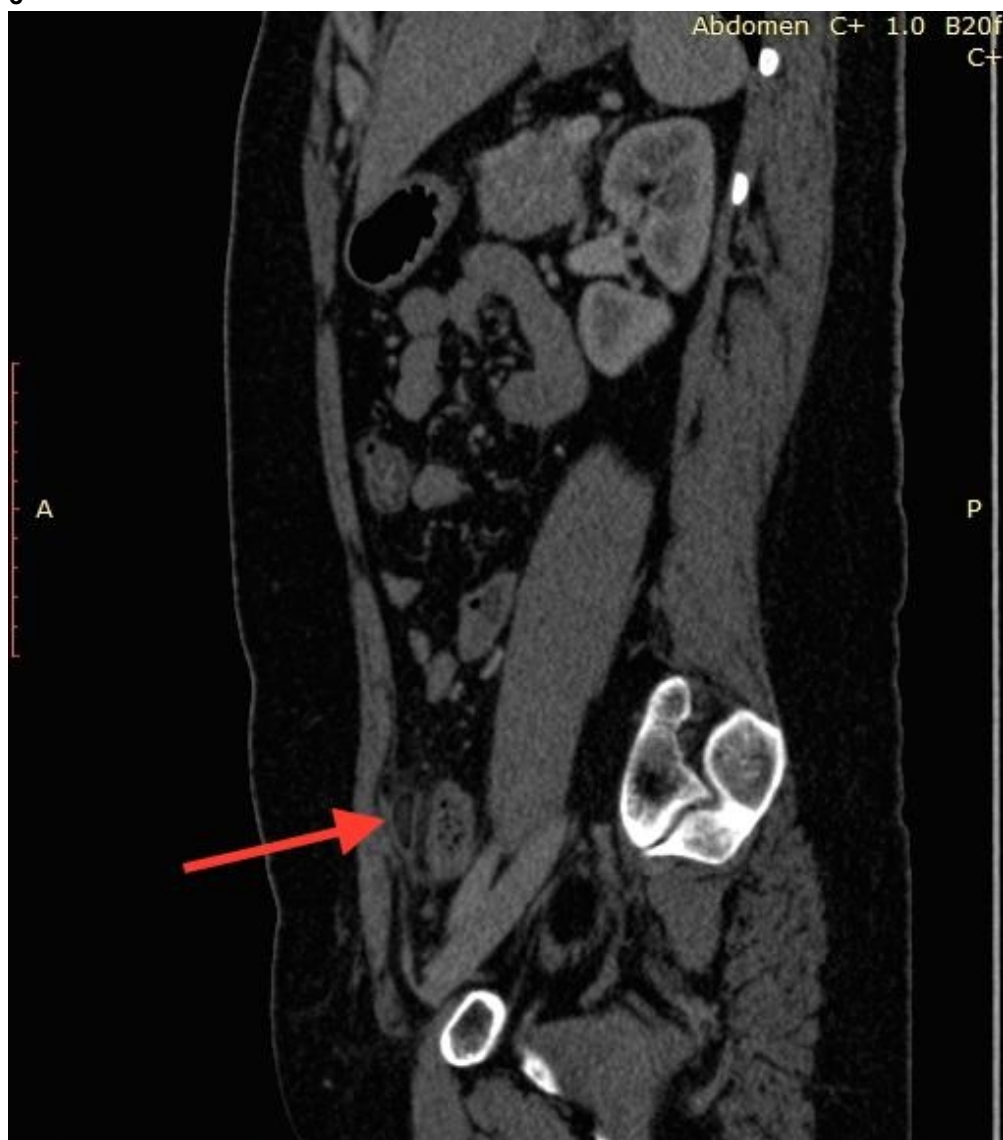
Description: Abdomino-pelvic showed a fat-density ovoid structure adjacent to sigmoid, the centre of which was slightly hyperdense, with thin high-density rim, and surrounding inflammatory fat stranding. Mild thickening of adjacent visceral peritoneum was also noted. **Origin:** service d'imagerie médicale, hôpital militaire d'instruction

b



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c



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