Omental torsion: a rare cause of acute abdomen

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Abstract

Omental torsion is a rare cause of acute abdomen which often required surgical intervention. Preoperative diagnosis by clinical examination alone is almost never possible. Increasing use of CT is making it possible to diagnose this preoperatively. An adult male case is presented that highlights these points.

Case report

A 25-year-old male presented with a 3-day history of right sided abdominal pain which started gradually and remained constant with episodes of severe exacerbations. There were no specific aggravating or relieving factors for the pain, and there was no associated vomiting, diarrhoea, or urinary tract symptom. Patient denied any similar complaints in the past. He did not have any previous abdominal operations.

On examination he was apyrexial, abdomen was soft with tenderness in the right iliac fossa, no masses were palpable. Blood investigations showed a mildly elevated white cell count (13.5) and CRP (25), urine dipstick was normal. Plain abdominal X-rays did not reveal any evidence of renal calculi.

A diagnosis of acute appendicitis was made and the patient was scheduled for surgery. At laparoscopy a patch of gangrenous omentum was found, the appendix was normal looking. We found a pedicle which was twisted and responsible for the torsion. The omentum was excised laparoscopically.

Patient had an uneventful postoperative period. Histology revealed a necrotic and haemorrhagic omentum and a normal appendix.

Discussion

Omental torsion was first reported in 1889 by Eitel. This occurs when the omentum twists along the longitudinal axis resulting in vascular compromise. According to literature, omental torsion can be primary or secondary, precise causes for primary torsion are not well recognised, several factors like anatomical variation, accessory omentum and venous malformations have been proposed. Right sided omental torsions are more commonly documented than the left and it has been suggested that this is possibly due to the greater mobility and the length of the omentum on the right side. Precipitating factors are those that cause displacement of the omentum—e.g. heavy exertion, sudden change in body position, coughing, straining and hyperperistalsis. Secondary omental torsions have predisposing factors like scarring form surgeries, foci of inflammation and hernias.

Clinical presentation is usually that of an acute abdomen, mimicking appendicitis, cholecystitis or diverticulitis depending on its location. Pain is usually sudden in onset with abdominal tenderness and in some cases peritonism. Associated symptoms like
nausea, vomiting or low grade fever may be present. Leucocytosis can also be present.

With increasing use of ultrasound and CT characteristic features which suggest omental torsion have been reported. Ultrasound may show a complex mass with mixture of solid and hypoechoic material. The CT finding of an omental fatty mass with a whirling pattern is characteristic of omental torsion.

Omental torsion must be considered if preoperative diagnosis is not confirmed during surgery and there is serosanguineous fluid in the peritoneal cavity. A thorough and methodical search of the abdominal cavity must be made. With increasing use of laparoscopy this is being made easy without having to extend the incision or use separate incisions. Treatment consists of resecting the necrotic omentum and in case of secondary torsion correcting the factor that predisposed to the torsion.

After a series study Miguel Perelló et al, Abadir et al have suggested conservative management of this condition when it has been diagnosed preoperatively in selected patients. The question of conservative versus operative management would depend on the presentation and the clinical condition of the patient.

In summary, omental torsion is a rare cause of acute abdomen that often mimics common causes of acute abdomen like appendicitis. Pre operative diagnosis by clinical examination alone is not possible. With increasing use of imaging it is likely that more cases will be reported.

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**References:**