



# Primary Epiploic Appendagitis As a Rare Cause of Localized Abdominal Pain: Imaging Findings

## Lokalize Abdominal Ağrının Nadir Bir Nedeni Olarak Primer Epiploik Apendijit: Görüntüleme Bulguları

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### ABSTRACT

Disorders of the epiploic appendages are rare, usually affecting the middle age group. Primary epiploic appendagitis is an inflammatory and ischemic condition that results from torsion, spontaneous venous thrombosis, or inflammation of one of the hundreds of appendices epiploicae. In this article, we present a patient with primary epiploic appendagitis diagnosed by ultrasonography and computed tomography scan, and discuss the important clinical and radiological manifestations of this disease.

**Keywords:** Appendix epiploica, epiploic appendagitis, computed tomography, ultrasonography

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### ÖZET

Epiploik apendiksın hastalıkları nadir olup genellikle orta yaş grubunu etkilemektedir. Primer epiploik apendijit, yüzlerce epiploik apendiksten birinin torsiyonu, spontan venöz trombozu veya inflamasyonu sonucu oluşan inflamatuvar ve iskemik bir durumdur. Bu yazıda, ultrasonografi ve bilgisayarlı tomografi ile tanısı konulan primer epiploik apendijitli bir hastayı, bu hastalığın önemli klinik ve radyolojik bulguları eşliğinde sunuyoruz.

**Anahtar Kelimeler:** Apendiks epiploika, epiploik apendijit, bilgisayarlı tomografi, ultrasonografi

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### Introduction

Primary Epiploic appendagitis (PEA) is a rare benign self-limiting inflammatory condition of the colonic epiploic appendices. Disorders of the epiploic appendices are rare, usually affecting the middle age group. Acute PEA most commonly manifests with acute lower quadrant pain. Its clinical features are similar to those of acute diverticulitis or, less commonly, acute appendicitis. Ultrasonography (US) and computed tomography (CT) allow a reliable diagnosis and render invasive procedures such as colonoscopy and surgery unnecessary (1-4).

### Case Report

A 42 year-old male patient presented with left lower quadrant pain for the last 12 hours. There was tenderness in the left lower quadrant on the physical examination. In the laboratory results; WBC: 8500/mm<sup>3</sup>, Hb: 14.5 gr/dl, Htc: 42.9 mg/dl, serum glucose: 95 mg/dl, serum amylase 68 U/L, liver tests, total protein and albumin were normal. Sonographically, at the point of maximum tenderness, a noncompressible, solid, hyperechoic ovoid mass with a subtle hypoechoic rim was detected anterior to the descending colon (Figure 1). Doppler studies typically revealed the absence of blood flow in the mass. Because the diagnosis was uncertain, a subsequent contrast-enhanced multidetector CT scan was performed, which showed the classic finding of PEA: an oval area of fat attenuation surrounded by a hyperattenuating ring located adjacent to the descending colon (Figure 2). In addition, marked periappendageal fat stranding and thickening of the visceral peritoneum were noted. The patient was followed conservatively but his symptoms did not improve with medical therapy. Diagnostic laparotomy revealed an inflammatory mass adherent to the bowel wall of the descending colon. The mass was excised. The histopathologic diagnosis was necrotic appendix epiploica with surrounding periappendageal fat inflammation. The postoperative period was uneventful.

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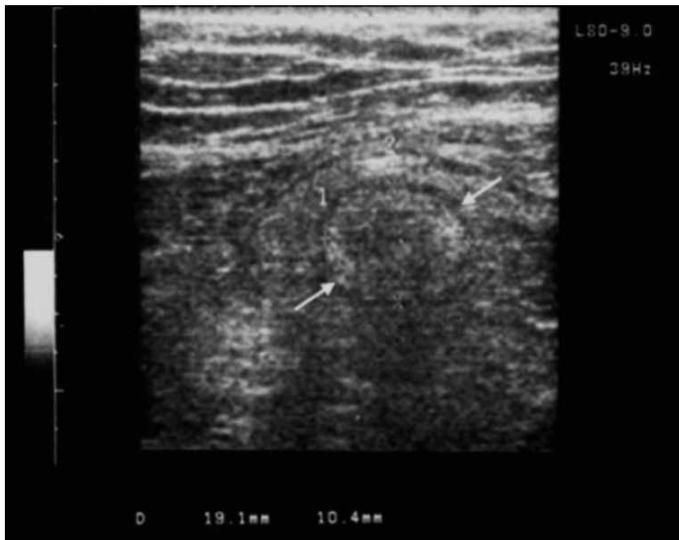


Figure 1. Ultrasonography scan shows hyperechoic mass surrounded by hypoechoic border (white arrows)

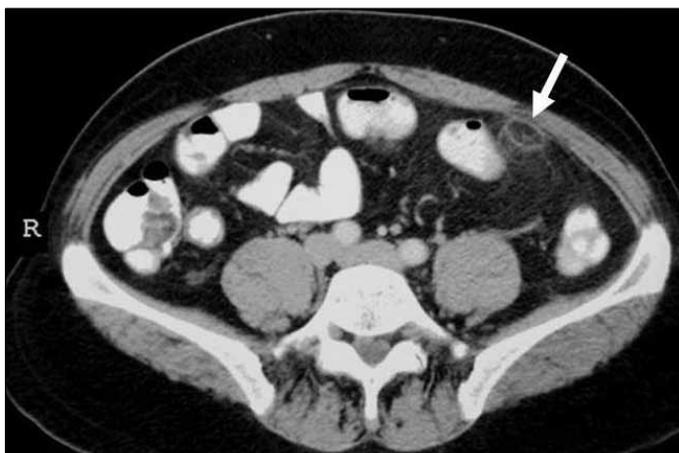


Figure 2. Contrast-enhanced axial CT scan demonstrates a pericolonic lesion with fat attenuation surrounded by a hyperattenuating ring (white arrow)

## Discussion

Primary Epiploic appendagitis causes acute localized abdominal pain, thought to be the result of torsion or spontaneous vascular thrombosis of epiploic appendices. This is a non-surgical situation that clinically mimics other conditions requiring surgery, such as acute diverticulitis or appendicitis. Epiploic appendices correspond to peritoneum covered fatty structures about 2 to 5 cm long. They are about 100 in number and distributed in two rows along the free taenia and taenia omentalis, from the cecum to the sigmoid colon. They are largest along the descending and sigmoid colon and smallest along the transverse colon. Clinically, PEA is characterized by sudden onset of focal abdominal pain with mild or absent addi-

tional findings in the history and physical examination or laboratory evaluation (1-5).

Acute epiploic appendagitis can be classified as primary or secondary. PEA represents ischaemic infarction of an epiploic appendix which occurs when an epiploic appendix torses or when there is spontaneous thrombosis of its central draining vein resulting in a focal inflammatory process. In Secondary epiploic appendagitis the epiploic appendix is inflamed secondary to another disease processes such as diverticulitis and appendicitis (2, 4, 6).

Both US and CT scan can be used for reaching the diagnosis of PEA. The PEA has a characteristic sonographic appearance. It shows as a hyperechoic noncompressible ovoid structure near the colonic wall. On CT, the finding of a 1-4 cm diameter pericolonic mass with fat attenuation, circumscribed by a 2-3 mm thick hyperattenuating ring, is diagnostic of PEA. The hyperattenuating ring may be subtle, but its presence has been mentioned in all cases of PEA reported in the radiology literature. Additional CT findings include periappendageal fat stranding and thickening of the parietal peritoneum (2-4).

For differential diagnosis, acute diverticulitis, acute appendicitis, acute omental infarction, sclerosing mesenteritis, primary tumours (liposarcoma, exophytic angiomyolipoma and dermoid metastasis that involves the mesocolon) have to be considered (1-5).

Currently, the therapeutic approach is conservative with oral anti-inflammatory medication (4-6).

In conclusion, radiologists and clinicians should be aware of this rare entity and should include it in the differential diagnosis of acute abdominal pain.

## Conflict of interest

No conflict of interest was declared by the authors.

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