Common presentation uncommon diagnosis Primary Omental Torsion

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Abstract

Primary omental torsion is a rare cause of acute abdomen and mimics common acute abdominal condition like appendicitis. Torsion of the greater omentum may be primary or secondary. Here we present 2 cases admitted through emergency with the pain in right iliac fossa with this unusual diagnosis.

Keywords: Primary omental torsion, POT, Laparoscopy, Acute abdomen.

Introduction

Primary Omental Torsion is a condition in which pedicle of omentum twists on its own axis to such an extent that its vascularity is compromised. Eitel[1] first described omental torsion in 1899. Since then, fewer than 250 cases have been reported. Morris[2] had reported more than 164 cases of omental torsion from 1905 to 1930. Omental torsion can be primary or secondary. In primary omental torsion a mobile thickened segment of omentum rotates around a proximal fixed point in the absence of any associated or secondary intra abdominal pathology.

Below are discussed 2 young males, admitted through emergency with pain in the right lower abdomen and diagnosed with this rare pathology.

These cases describe this rare entity as a diagnostic pitfall to the differential diagnosis of acute appendicitis, cholecystitis and diverticulitis.

Case-1:

A 30 years old male patient with no known co-morbids was admitted to our hospital with complaints of pain in the right lower abdomen for two days. There was no significant past medical or surgical history.

On examination he was haemodynamically stable and abdominal findings were equivocal for appendicitis. Lab workup and ultrasound were unremarkable.

Management options were discussed with the patient and diagnostic laparoscopy was planned.

On Laparoscopy : portion of greater omentum was observed to be twisted around its own axial axis and was attached to the anterior abdominal wall (Figure-1). Appendix was found to be normal. Laparoscopic excision of the greater omentum was performed and

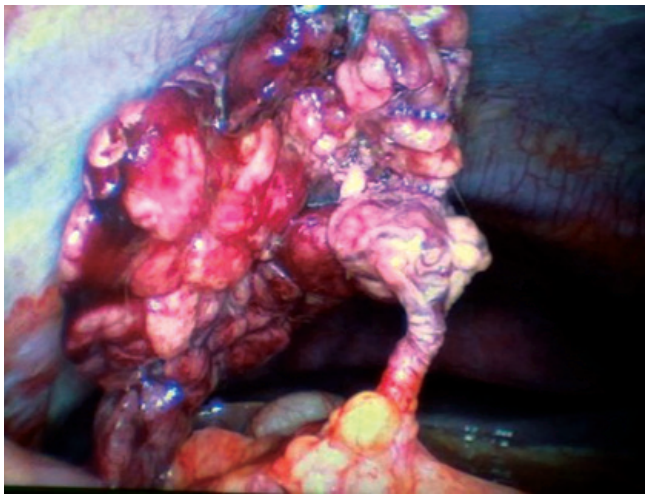

Figure-1: Laparoscopic View of Portion of greater omentum seen twisted around its own axis and attached to anterior abdominal wall.

appendectomy was not done.

Case-2:

A 22 years old male was admitted through the emergency with complaints of pain in the right iliac fossa with fever since 2 days. On examination he had tenderness in the right iliac fossa with a raised leucocytes count. With the clinical impression of acute appendicitis, he was advised appendectomy and the patient opted for open appendectomy. After resuscitation Lanz incision was given and peritoneal cavity was opened. Portion of ischaemic greater omentum was found to be adherent to the anterior abdominal wall through a narrow stalk. Appendix was found to be normal. Excision of the greater omentum along with the appendectomy was done. Histopathology showed acute on chronic inflammation with fat necrosis while histopatholgy of the appendix

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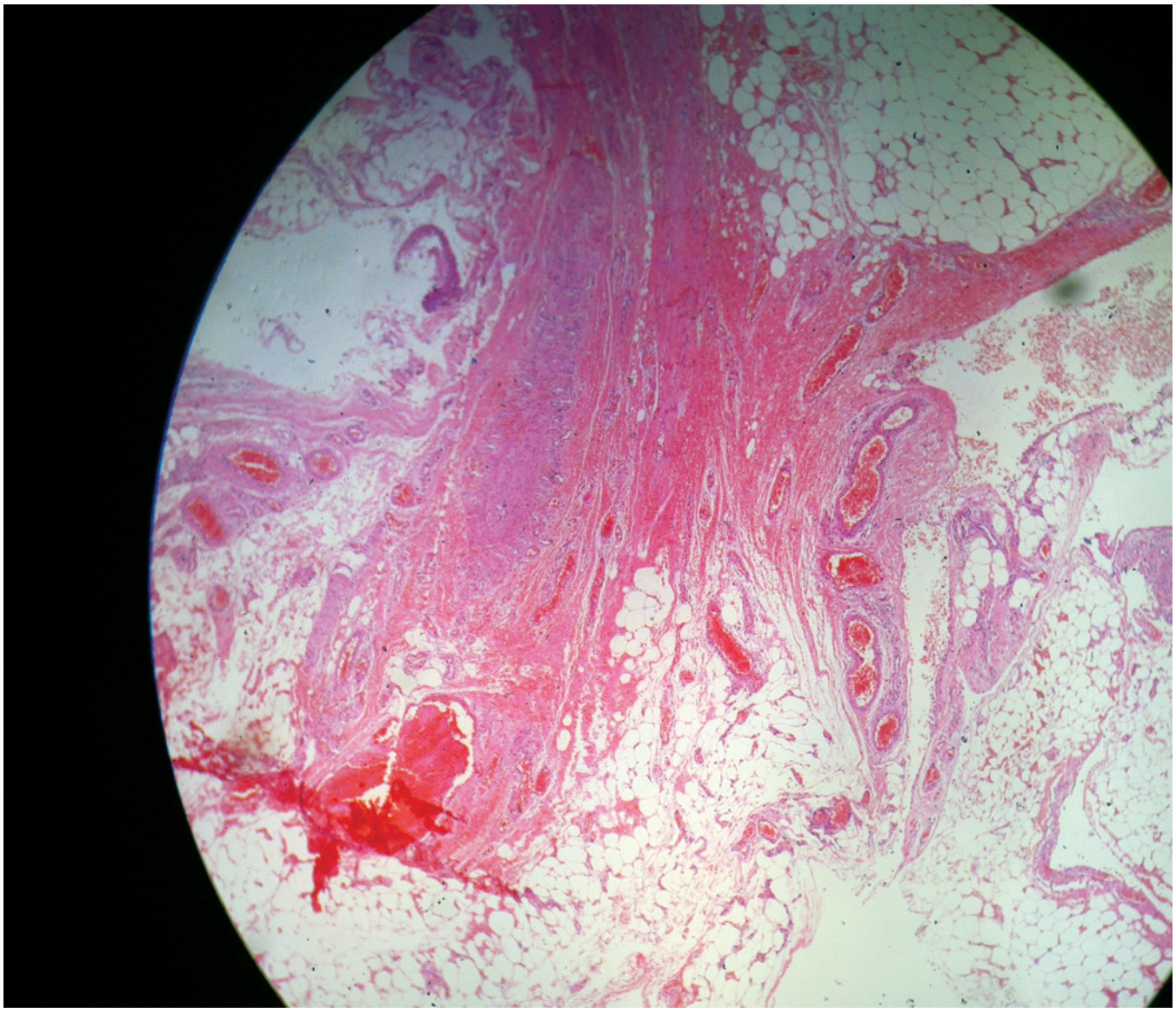

Figure-2: Microscopic view of greater omentum showing Acute on chronic inflammation with fat necrosis.

was normal (Figuer-2).

Discussion

Eitel[1] first described omental torsion in 1899. Since then, fewer than 250 cases have been reported.[3] No specific age predisposes to this condition as extremes of age can present with this pathology[4] however males are more prone to develop POT; male to female ratio 2 :1. In Pakistan, there are only few case reports of the same.[5,6]

Torsion of the omentum may be primary or secondary. In primary torsion POT, a mobile segment of omentum rotates around a proximal fixed point in the absence of any associated intra-abdominal pathology. Although the precise cause is unknown, both predisposing and precipitating factors in the pathogenesis of the condition can be identified. Factors that predispose a patient to torsion include:

Anatomical variations of the omentum itself, eg, accessory omentum, bifid omentum, irregular accumulations of omental fat (in patients who are obese), narrowed omentum pedicle, and any redundancy of omental veins leading to kinking and twisting around the shorter and tenser arteries.

Secondary omental torsion is more common than primary omental torsion and is due to previous intra abdominal

condition, a surgical scar, tumours or perforated bowel.[7] Omental torsion usually presents as constant severe non radiating pain associated with nausea and vomiting. Most cases are diagnosed peroperatively. There can be moderate leucocytosis in 50% of cases. Ultrasound can show a complex mass consisting of hypoechoic and solid zones may be identified, but this imaging technique is operator dependent with limited sensitivity due to overlying bowel gas. On CT omental torsion is characterized by diffuse streaking in a whirling pattern of fibrous and fatty folds.[8]

With the increased use of CT, pre-operative diagnosis of omental torsion may increase in frequency of preoperative diagnosis and lead to conservative management in patients without complications.[9] This will help to avoid unnecessary surgery since conservative management has been suggested in the absence of complications.[10] Computed tomography scan findings such as a streaking or "whirling" pattern of inflammatory tissue and a fluid cavity based on the degree of necrosis present, can help to make this diagnosis preoperatively.[11]

Histology findings of haemorrhagic infarction and fat necrosis confirm the diagnosis with the presence of fibrosis indicative of a longer disease process. The prognosis for primary omental torsion POT is good with fast post operative recovery and minimal morbidity. The natural disease progress if left untreated will result in fibrosis, necrosis and occasional auto amputation and clinical improvement Prognosis in secondary torsion SOT depends upon underlying pathology.

In our cases, both the patients were male with the mean age 26 years. In the first case, laparoscopic approach not only helped in establishing the diagnosis but unnecessary appendectomy was avoided. Sasmal et al[12] presented a case series of 9 patients from Jan 2003 to Dec 2008. In this series, laparoscopic approach was used to diagnose the cause of the acute abdomen in which all had had gangrenous omentum however they also performed the appendectomy in 8 patients and Cholecystectomy in 1 patient.

In our second case, which was operated via Lanz incision, excision of the ischaemic omentum was done along with the appendectomy. Histopathology of the appendix showed normal appendix.

Conclusion

In conclusion, primary omental torsion POT is a rare cause of acute abdomen and usually posses a diagnostic dilemma. POT is to be considered in all males with equivocal findings and normal lab work up. CT scan can help establish the pre-operative diagnosis but laparoscopy can be both diagnostic and therapeutic and unnecessary appendectomy can be avoided.

Acknowledgment

We authors would like to acknowledge Prof. Turab Pishori and Dr. Zahid Habib for their valuable support and providing us with the cases and valuable insight in writing this manuscript. Also, we would like to acknowledge the help of Dr Maisam Abbas in the preparation and submission of the manuscript.

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