

# Differential Diagnosis for Acute Appendicitis: Epiploic Appendagitis

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## Introduction

Epiploic appendagitis is a rare condition that may present with acute abdominal pain and it mimics appendicitis when it occurs on the right side [1]. In a series of 1320 cases of acute abdominal pain by Golash only eight cases were due to acute epiploic appendagitis [2]. Though there are case reports of epiploic appendagitis presenting as acute abdomen, it is seldom considered as a differential diagnosis for appendicitis. We report one such case which presented with right lower abdominal quadrant pain and was diagnosed as acute appendicitis but had torsion of an appendix epiploica of the proximal ascending colon on surgery.

## Case Report

A 28 year old lady presented to the emergency department with complaints of right iliac fossa pain of 12 hours duration which started around her umbilicus and shifted to the right iliac fossa after a few hours. She complained of anorexia, nausea without vomiting and fever. She had no history of bladder/ bowel disturbance and her menstrual history was normal. On examination, she was febrile with a temperature of 99°F. Her other vitals were normal. Her abdominal examination revealed tenderness in the right iliac fossa just lateral to the Mc Burney's point with some guarding. However by the time she was taken up for surgery she had developed rebound tenderness. The rest of the abdomen and per rectal examination were normal.

Laboratory investigation revealed a total leucocyte count of 10,800/mm<sup>3</sup> with 82% polymorphs, while urine examination was normal. An ultrasound examination showed a well defined hyperechoic oval lesion measuring 17 x 18 mm in size adjacent to the anterior wall of ascending colon surrounded by a thin rim of hypoechoic fluid (Fig.1). Hence a possibility of epiploic appendagitis was suggested with a ruptured appendix as a differential diagnosis since the appendix could not be visualized and there was a small amount of free fluid around the bowel loops in the right iliac fossa. She underwent a

contrast enhanced computed tomography (CECT) abdomen which suggested acute retrocaecal appendicitis (Fig.2).

In view of the clinical presentation and radiological findings the patient was diagnosed as having acute appendicitis. Per-operatively, there was serosanguinous fluid in the right iliac fossa and the appendix appeared normal. A gangrenous appendix epiploica on the surface of the proximal ascending colon, adjacent to the caecum was noticed (Fig.3). The patient underwent an appendectomy with excision of the gangrenous appendix epiploica (Fig.4) and a seromuscular inversion was done. Her postoperative course was uneventful except for mild superficial surgical site infection. The histopathology of specimen revealed necrosed adipose tissue, lympho-plasmacytic infiltrate and haemorrhage, consistent with the diagnosis of strangulated appendix epiploica. The appendix showed no significant histological abnormality.

## Discussion

Appendices epiploicae are pedunculated structures lining the colonic extension. They are usually arranged in two axial rows from the ascending to the distal sigmoid colon. A normal adult human being usually has about 50-100 appendices epiploicae [2]. Primary epiploic appendagitis is a rare condition, in which torsion and inflammation of an epiploic appendix may cause localized abdominal pain [3]. Epiploic appendagitis affects the sigmoid colon more than the ascending colon [4]. The site of pain may vary according to the position of the inflamed appendage. The condition is often confused with diverticulitis of the sigmoid colon but can mimic acute appendicitis when it occurs on the right side. It affects the middle age group with a peak incidence at around the age of 40 years [4]. Necrosis of the epiploic appendages is commonly due to an ischaemic event, either secondary to torsion or spontaneous thrombosis, but can also be due to a non vascular event [5-7].

Patients usually present with sudden onset of sharp

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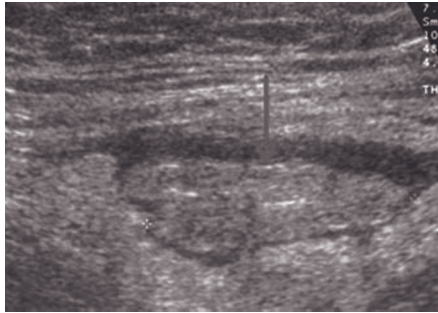


Fig. 1 : USG showing oval hyperechoic lesion in right iliac fossa with a thin rim of hypoechoic fluid around it

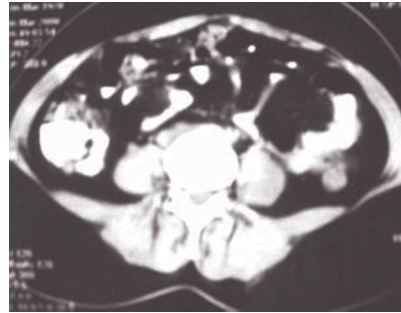


Fig. 2 : CECT image showing retrocaecal appendix

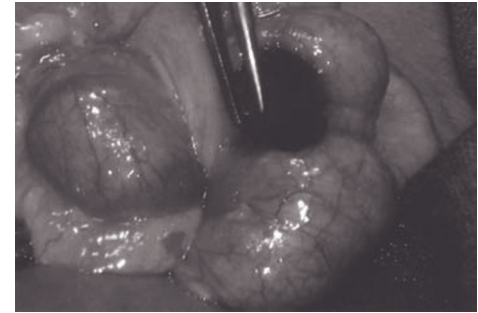


Fig.3 :Per-operative picture showing gangrenous appendix epiploica of ascending colon

localised pain either in the left or right iliac fossa. There may be associated minimal gastrointestinal symptoms. The temperature and white blood cell count may be normal or slightly elevated. Epiploic appendagitis is seldom diagnosed preoperatively due to the lack of pathognomonic clinical features [8].

Ultrasound and CT scan are good radiological modalities in diagnosis of epiploic appendagitis. The characteristic appearance of an infarcted appendix epiploica is a hyperechoic non compressible ovoid structure near the colonic wall [9]. This lesion will show an absence of blood flow on a colour doppler [9,10]. With the increasing use of CT scan for assessing cases of acute abdominal pain, a preoperative diagnosis is now more common [11]. In the present era, a diagnostic laparoscopic is likely to be a good modality to establish the correct diagnosis and definitive management can be done during the same procedure.

Where a definite pre-operative diagnosis can be made, conservative management with antibiotics, analgesics and supportive care is required, but in cases when the diagnosis is reached during operative exploration the treatment is ligation and excision of the necrotic tissue with seromuscular inversion [4]. Depending on the amount of torsion and/or inflammation, the per-operative finding may be that of a phlegmon, a gaseous epiploic abscess, an infarcted epiploic appendix or a colonic mass. In our case the finding was that of an infarcted appendix epiploica.

Our case highlights the fact that appendagitis of the appendix epiploica lining the proximal ascending colon, though rare, should be considered as a differential diagnosis for acute appendicitis.

#### Conflicts of Interest

None identified

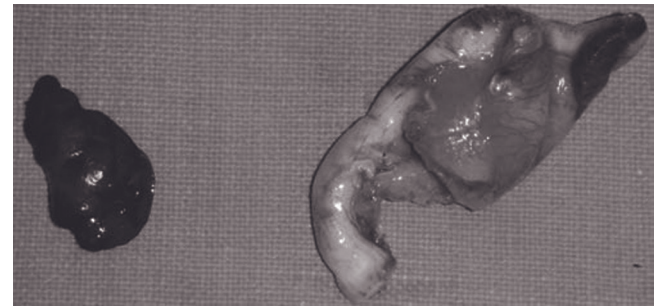


Fig. 4 : Resected specimen of gangrenous appendix epiploica and vermiform appendix

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