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Omental Infraction: Misdiagnosed As Acute Appendicitis

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Abstract **Case Report**

Idiopathic omental infarction is a rare cause of acute abdomen. We reported a 60-year-old lady who presented with sudden onset of abdominal pain for five days. The pain became more localized at the right iliac fossa. A physical examination revealed fever (101.4 F), severe RIF tenderness, and positive rebound tenderness. A USG of the abdomen showed feature of acute appendicitis. Diagnosis was carried on laparoscopically as gangrenous omental mass. The omental mass was excised and an appendectomy was performed. In summary, omental infarction should be considered as a deferential diagnosis for acute right-sided abdominal pain.
Keywords: Acute abdomen, acute appendicitis, omental infraction.

INTRODUCTION

Omental infarction due to torsion of the omentum is a rare cause of acute abdomen in which the organ twists on its long axis to such an extent that its vascularity is compromised [1, 2]. The incidence of omental infraction is around 0.1%. Bush reported first case of omental infarction associated, with hemorrhaging into the greater omentum caused by a traumatic event [7], and Eitel, the first case of torsion associated omental infraction in 1896[8]. Both phenomena can be further classed as primary and secondary depending on pathogenesis.it is a neglected but threating cause of acute abdomen. Ultrasonography (US) and computed tomography (CT) scanning are helpful tools for identifying the characteristic signs of omental infarction and signifying the deferential diagnosis. We present a case of 60 yr old lady admitted as a case of acute appendicitis but diagnosed as omental infraction.

CASE PERSENTATION

A 60-year-old obese lady presented to the Emergency Department with a history of abdominal pain for 5 days which was dull aching in nature and the pain became more localized at the right iliac fossa at day 1, before admission. The pain increased in intensity throughout the day, was not relieved by any analgesia or antispasmodic medications, and was aggravated with movement, cough, and straining. The pain was associated with nausea, decreased appetite, and vomiting. There were no other associated symptoms such as change in bowel habit and urinary symptoms. There was no history of trauma or surgery. On examination, the patient was febrile with a temperature of 101.4 F, with tachycardia (108/min). An abdominal examination revealed severe RIF tenderness, associated with guarding and positive rebound tenderness. The bowel sound was normal. His laboratory investigations showed a white cell count of 12,800 /mmc with 78% polymorph nuclear cells. Amylase was within normal range. Abdominal plain film and erect chest radiographs showed no active disease. The urine analysis was normal. Abdominal ultrasonography suggestive of acute appendicitis.

The patient was kept NPO with intravenous fluid and analgesia. He was started on an antibiotic. Consent was given for diagnostic laparoscopy and an appendectomy under general anesthesia. During the diagnostic laparoscopic procedure, a serosanguinous free fluid was found in all abdominal quadrants. In addition, a 6 × 4 cm gangrenous omental mass was noted. The appendix was within normal limits.

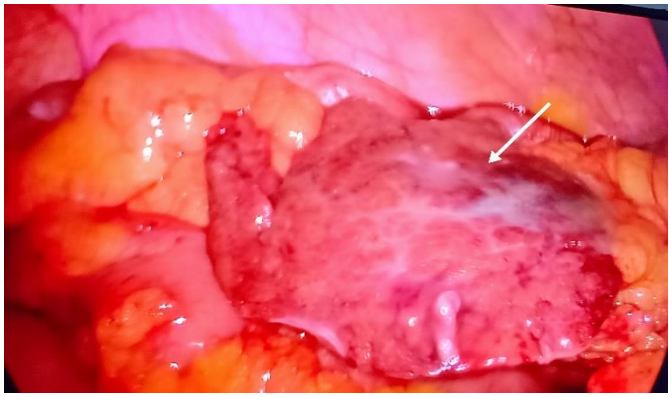

Fig-1: Showing gangrenous omentum

The omental mass was excised F/B by appendectomy and samples of both specimens were sent out for a histopathology examination. The postoperative course was uneventful. The patient was doing well in the following days, started a normal diet, and was discharged on pod 2 with no complications. At a follow-up exam in the clinic, the histopathological report revealed congested omental tissue with focal necrosis and a mild fibroblastic reaction, confirming the diagnosis of omental torsion. The appendix showed no significant mural inflammation.

DISCUSSION

Torsion is the main cause for omental infarction and it is classified as idiopathic or secondary torsion. Idiopathic torsion presents without any intra-abdominal pathogenic signs, and secondary torsion can present due to a secondary cause such as cysts, tumors, adhesions, or hernia. Primary omental torsion occurs idiopathically and can be predisposed by trauma, hyperperistalsis, and anatomical variations of the omentum itself, for example, accessory omentum, bifid omentum, irregular accumulations of omental fat in obese patients, and narrowed omentum pedicle. The higher incidence of torsion on the right side of the omentum is related to the greater length and mobility, which leaves it more prone to twist itself along its long axis, leading to compromise the vascularity [1]. Secondary torsion is more common than primary torsion and is associated with abdominal pathology, including cysts, tumors, intra-abdominal inflammation, postsurgical scarring, and hernial sacs. Pathophysiology of infraction– venous stasis leading to oedema and congestion of the omental vessels, leading to: (i) hemorrhagic necrosis and extravasation into the interstitium; and (ii) thrombosis in the omental veins, ultimately leading to peritoneal irritation and subsequent pain.

Most of the cases are presented as acute right-sided abdominal pain and misdiagnosed as acute appendicitis. The ultrasonography image was not informative as to the extent and diagnosis required confirmation with an advanced radiological method such as CT abdomen. *Typical* CT findings of a sub-segmental omental infarction include: (a) a sharp demarcation between normal and abnormal omental fats with increased attenuation of the latter; (b) a mesenteric vascular swirl sign indicative of torsion with surrounding fat stranding (c) a slight thickening of the visceral peritoneum; and (d) a mass effect on the adjacent intra-abdominal structures without any bowel abnormality. A laparoscopic approach enables the detection of other intra-abdominal masses and to identification of any associated pathology.

Conservative treatment with bed rest and anti-inflammatory medications are advised before operating in cases in which the diagnosis is confirmed by US or CT and in hemodynamically stable patients [8]. In our case this was not applied. Conservative approach can be associated with the development of omental abscesses [8]. Because of the severity of the presentation of our patient, surgical intervention was advised. Laparoscopic exploration should be considered as it can be both diagnostic and therapeutic and is associated with low morbidity [1, 9–11]. Laparoscopic resection of the involved omentum provides definitive treatment with a short hospitalization and rapid recovery.

CONCLUSION

Omental infarction is a neglected but lethal cause of acute abdomen. Abdominal ultrasonography and computed tomography should be used as initial diagnostic measures. Diagnosis and treatment of omental torsion can be achieved by laparoscopy.

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