



## Clinical Note

# Epiploic appendagitis as a cause of acute left iliac fossa pain: case report

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### ABSTRACT

Epiploic appendicitis is a condition arising through spontaneous torsion or venous thrombosis of the draining vein of the epiploic appendix. The symptoms are non-specific, though the patient usually presents with sudden, focalised abdominal pain with no other clinical findings. Historically, the diagnosis was established at laparotomy performed because of suspected diverticulitis or appendicitis. At present the diagnosis is based on the computerised tomography (CT) scan findings.

**Key Words:** *Epiploic appendicitis. Acute pain.*

### RESUMEN

#### Apendicitis epiploica como causa de dolor agudo en fosa ilíaca izquierda: a propósito de un caso

La apendicitis epiploica es una enfermedad que se produce por torsión o trombosis venosa espontánea de la vena de drenaje del apéndice epiploico. La sintomatología es inespecífica, aunque suelen comenzar con dolor abdominal focal y brusco en ausencia de otros hallazgos clínicos. Históricamente el diagnóstico se hacía por laparotomía ante la sospecha de diverticulitis o apendicitis. En la actualidad el diagnóstico se basa fundamentalmente en los hallazgos encontrados en la tomografía computarizada (TC).

**Palabras clave:** *Apendicitis epiploica. Dolor agudo.*

### INTRODUCTION

In 1543 Vesalius first described the epiploic appendixes (EA) followed by Littre in 1703, who found an epiploic appendix as a free foreign body within the peritoneal cavity of a cadaver<sup>1</sup>.

The term epiploic appendagitis was first coined by Lynn et al. in 1956<sup>2</sup>. It is an acute condition caused by infarction of the fatty appendixes adhered to the colon. It is clinically mistaken with diverticulitis and acute appendicitis. Less than 8% of patients examined with suspected appendicitis or diverticulitis have epiploic appendagitis.

Diagnosis is currently presurgical, as use of CT scans is on the increase in the study of abdominal pain.

Here we discuss a case presenting with intense pain in the left iliac fossa (LIF) with no other associated symptoms.

### CLINICAL CASE

A 59-year-old male presented at A&E presenting pain in LIF for the past two days with recent worsening which sometimes disappeared, but always returned to the same spot. The patient had no nausea, vomiting, alterations in intestinal habits or mictional syndrome.

Blood pressure was 150/90 with a temperature 36.6°C. The patient had good colouring of skin and mucosae. Cardiac auscultation was rhythmic. The abdomen was tender, painful to fingertip touch in LIF with absence of the Blumberg and Murphy signs; preserved bowel sounds and no pain elicited from fist percussion to the kidney.

The white blood cell count was 8.500 per mm<sup>3</sup> with a 66.7% of neutrophil. Biochemical and urine analyses as well

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as thorax and abdominal radiographies proved normal.

Under examination by scan and at the most painful spot, a more hyperecogenic area was identified. In light of suspected omental infarction or epiploic appendagitis, an abdominal CT scan was performed which showed a fatty oval mass compatible with epiploic appendagitis (see Fig. 1).

The patient was admitted for observation over three days; the only treatment administered was an single intramuscular dose of diclofenac resulting in considerable improvement on the following day and absence of symptoms after two days.

## DISCUSSION

Epiploic appendages (EA) are peritoneal pockets which form on the serous surface of the colon, containing fat and vessels. From 50 to 100 may appear in two longitudinal bands extending from the cecum to the rectosigmoidal junction. None are found near the rectum<sup>3,5</sup>. They are only visible via CT scan when they are inflamed and/or surrounded by fluid<sup>5</sup>.

Torsion of the EA leading to vascular occlusion and in turn to ischemia has been considered to be the cause of acute epiploic appendagitis. A limited vascular contribution, together with its pedunculated shape and excessive mobility promote the torsion of the EA and the ensuing ischaemia or haemorrhagic infarction. The sigmoid colon is the most frequent location, followed by the cecum<sup>3</sup>.

It has been described in associated with obesity, hernias and intense physical exercise<sup>5</sup>.

Most EAs present with abdominal pain, usually on the left side, and can be mistaken for diverticulitis. Patients do not usually have fever and have a normal white blood cell count. It mostly occurs in males between the fourth and fifth decades. Our case concerns a 59-year-old male who presented with acute pain in the LIF with no other clinical findings. Some patients may present with low-grade fever, nausea, vomiting, diarrhoea or constipation; only 25% show rebound tenderness. In light of the scarcity of specific signs and symptoms, the diagnosis of epiploic appendagitis must always be considered in the case of a patient presenting with lower abdominal pain with no systemic manifestations<sup>3</sup>.

A CT scan image of epiploic appendagitis was first shown in 1986. Some authors have recently described its appearance in the CT scan as pathognomonic. Findings consist of an oval 2-3 cm fatty mass with surrounding inflammatory changes, adhered to the anterior colon wall. A hyperdense centre can



**Figure 1. Abdominal CT scan with oral contrast. Image of epiploic appendagitis in left iliac fossa (arrow).**

occasionally be seen which histologically represents the torsioned appendix<sup>3,5,6,8</sup>.

Differential diagnosis with diverticulitis scan must be made via CT of diverticulitis, and appears as a segmentary parietal thickening and hyperemia of the colon with inflammatory changes in the pericolic fat. The key to differentiation is to observe the inflamed diverticulae in the affected segment<sup>3</sup>. Location of epiploic appendagitis is always anterior to the colon wall, which is useful when making a diagnosis. It must also be differentiated from an omental infarction, which is larger and does not have a well-defined peripheral ring pertaining to the thickening of the visceral peritoneum<sup>6</sup>. It occurs more often in the right abdominal quadrant and must be differentiated from appendicitis and cholecystitis.

On ecography it appears as an oval or round non-compressible ecogenic mass coinciding with the spot of maximum pain<sup>6,8</sup>.

On MRI they appear as focal lesions with a fatty sign arranged in annular form<sup>5</sup>.

Pathologic<sup>6</sup> confirmation is infrequent given its conservative management; therefore its diagnosis is mainly based on based on CT scan findings<sup>4</sup>.

Therapies historically used were excision, ligation and possibly seromuscular inversion, which thus led to discovery during surgery due to suspected abdominal pathology<sup>2</sup>. Treatment is currently conservative, with oral non-steroidal anti-inflammatory medication. Antibiotics are routinely not indicated. It is a self-limiting process and most patients recover with conservative therapy within less than 10 days. On the other hand, a diagnostic error can lead to unnecessary hospitalization, antibiotic therapy, laboratory tests and dietary restrictions<sup>5,7</sup>.



## REFERENCES

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- 1- Carmichael DH, Organ CH. Epiploic disorders. Conditions of the epiploic appendages. *Arch Surg* 1985;120:1167-72.
- 2- Boulanger BR, Barnes S, Bernard AC. Epiploic appendagitis: an emerging diagnosis for general surgeons. *Am Surg* 2002;68:1022-5.
- 3- Son HJ, Lee SJ, Lee JH, Kim JS, Kim YH, Rhee PL et al. Clinical diagnosis of primary epiploic appendagitis: differentiation from acute diverticulitis. *J Clin Gastroenterol* 2002;34:435-8.
- 4- Singh AK, Gervais DA, Hahn PF, Rhea J, Mueller PR. CT appearance of acute appendagitis. *AJR* 2004;183:1303-7.
- 5- Singh AK, Gervais DA, Hahn PF, Sagar P, Mueller PR, Novelline RA. Acute epiploic appendagitis and its mimics. *Radiographics* 2005;25:1521-34.
- 6- Rao PM, Wittenberg J, Lawrason JN. Primary epiploic appendagitis: evolutionary changes in CT appearance. *Radiology* 1997;204:713-7.
- 7- Rao PM, Rhea JT, Wittenberg J, Warshaw AL. Misdiagnosis of primary epiploic appendagitis. *Am J Surg* 1998;176:81-5.
- 8- Miguel A, Ripollés T, Martínez MJ, Morote V, Ruiz A. Apendicitis epiploica e infarto omental. Hallazgos en ecografía y tomografía computarizada. *Radiología* 2001;43:395.