

EPIPLOIC APPENDAGITIS

H. Toprak, S. Yildiz, R. Kilicarslan, M. Bilgin

Key-word: Epiploic appendices

Background: A 8-year-old girl was admitted to our hospital because of abdominal pain of 1 day duration. The pain was localized in the left lower quadrant, constant, non-radiating and did not exacerbate by movement. The laboratory tests were normal, except mildly elevated white blood cell count of 11200/ml.

Emergency multi-detector contrast-enhanced abdominopelvic CT examination without oral or rectal contrast material and coronal maximum intensity projection (MIP) image obtained during the arterial phase of the abdominopelvic were performed.

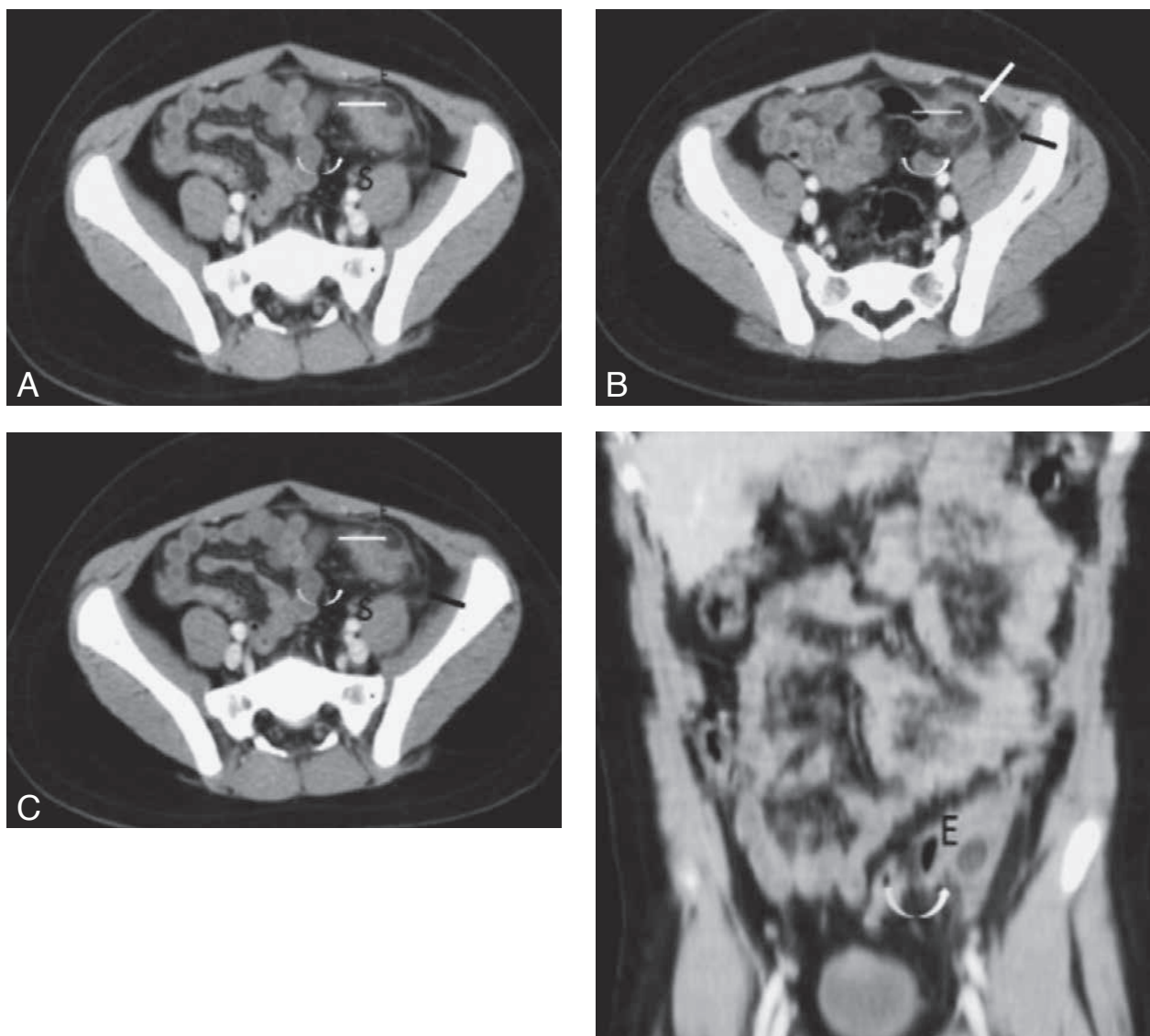


Fig.

1A	1B
1C	2

Work-up

Contrast-enhanced CT scan of the abdomen (Fig. 1 A,B,C, consecutive axial CT images) demonstrates 3 different oval shaped epiploic appendages (E) that abut the sigmoid colon (S), surrounded by a hyperattenuating rim (thick white arrow), containing central hyperattenuating dot (white arrow) and associated with perilesional fat stranding (curved arrow). There is also subtle thickening of the visceral peritoneum (black arrow).

Coronal maximum intensity projection (MIP) CT image obtained during the arterial phase (Fig. 2) demonstrates oval shaped epiploic appendages (E) adjacent to the sigmoid colon (curved arrow).

Radiological diagnosis

The diagnosis of *epiploic appendagitis* was made on the basis of CT findings. The patient did not improve by medical therapy and she underwent a laparoscopic surgery. Surgery revealed 3 infarcted epiploic appendages, which were dissected from the sigmoid colon during the operation.

Discussion

Epiploic (or omental) appendages are peritoneal pouches, composed of adipose tissue and blood vessels that arise from the antimesocolic serosal surface of the colon, to which they are attached by a vascular stalk. They are small structures, measuring 0.5-5 cm in length and span the entire length of the colon, with the exception of the rectum. More than half of the normal epiploic appendages are located in the descending and sigmoid colon, which explains why the majority of epiploic appendagitis (EA) cases occur in the left lower quadrant. EA is a rare benign self-limiting inflammatory process in majority of the patients that is attributable to either torsion or spontaneous venous thrombosis of an epiploic appendage with subsequent infarction and inflammation. EA usually occurs spontaneously.

Although EA can occur at any age, it is usually seen in middle aged-patients with a peak incidence in the fourth decade. The pain may be mistaken for appendicitis when present in the right lower quadrant in pediatric patients. For this reason, the

diagnosis of EA may be delayed or discovered incidentally at operation.

The characteristic ultrasonographic features of epiploic appendagitis have been well described as follows: non-compressible, solid, hyperechoic mass surrounded by a subtle hypoechoic line near the colonic wall at the point of maximal tenderness, absence of changes in the colon wall itself, and lack of central blood flow on Doppler US.

The typical CT findings of EA include an oval-shaped paracolic mass with hyperattenuating rim less than 5 cm in diameter (typical diameter range, 1.5-3.5 cm), that has attenuation values equivalent to that of fat (but higher in attenuation than uninvolved fat), that abuts the anterior colonic wall, and that is surrounded by inflammatory changes. Occasionally, adjacent colonic wall thickening and compression secondary to the spread of inflammation are present as adjacent peritoneal thickening. The presence of a central area of high attenuation due to venous thrombosis is useful for diagnosis, but the absence of this feature does not preclude a diagnosis of acute EA.

In conclusion, EA is an uncommon self-limiting benign inflammatory abdominal condition with nonspecific clinical and laboratory findings, often clinically mistaken for other acute abdominal emergencies. Clinicians and radiologists should be aware of EA and should include it in the differential diagnosis of acute abdominal pain also in children. EA has highly characteristic CT features that, when identified, allow for a definitive diagnosis; thus CT helps to avoid unnecessary diagnostic or therapeutic procedures.

Bibliography

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