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Primary Epiploic Appendagitis - A Rare Cause of Acute Abdomen

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Abstract: ***Epiploic appendagitis is a rare cause of acute abdominal pain, determined by a benign self - limiting inflammation of the epiploic appendages. It may manifest with heterogeneous clinical presentations, mimicking other more severe entities responsible of acute abdominal pain, such as acute diverticulitis or appendicitis causing a diagnostic dilemma for the surgeon. CT represents the gold standard technique for the evaluation of patients with indeterminate acute abdominal pain. Early identification of this condition with the help of the CT scan has lead to the avoidance of exploratory laparotomy. Rarely, epiploic appendagitis may be located within a hernia sac or attached to the vermiform appendix (2). Chronically infarcted epiploic appendage may detach, appearing as an intraperitoneal loose calcified body in the abdominal cavity. Here we present two such cases of primary acute appendagitis which we came across in our institute. Both the cases were managed conservatively.***

Keywords: Epiploic appendagitis,, acute diverticulitis, vermiform appendix, diagnostic dilemma

1. Introduction

Primary epiploic appendagitis is an uncommon clinical condition resulting from torsion and inflammation of an epiploic appendix that lead to localized abdominal pain. Epiploic appendages are tiny, mobile fat filled pouch like structures, approximately 50 to 100 in numbers, arising from the peritoneum and typically located on the outer part of tinea coli (from cecum to sigmoid colon). They are pedunculated, broad based and usually drained by single vein; making it prone for infection, infarction and torsion (1 - 4). Usually, it has a smooth clinical scenario after a correct diagnosis. The vagueness of the clinical presentation usually accounts for the difficulty of diagnosing this pathology. Radiological studies, particularly contrast enhanced abdominal computed tomography (CT) scan, have a valuable role in reaching the right diagnosis and sparing the patient unnecessary hospitalization or surgery in uncomplicated cases. Here, we present two cases of primary epiploic appendagitis which were successfully managed conservatively with conservative approach.

Case 1

A 38 year old female patient, a housemaker, belonging to lower socioeconomic class presented to us with the complaints of lower abdominal pain, localized to left lower abdomen, non radiating in nature along with intermittent vomiting since 6 days with no other constitutional symptoms. Patient was a known case of hypertension and hypothyroidism for 5 years, on regular medication. She had undergone abdominal hysterectomy for fibroid 5 years ago. The patient's family, social and personal history had no other contributory findings.

On Examination, a diffuse irregular shaped tender firm non fluctuant, non mobile lump measuring approximately (4x3) cm was palpable in the left iliac fossa extending 5 cm lateral to the left of umbilicus and 3 cm medial from the anterior axillary line with normal overlying skin. There was no local rise of temperature, no compressibility, no reducibility, no cough impulse with normal hernia sites. The routine blood and laboratory investigations were found to be normal.

The Ultrasonography was suggestive of a (36x32) mm size of echogenic area in the left iliac fossa, possibly focal mesenteric panniculitis. Further, on getting a Computed Tomography done, it revealed a 44 (AP) x 30 (SI) x 11 (TR) mm sized well defined non enhancing fat density lesion noted within the mesentry adjacent to the distal part of descending colon in the left iliac fossa. There is thin peripheral mildly enhancing hyperdense rim noted. Perilesional fat stranding noted. Findings suggest possibility of Epiploic appendagitis. There was no evidence of thickening of descending colon. [Fig.1].

Patient was managed conservatively with anti - inflammatory and analgesic medications. the patient was discharged after 5 days with no complaint of pain. Per abdomen was soft, non tender, there was no palpable lump at discharge. Further follow ups with the patient over the month were uneventful.

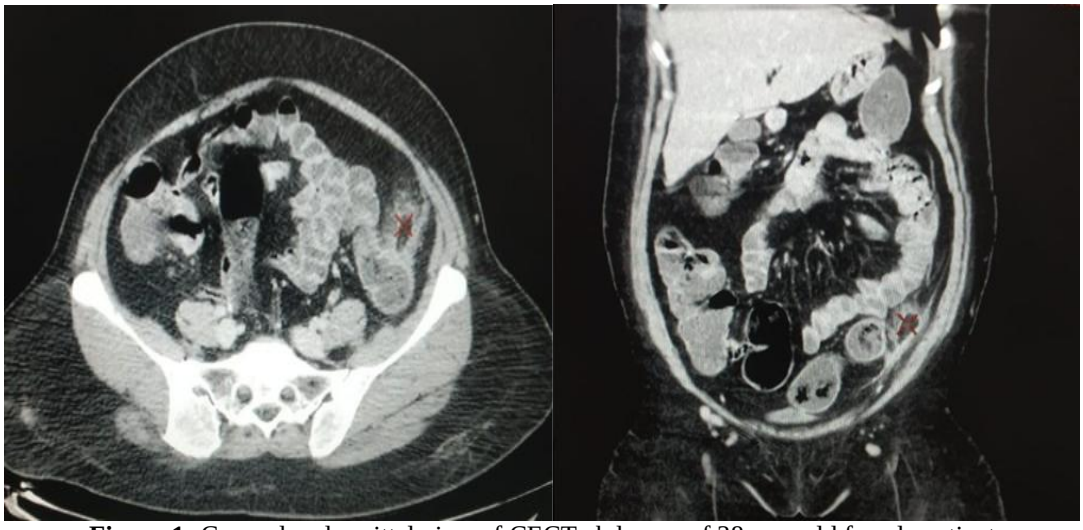

Figure 1: Coronal and sagittal view of CECT abdomen of 38 year old female patient

Case 2:

A 36 - year - old man presented to the general surgery department PDU hospital Rajkot with the chief complaint of lower abdominal pain for 2 months, localized to left lower abdomen, non radiating in nature. Abdominal pain was not related with eating and defecation. He did not have nausea, vomiting, fever, chills, skin rash, joint pain, dysuria, hematuria, loss of weight, and trauma to the abdomen. There was no recent travel history or contact with sick person. Also, there was no history of illicit drug abuse. He denied presence of any significant stressors at home or at work.

There was no personal or family history of irritable bowel syndrome or inflammatory bowel disease.

On physical examination, the patient had tenderness and pain in the left iliac fossa associated guarding in left lumbar region, no rigidity. All of his vital signs were within normal limits.

All Laboratory investigations within normal limit.

AXR (standing) was normal.

USG (abdo+pelvis) findings s/o 3.5 cm long small bowel segment in Lt lumbar region with bowel within bowel sign with normal vascularity p/o Intussusception.

CECT (abdomen + pelvis) findings s/o haziness of flat planes noted near sigmoid colon in pelvis on left side with well defined soft tissue density region of size 24*15 mm on left side p/o Epiploic Appandages appears likely.

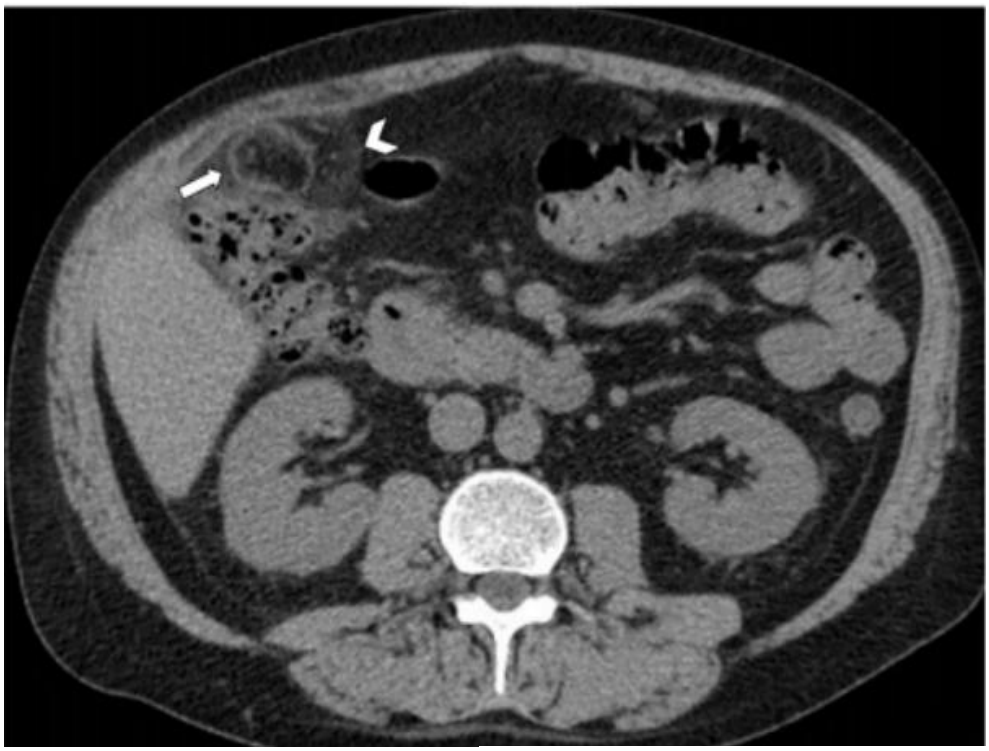

Figure 1: Acute epiplpoic appandages in 36year old male s/o haziness of flat planes noted near sigmoid colon with well defined soft tissue density.

After careful correlation among clinical, radiological, and laboratory findings, diagnosis of PEA was confirmed.

The patient was managed conservatively with the advice of plenty of fluid intake and bed rest. Furthermore, he was prescribed Oral Antibiotics (Ciprofloxacin And Metronidazole), oral antispasmodic (Dicyclomine) and non - steroidal anti - inflammatory drug (Diclofaenac) empirically for seven days to prevent further complications like adhesions, bowel obstruction, intussusception, peritonitis, and local abscess formation.

The patient recovered completely (the symptoms and signs resolved clinically) after one week.

2. Discussion

Normal epiploic appendages

Epiploic appendages, otherwise known as epiploicae appendices, are pedunculated, adipose outpouchings abutting the serosal surface of the large bowel into peritoneal cavity [1]. There are approximately 50–100 epiploic appendages in adults [2], which are arranged in two separate longitudinal lines, extending from the cecum to the recto - sigmoid junction, located anteriorly along the taenia libera and postero - laterally along the taenia omentalis [3]. The transverse colon harbors a single row, since at this level the taenia omentalis lies at the attachment of the greater omentum. Epiploic appendages can be found also near the vermiform appendix, while they are absent in the rectum. Normal epiploic appendages are covered by visceral peritoneum and typically measure 1–2 cm in thickness and 2–5 cm in length, but they have been reported to be up to 10 cm in length [4, 5]. For unclear reasons, these structures tend to be larger in obese patients and in those who have recently lost weight [5]. The vascular supply of epiploic appendage relies on one or two small feeding arteries originating from the vasa recta longa of colon, while the venous drainage is guaranteed by a tortuous vein passing through a narrow pedicle [1, 5]. The limited vascular perfusion, associated with their pedunculated shape and increased mobility, exposes epiploic appendages to high risk of torsion with subsequent ischemia or hemorrhage [2–5]. The normal epiploic appendages are undetectable on computed tomography (CT) images due to the overlapping in density with the surrounding peritoneal and omental fat, while they can be noted when they are inflamed and/or outlined by ascites.

Epiploic appendagitis

Epiploic appendagitis, also known as “appendicitis epiploica” or “appendagitis, ” is a relatively unusual cause of acute pain in the abdomen, determined by a benign, self - limiting inflammatory or ischemic process affecting the epiploic appendages [2]. The “primary” form of epiploic appendagitis is characterized by ischemic or hemorrhagic infarction of the epiploic appendages, due to the torsion of their pedicles or to the spontaneous central venous drainage thrombosis. These processes result in vascular occlusion and local inflammation. Epiploic appendagitis may also be secondary to other local inflammatory processes affecting adjacent organs, particularly in case of diverticulitis, appendicitis, pancreatitis, or cholecystitis [2, 6, 7]. In the prior literature, reported incidence rates were 2–7% in patients with initial clinical suspicion of acute diverticulitis or appendicitis [3, 8, 9]. Epiploic appendagitis is more frequently diagnosed between the second and the fifth decades of life, with a reported mean age at diagnosis of 44 years (range 12–82 years) and an incidence four times higher r in males than females [2, 3, 10–14]. Epiploic appendagitis may occur in any segment of the colon, more commonly the sigmoid (50%), followed by the descending (26%), ascending colon and cecum (22%), while it is uncommonly encountered in the transverse colon (2%) [10, 11]. Obesity and rapid weight loss are described as potential risk factors for the development of epiploic appendagitis.

The clinical diagnosis of epiploic appendagitis is challenging due to the lack of pathognomonic clinical signs or laboratory markers. On physical examination, patients complain of focal non - migratory abdominal pain in the lower abdominal quadrants (left more commonly than right), not exacerbated by physical movement, without significant guarding or rigidity, and in the absence of a palpable mass [10, 11]. The pain is typically circumscribed and the patient may often point his finger on the place where the lesion is situated. Patients may also report postprandial fullness, swelling, vomiting, early satiety, diarrhea, and rarely mild fever [10, 12, 14]. White blood cell count, erythrocyte sedimentation rate, and C - reactive protein levels are within normal range in the majority of patients, while mild leukocytosis may occasionally be observed due to inflammatory response [10–12, 14]. Epiploic appendagitis is a benign, self - limiting condition which spontaneously resolves within 2 weeks from the onset of symptoms. The risk of recurrence is low and complications are even rarer. Some authors believed that surgical intervention with ligation and excision of the inflamed epiploic appendages was the only way to prevent recurrences and complications, such as adhesions and intussusception induced by inflammation [14]

3. Conclusion

Epiploic appendagitis is an undervalued cause of acute abdominal pain, with an ambiguous clinical presentation that requires evaluation of CT imaging to exclude the presence of other common causes of abdominal pain and to confirm the benign nature of the lesion. It is recommended to correlate the imaging characteristics with clinical manifestations, to identify the patients who will benefit from conservative treatment options using analgesics and to prevent hospitalization, antibiotic therapies and surgery.

Conflict of interest: Nil declared.

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