

## Case Report

### **Primary Epiploic Appendagitis: 3 case reports**

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#### **Abstract**

Acute Epiploic Appendagitis is a rare self limiting disease that represents ischaemic infarction of an epiploic appendix. It is usually discovered incidentally on imaging of abdomen done for other causes of acute abdominal pain. It is difficult to diagnose clinically due to the lack of pathognomonic clinical features, since it is characterized by a sudden onset of sharp localized pain either in the left or right iliac fossa with minimal gastrointestinal symptoms, which can simulate a surgical clinical picture. Awareness of imaging findings of this entity is important to arrive at a correct diagnosis and to avoid unnecessary hospitalization and surgery. We report cases of three male patients presenting with acute flank pain who were diagnosed as case of Primary epiploic appendagitis. All 3 patients were treated conservatively.

**Keywords:** Epiploic Appendagitis: Acute flank pain.

#### **Introduction**

Acute epiploic appendagitis is an uncommon cause

of abdominal pain that has only recently been recognized.<sup>1</sup> Epiploic appendagitis 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. Clinical features of epiploic appendagitis are non-specific; however, it has characteristic computed tomography (CT) features.<sup>2</sup> Epiploic appendagitis is usually characterized by a sudden onset of sharp localized pain either in the left or right iliac fossa with minimal gastrointestinal symptoms which can simulate an acute surgical abdomen. Epiploic appendagitis is self limited and usually resolves spontaneously within 5-7 days with only pain relieving medication. Surgery is therefore not indicated. The clinicoradiological misdiagnosis of primary epiploic appendagitis can lead to unnecessary hospitalization and treatment.<sup>3</sup>

In this report we present 3 cases of epiploic appendagitis who presented with acute flank pain to our hospital over a period of 1 year.

## Case 1

A 30 years old male presented with left flank pain, which was sharp and acute in onset. Patient presented in Emergency room (E.R) where he was clinically examined. He had tenderness of left anterolateral abdomen on deep palpation . His lab investigations were in normal limits. A provisional clinical diagnosis of abdominal wall/rectus sheath haematoma was made and CT abdomen was requested. The CT study showed localized left anterolateral pericolonic fat stranding adjacent to descending colon with a central fat containing area, the centre of which was slightly hyperdense. Mild thickening of adjacent visceral peritoneum was also noted. A radiological diagnosis of Primary epiploic appendagitis was made. The rest of the abdominal organs were unremarkable. There was no abdominal wall or rectus sheath haematoma.. Patient was observed clinically and treated symptomatically for 5-7 days and became symptoms free on subsequent surgical OPD visit.

## Case 2

A 40 year old male presented in E.R with sharp acute onset pain in left lower flank and was examined by surgical on-call doctor who after examining the patient made a provisional clinical diagnosis of left renal colic and plain CT abdomen study was requested for this purpose. The CT showed localized pericolonic fat stranding with central fat containing area, the centre of which was slightly hyperdense, with thickening of visceral peritoneum adjacent to distal descending colon. A radiological diagnosis of Primary epiploic appendagitis was made. No other significant abnormality was noted on plain study. Patient was treated symptomatically with pain relieving medication and became symptom free on subsequent surgical OPD visit after 7 days.

## Case 3

A 36 years old male presented in ER with right lower abdominal pain which was sharp and acute in onset. After being examined by ER physician a provisional clinical diagnosis of Acute Appendicitis was made and Plain CT abdomen study was requested for this purpose. The CT showed localized pericolonic fat stranding with central fat containing area, the centre of which was slightly hyperdense, with thickening of visceral peritoneum adjacent to proximal ascending colon. A radiological diagnosis of Primary epiploic appendagitis was made. No other significant abnormality was noted on plain study. Patient was referred to surgical services and was treated symptomatically with pain relieving medication and became symptom free on subsequent surgical OPD visit.

## Discussion

Epiploic (omental) appendages are pedunculated fatty

peritoneal pouches around 1-2 cm thick and 2-5cm long, arranged in two separate rows over the serosal surface of the colon, extending from cecum to the recto sigmoid junction. They are bigger in size and more prominent on the left side of the colon as compared to the right side. The greatest concentration of epiploic appendices is in the ascending and sigmoid colon. Each is supplied by one or two small end arteries branching from the vasa recta longa of the colon and is drained by a single vein passing through its narrow pedicle. Their limited blood supply together with their pedunculated shape and excessive mobility, make epiploic appendices prone to torsion and ischaemic or haemorrhagic infarction. The condition most commonly manifests in 4th-5th decades of life predominantly in men.<sup>4,6</sup> The most common sites of acute epiploic appendagitis in order of descending frequency are areas adjacent to the sigmoid colon, the descending colon and the right hemi colon.

Acute epiploic appendagitis is a self limited condition, which is misdiagnosed in the majority of patients on the basis of clinical manifestations alone.<sup>7</sup> There is extensive clinicoradiological literature about common causes of acute abdomen as appendicitis, diverticulitis, bowel obstruction, pancreatitis, perforated peptic ulcer, abscess, pyelonephritis and obstructive urolithiasis. However, there is less published information and less extensive knowledge about rarer causes of acute abdomen, such as acute epiploic appendagitis. Accurate radiological assessment of this condition is important for selecting appropriate mode of management and preventing unnecessary hospital admission and surgery.

Acute epiploic appendagitis can be classified as Primary or Secondary.

Primary Epiploic Appendagitis 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 process such as diverticulitis.

Before the use of CT became widespread, most cases of acute epiploic appendagitis were diagnosed at surgery. The clinical signs and symptoms of the condition are nonspecific, and the diagnosis at preoperative assessment was correct in only 2.5% of patients. The preoperative diagnosis could be suspected in patients who had clinical signs and symptoms of acute appendicitis and a history of appendectomy or clinical symptoms of diverticulitis in the absence of findings at barium enema study.<sup>8</sup> Since the introduction of cross sectional imaging, acute epiploic appendagitis has been diagnosed most commonly on the basis of CT images. There are also reports about the imaging appearance of acute epiploic appendagitis at US and more rarely at MRI.<sup>9</sup>

The most common CT feature in acute epiploic appendagitis is an oval lesion less than 5cm in diameter (Typical diameter range 1.5-3.5cm) that has attenuation equivalent to that of fat, abuts the anterior colonic wall and is surrounded by inflammatory changes.<sup>1</sup> Thickening of the visceral peritoneum secondary to the spread of inflammation also may be observed. The wall of colon may be thickened but is most often normal in thickness.<sup>1</sup> Although the presence of a central area of high attenuation due to venous thrombosis is useful for diagnosis, the absence of this feature does not preclude a diagnosis of acute epiploic appendagitis. Almost all of the above mentioned findings were present in our cases. Sometimes the central high attenuation dot/area calcifies. This small calcified body may become detached and appears as a "Peritoneal loose body" in the abdominal cavity. It may reattach itself to a surface such as the lower aspect of spleen in which case it can be called a "Parasitized appendix epiploic".

Ultrasound features are less described in literature; however the commonly described features include a well defined non compressible hyper echoic ovoid or round mass of adipose origin between colon and abdominal wall frequently surrounded by a hypo echoic border corresponding to the hyper attenuating ring on CT. There is absence of flow at color Doppler<sup>10</sup> and usually no colonic wall abnormality is seen.

## Conclusion

Primary epiploic appendagitis is a self limiting disease and patients having this disease usually present with acute abdomen. Many physicians are not familiar with this uncommon entity. Therefore accurate radiological diagnosis of this condition is important to avoid unnecessary hospital admission and surgery.

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