

Primary Epiploic Appendagitis: A Rare Cause of Acute Abdominal Pain Mimicking Appendicitis

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Abstract

Epiploic appendagitis (EA) is an unhabitual cause of local abdominal ache in any other case of healthy patients. It has a lot of similarities on clinical issues that might mimic diverticulitis, appendicitis or mesenteric infarction especially if it occurs on the lower right quadrant. The diagnosis of EA is very infrequent due to low consciousness by clinical physicians. This case report aimed to review and describe different clue radiological findings on computed tomography (CT) that helps to establish the diagnosis of EA to avoid unnecessary surgery.

Keywords: *Epiploic appendagitis; Abdominal pain; Epiploic appendages*

1. Clinical History

A 36-year-old female patient was referred to emergency with a rapidly increasing abdominal pain at the right lower quadrant last night, there were no associated symptoms apart from a mild fever of 38 degrees Celsius.

The routine blood laboratory tests were normal, notably a white blood count of 8200. An abdominopelvic computed tomography (CT) with contrast was performed showed a 2 cm, ovoid, fat-density paracolic lesion with adjacent fat stranding we note also the presence of a central « dot » of increased attenuation correspond to the thrombosed vein. According to those findings, the diagnosis of the epiploic appendagitis was posed conservative management was tried for the patient (only analgesics as prescribed) with a spontaneous resolution of clinical symptoms on the 10th day after the CT scan (FIG. 1).



FIG. 1. Epiploic appendagitis: CT images of the abdomen performed at venous phase, in axial (A) and coronal (B) and sagittal (C) reconstructions showing an oval lesion (arrow) of fatty density with increasing attenuating central point (central dot) which corresponds to the thrombosed vein (red arrow) and surrounded by a hyperdense peripheral rim demonstrating to the infiltration of the adjacent mesenteric fat (dotted arrow).

2. Discussion

Epiploic appendagitis (EA) is a rare pathology, corresponding to an acute inflammation or infarction process of epiploic appendages (FIG. 2).

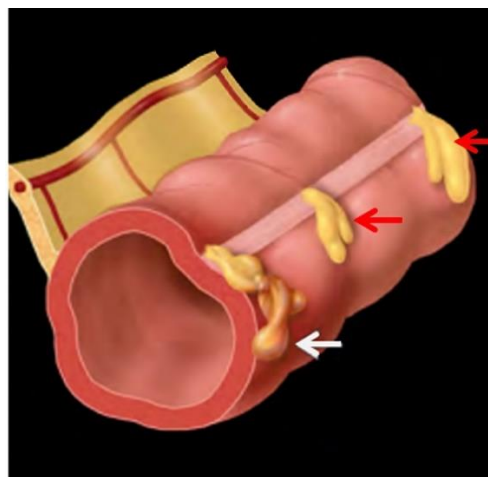


FIG. 2. Graphic illustrates 2 normal epiploic appendages (red arrow) and one that is twisted and infarcted (white arrow).

There are two types of EA: primary when there is no other underlying inflammatory condition, and secondary when the appendages may be inflamed due to adjacent processes, such as diverticulitis or abdominal abscess.

We consider two major factors that lead to EA: the torsion of the peduncle, which is attached to the colonic serosa, initially affecting the venous component, this torsion is also caused by the precarious blood supply, the pedunculated morphology and the hypermobility.

The second essential factor is the venous thrombosis of the draining appendage vein [1].

The patients closely mimic appendicitis, diverticulitis or other acute inflammatory conditions. They present a sudden onset focal abdominal pain which increases while coughing, deep breathing or abdominal stretching, but these symptoms gradually resolve over 3-7 days, sometimes with fever and elevated white blood cell count.

The true incidence of EA is unknown because it was misdiagnosed in the past.

The best imaging tool is the contrast-enhanced computed tomography which offers highly characteristic signs and features that make the diagnosis easily.

Unlike the normal epiploic appendages that are seen on CT scan only when outlined by ascites, the epiploic appendagitis is seen even without the ascites as a pericolic ovoid or rounded pedunculated fatty mass of 1 cm to 4 cm, surrounded by hyperattenuated peripheral rim due to inflammation of the serosa, which may calcify when infarcted [2,3].

We may also have a central « dot » of increased attenuation within the inflamed appendage representing a thrombosed vessel or haemorrhagic necrosis.

The differential diagnosis for EA includes:

Segmental omental infarction: it is localized in the greater omentum typically on the left-sided secondary to torsion, trauma or central venous occlusion. The lesion is larger with a diameter of 7 cm and there is no hyperattenuating rim sign [4].

Appendicitis: Inflammation of the appendix, not a fatty lesion.

Diverticulitis: can be associated with the EA with a longer segment of colonic wall thickening and abscess formation contrary to EA where the inflammatory process is limited to the pericolic region.

Sclerosing mesenteritis: is a distortion and thickening of small bowel mesenteric root and it does not about the colonic wall
Treatment is conservative with clinical spontaneous resolution. Within 10 days, CT findings may persist beyond 6 months and a Calcified mobile "stone" independent peritoneal recesses may persist long-term [5].

3. Learning Points

- It is essential to Differentiate epiploic appendagitis from diverticulitis in the lower left quadrant and appendicitis in the right-left quadrant because the treatment is not the same!

- The image Interpretation Pearl is the presence of a pericolic ovoid fatty mass (1-4 cm) with a hyperdense rim (most common in the rectosigmoid area).
- It is not limited to left colon or elderly.
- We have to be aware of secondary Epiploic appendagitis in which appendages may be inflamed due to adjacent inflammatory processes, such as diverticulitis.

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