Clinical and CT findings of epiploic appendagitis within an inguinal hernia

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Appendices epiploica are fat-containing peritoneal outpouchings arising from the serosal surface of the colon. They can be found at any point between the cecum and rectosigmoid colon. Their length may vary between 0.5 and 5 cm (1). Epiploic appendagitis is an entity that develops secondary to inflammation of appendix epiploica and subserosal fat tissue, which leads to acute abdomen (2, 3). In this case report, the clinical picture of a patient diagnosed as epiploic appendagitis within a left inguinal hernia is presented with computed tomography (CT) findings.

Case report
A 73-year-old male patient who presented with acute left lower quadrant pain, which began 2 days earlier, was evaluated with complete abdominal CT findings. In physical examination there was tenderness and a swelling increasing with the Valsalva maneuver in the left lower quadrant. His body temperature was subfebrile and measured 37.8°C. His blood biochemistry analysis was normal, except for leukocytosis (13,800/mm³). Direct abdominal X-ray examination was normal. Due to a past history of allergic reaction, non-enhanced CT of the abdomen was obtained with 5 mm slice thickness using a spiral CT machine (Prospeed SX, GE Healthcare, Milwaukee, WI, USA). In this examination, the left inguinal canal was wider than normal and within the canal herniated intestinal segments with adjacent mesenteric stranding and densities consistent with inflammation were identified (Fig. a). More inferior slices revealed a mass lesion of fat density (Fig. b). The fat-containing lesion was evaluated as an inflamed appendix epiploica and thickened visceral peritoneum, and densities around it were evaluated as periappendiceal fat tissue inflammation. CT findings were primarily evaluated as epiploic appendagitis developed within a left inguinal hernia, but the possibility of diverticulitis within the hernia could not be excluded. The patient underwent surgery with the pre-diagnoses of epiploic appendagitis and diverticulitis within a left inguinal hernia. Histopathology revealed inflamed appendix epiploica.

Discussion
Epiploic appendagitis can be primary or secondary. Primary epiploic appendagitis results from spontaneous thrombosis of appendiceal drainage veins in the absence of torsion or ischemia (1, 4, 5). Secondary epiploic appendagitis develops following the inflammatory processes in adjacent structures, such as in cases of vermiform appendix, diverticulitis, and cholecystitis (1, 4). Epiploic appendagitis usually mimics appendicitis or diverticulitis, depending on its location, and may be incorrectly diagnosed preoperatively (5–7). Patients are usually overweight, are between 20 and 60 years old, and complain of

ABSTRACT
Epiploic appendagitis is a rare condition resulting from an acute inflammation of an appendix epiploica. Epiploic appendagitis is frequently misdiagnosed as either acute appendicitis or acute diverticulitis, and the diagnosis is usually made during surgery. Epiploic appendagitis is a rare, self-limiting condition, which can be easily diagnosed with computed tomography (CT). Imaging with CT may suggest the diagnosis thus preventing unnecessary surgery. Medical management of symptoms is usually sufficient. Herein, we present CT findings of an epiploic appendagitis case that developed in a left inguinal hernia, which is a very rare entity.

Key words: • appendix epiploica • epiploic appendagitis • hernia, inguinal • computed tomography, X-ray

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Epiploic appendagitis should always be considered in evaluating an acute abdomen case presenting with localized lower quadrant pain and tenderness in the absence of specific symptoms and laboratory findings, and prompt radiological evaluation should be conducted (5).

CT, ultrasonography (US), and magnetic resonance imaging (MRI) provide useful information for the diagnosis of epiploic appendagitis. An echogenic finger-like protrusion from the colon wall through pericolonic tissue or a hypoechoic mass adjacent to the anterior peritoneal wall are US findings of an inflamed epiploic appendix. Additionally, inflammatory echogenic stranding can be seen at adjacent pericolonic fat tissue (1, 9).

An ovoid mass with fat intensity and a central point sign on T1- and T2-weighted images are among the MRI findings of epiploic appendagitis. Peripheral contrast enhancement is seen on fat suppressed contrast enhanced T1-weighted MR imaging, which is the best for visualization of such lesions (2).

In conclusion, epiploic appendagitis should be considered in the CT differential diagnosis of patients with acute abdomen in order to prevent misdiagnosis and unnecessary surgery.

References

Omental infarct is another entity that has similar clinical and radiological properties. Omental infarct may clinically present as epiploic appendagitis (8). On CT, omental infarct has a larger dimension and visceral peritoneal thickening is not seen, which aids the diagnosis (4).

Epiploic appendagitis is a self-limiting (7, 8) and spontaneously regressing entity, and conservative treatment is sufficient (1, 3). Epiploic appendagitis should always be considered in evaluating an acute abdomen case presenting with localized lower quadrant pain and tenderness in the absence of specific symptoms and laboratory findings, and prompt radiological evaluation should be conducted (5).