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KEY WORDS: Epiploic Appendage , Appendagitis Epiploicae , Acute, Abdomen, Serosal Outpouching

APPENDAGITIS EPIPLOICAE – A BLUE MOON IN THE PANDORAS BOX OF THE GIT

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ABSTRACT

Disorders of the epiploic appendages are rarely diagnosed preoperatively and usually result from torsion with subsequent infarction.No diagnostic test or clinical symptoms are pathognomonic of this entity, which is a disease of middle age and rarely life-threatening. The majority of cases occur in the sigmoid colon and present with left sided abdominal pain. Acute torsion of an appendage usually manifests as localised abdominal pain in one of the lower quadrants. Untreated, peritonitis or intestinal obstruction may ensue. The surgical treatment of appendicitis epiploicae is simple ligation and excision if an intraoperative diagnosis is made. We report a 65 year old female who presented with symptoms of left lower quadrant pain in the abdomen and with features of sub acute intestinal obstruction .The suspicion of epiploic appendagitis was established by the findings of a contrast-study computed tomography of the abdomen. A diagnostic laparoscopy was subsequently performed due to clinical deterioration of the abdominal pain despite antibiotic coverage. An infarcted epiploic appendage of the sigmoid colon was revealed, which was removed laparoscopically.

INTRODUCTION: Epiploic (or omental) appendages are peritoneal pouches that arise from the serosal surface of the colon, to which they are attached by a vascular stalk. They frequently arise in association with colonic diverticula. Composed of adipose tissue and blood vessels, the appendages typically have a length of 0.5–5 cm. Those located near the sigmoid colon are the largest, and they may occur in multiples of approximately 100. They are thought to have a protective function, similar to that of the greater omentum, containing any intra-abdominal infection.They are arranged in two rows: one row medial to the tenialibera, and the other lateral to the teniaomentalis Each epiploic appendage is supplied by one or two small endarteries branching from the vasa recta longa of the colon and drained by a rather tortuous vein passing through its narrow pedicle. Such a limited blood supply, together with their pedunculated shape and excessive mobility, makes them prone to torsion and ischaemic or haemorrhagic infarct. On clinical examination, the pain is usually located in the left or in the right lower abdominal quadrant. Due to the lack of pathognomonic clinical features, the diagnosis is often difficult, delayed or completely missed They appear as lobulated masses of pericolic fat, usually 2-5 cm long and 1-2 cm thick on abdominal radiography, CT scan or ultrasound.

CASE REPORT:A 68 -year-old female was admitted with complaints of abdominal pain for the past three days aggravated on exertion and associated with mild abdominal distension and two episodes of vomiting. On examination patient was conscious, oriented and afebrile. Abdomen was distended and tenderness over left iliac fossa. Per rectal examination was normal. Blood investigations were within normal limts. X-ray abdomen revealed mild dilated large bowel loop. Patient was initially managed conservatively and was kept nil by mouth. There was an increase in the intensity of the pain and an increase in the abdominal girth. Patient occasionally passed flatus but not stools. Ultrasound abdomen revealed dilated fluid filled bowel loops seen in left iliac fossa suggestive of sub acute intestinal obstruction. Blood tests showed rising inflammatory markers (neutrophil leucocytosis) (White cell count – 14,200 cells /cmm and C - reactive protein of 22). CECT scan of abdomen revealed **Focal Inflammation of fat with a rim in left Iliac fossa measuring 36 *12 mm anterior to the descending colon suggestive of Acute Epiploic Appendagitis.** Patient and her attenders were explained about the disease and the treatment. Patient was prepared for diagnostic laparoscopy and proceed. Intra-op findings showed multiple adhesions over the left iliac fossa overlying the inflammed appendix epiploicae along the Sigmoid Colon which had undergone infarction and progressed to necrosis. The adhesions were carefully released using harmonic scalpel .The necrosed epiploicae along with its pedicle carefully dissected from the colon and transfixed using an endo-loop and then dissected with harmonic scalpel. The specimen was extracted using an endobag. Perioneal toileting and lavage done. The patients clinical condition improved over the subsequent post operative days. Histopathology report confirmed an infarcted and necrosed appendix epiploicae. Patient is doing well and is on regular follow up.

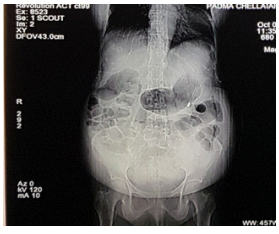

FIGURE -1

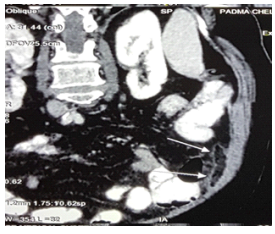

FIGURE -2

CT SCAN ABDOMEN SHOWING FOCAL INFLAMMATION OF FAT WITH A RIM IN LEFT ILIAC FOSSA MEASURING 36 *12 MM ANTERIOR TO THE DESCENDING COLON SUGGESTIVE OF ACUTE EPIPLOIC APPENDAGITIS

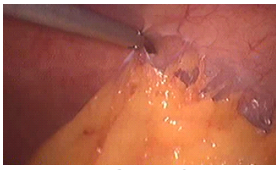

FIGURE -3

FIGURE -4

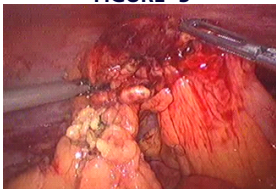

FIGURE -5

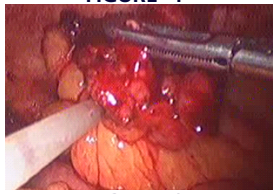

FIGURE -6

FIGURE 3-6- INTRA-OP FINDINGS SHOWING LAPAROSCPIC ADHESIOLYSIS AND REMOVAL OF INFARCTED ,NECROSED EPIPLOICAE APPENDAGITIS.

FIGURE -7 EXTRACTED SPECIMEN

DISCUSSION:

The term "epiploic appendagitis" was introduced by Lynn et al. in 1956 to describe the rare inflammatory process that results from a disturbance in the vasculature such as torsion or venous thrombosis of the epiploic appendage involved. Epiploic appendages are small pouches of peritoneum, each of which is supplied by vascular stalks, which protrude from the external serosal surface of the colon into the peritoneum. The pedunculated shape, the free range of movement and the tortuous nature of their blood supply makes epiploic appendages vulnerable to torsion or ischemic change.Torsion of epiploic appendages, with resultant vascular occlusion or venous occlusion that leads to ischemia, has been implicated as the cause of acute epiploic appendagitis. The venous component of the appendage is affected first, because each appendage is supplied by paired arteries but drained by only one vein.They occur in the rectosigmoid junction (57%), ileoceacal region (26%), ascending colon (9%), transverse colon (6%) and descending colon (2%) .Thomas et al reviewed 197 cases from the literature and 11 of their own cases of acute epiploic appendagitis and classified each according to its cause: torsion and inflammation (73%), hernia incarceration (18%), intestinal obstruction (8%), and intraperitoneal loose body (<1%). Acute epiploic appendagitis is associated with obesity, hernia, and unaccustomed exercise. Inflammation of the epiploic appendages is selflimited in the majority of patients. Rarely, acute epiploic appendagitis may result in adhesion, bowel obstruction, intussusception, intraperitoneal loose body, peritonitis, and/or abscess formation.

The exact physiological functions of epiploic appendages are not yet very clear. It has been proposed that their role involves a soft support cushioning of the colon, a role in immune response (much like that of the lesser omentum) and colonic absorption. A twisting, kinking or stretching of epiploic appendages along their long axis with impairment of their vascular supply results in subsequent venous thrombosis and necrosis (sometimes hemorrhagic). Although less likely, primary thrombosis is also possible. Appendices epiploicae are also affected by calcification due to aseptic fat necrosis, pericolic abscess, enlargement by lipomas or metastases, and incarceration in hernias.

The condition most commonly manifests in the 4th to 5th decades of life

The clinical presentation of an acute torsion can also mimic acute appendicitis, diverticulitis or cholecystitis. Symptoms may be minimal and there is no diagnostic sequence of symptoms. The most common presenting symptom is acute, moderate to severe, colicky or continuous abdominal pain in an area corresponding to the contour of the colon, and pain shift is unusual. The pain is usually present for less than a week, but in some patients it may occur intermittently over several months. The patient does not look ill, nausea and vomiting are unusual, and appetite is commonly unaffected. Localised tenderness over the site is usual and is often associated with pronounced rebound tenderness without rigidity.Laboratory investigations have been found to be inconclusive, and usually suggest a normal or slightly elevated leucocyte count. The radiological evaluation in the form of abdominal ultrasound examination which suggests that the presence of a hyperechoic non-compressible ovoid structure near the colonic wall with the absence of blood flow on sonographic assessment of the abdomen provides the clue to the diagnosis and computed tomography (CT) scan shows features of an oval lesion less than 5 cm in diameter (typical diameter range, 1.5–3.5 cm) that has attenuation equivalent to that of fat, that abuts the anterior colonic wall, and surrounded by inflammatory changes.

The indicated therapy of epiploic appendagitis is still a matter of controversy. It is widely accepted that this clinical entity is self-limiting,with patients recovering in less than 10 days, when given anti-inflammatory and antibiotic medication. Most of the surgical literature supports the benign course of this disease and favours a conservative approach. However, it is also observed that there has been a tendency of recurrence in conservatively treated patients and therefore some surgeons believe that surgical therapy will prevent recurrence, inflammation induced adhesions and other less common complications. Furthermore, laparoscopic interventions are highly appealing to both patients and surgeons as it is a very, safe easy and simple approach and is both diagnostic and therapeutic.

CONCLUSION:

Acute torsion of the epiploic appendage usually manifests as localised abdominal pain in one of the lower quadrants and can mimic various common pathologies affecting the abdomen Untreated, peritonitis or intestinal obstruction may ensue. High level of suspicion and use of diagnostic laparoscopy would help to resolve the issue at an early stage and avoid subsequent problems. We suggest that evidence for epiploic appendagitis should be looked for during diagnostic laparoscopy done for unexplained abdominal pain**,** if all the other abdominal organs are normal.

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