Epiploic Appendagitis
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Case 8949

Clinical History:
A 48 year old male patient was admitted to our hospital because of sudden onset of constant pain in the left lower abdominal quadrant radiating to the left upper quadrant and scrotum. He was afebrile. The laboratory profile was normal.
On physical examination he showed left lower abdominal quadrant direct tenderness with no peritoneal signs.

Imaging Findings:
MDCT with oral and intravenous contrast medium was performed. Intestinal distension was obtained by oral administration of 1 L of iso-osmotic polyethylene glycol solution. Contrast-enhanced CT showed a thin oval ring of soft-tissue attenuation surrounding an area of fat attenuation adjacent to the left colon; the hyperdensity of the fat extended along the mesenteric fat which protruded into the inguinal canal to the scrotum (Fig. 1). The CT diagnosis was epiploic appendagitis (EA).
Subsequently, MRI was performed which confirmed the diagnosis of EA and excluded the presence of diverticulitis (Fig. 2).
The patient underwent solely antibiotic therapy, surgery was not performed. A CT follow-up 3 months later yielded a regression of the pathological findings (Fig. 3).

Discussion:
The epiploic appendages are peritoneal pouches of subserosal fat running rows next to the taenia coli of the colon. Approximately 50-100 in number, epiploic appendages are typically 1-2 cm thick and 2-5 cm long. They are absent from the cecum, the appendix and the rectum. Each epiploic appendage is supplied by one or two small endarteries branching from the colonic vasa recta and drained by a rather tortuous vein passing through its narrow pedicle. Such a limited blood supply, together with their pedunculated shape and excessive mobility, makes epiploic appendages prone to torsion and ischemic or hemorrhagic infarct. The clinical findings in EA are non specific and it is usually misdiagnosed as either acute appendicitis or diverticulitis, depending on its localization [1, 2]. In the past EA was a diagnosis of exclusion and was confirmed only after laparotomy and local excision [1]. With improved imaging techniques, EA can be diagnosed without surgery.
Appendices epiploicae are normally invisible in CT. When there is an inflammatory process, CT is usually diagnostic. The typical CT finding of epiploic appendagitis [3, 4, 5, 6] is an oval-shaped paracolic mass with fat attenuation slightly superior to normal fat. The hyperattenuating ring represents thickening of the visceral peritoneal lining of an inflamed epiploic appendix. Parietal peritoneal thickening, fascial thickening and periappendageal fat stranding are often present. In a minority of cases a central high-attenuating “dot” is seen within the appendage, corresponding to a thrombosed draining appendageal vein. The paracolic inflammation is typically more severe than the mild local reactive thickening of the adjacent colonic wall.
Our patient showed on CT a thin oval ring of soft-tissue attenuation surrounding an area of fat attenuation adjacent
to the left colon; the hyperdensity of the fat extended to the scrotum (Fig. 1), a sign never observed before.
Few cases studied by MRI are reported in literature [7]. MRI showed the lesion less hyperintense than normal peritoneal fat on T1-weighted images. The peripheral rim and the perilesional inflammatory changes appeared hypointense on T1-weighted images and hyperintense on T2-weighted images and showed marked enhancement on post-contrast images (Fig. 2).
When the diagnosis of epiploic appendagitis is made, conservative treatment must be initiated to avoid unnecessary surgery.
Follow-up can be performed by CT and we can observe interval shrinkage of the lesion, clearing of periappendageal fat stranding and loss of the smooth outline of the lesion (Fig. 3).

**Differential Diagnosis List:** Epiploic Appendagitis, Omental torsion with or without infarction, Appendicitis, Diverticulitis

**Final Diagnosis:** Epiploic Appendagitis

**References:**

Description: Pericolonic lesion with fat attenuation surrounded by a hyperattenuating ring (black arrow in A and B); the hyperdensity of the fat extends along the mesenteric fat to the scrotum (white arrows in B). Origin:
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**Figure 2**

**Description:** Axial (A) and coronal view after iv contrast medium (B) show hypointense lesion with marked contrast enhancement of the peripheral rim (arrows). **Origin:**
Description: Axial (A) and coronal view after iv contrast medium (B) show hypointense lesion with marked contrast enhancement of the peripheral rim (arrows). Origin:
Description: Coronal MDCT after 3 months shows disappearance of the fat lesion and moderate hyperdensity of the pericolonic fat again extending to the scrotum (arrows) Origin: