

Primary Torsion Of The Omentum: An Intraoperative Surprise, Case Report.

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Citation

A Mohamed, Y Mohamed, I Harera. *Primary Torsion Of The Omentum: An Intraoperative Surprise, Case Report..* The Internet Journal of Surgery. 2010 Volume 26 Number 2.

Abstract

Primary torsion of the greater omentum is rare with less than 400 cases reported in the English literature since it was first reported in 1899. We report a case of primary torsion of the greater omentum in a 30-year-old male who presented with the clinical picture of acute appendicitis.

INTRODUCTION

Preoperative diagnosis of torsion of the omentum is difficult. Accurate preoperative diagnosis was reported in the range of 0.6-4.8%. We report a case of primary torsion of the greater omentum diagnosed clinically as acute appendicitis and found intra-operatively to be primary torsion of the omentum.

CASE PRESENTATION

A 30-year-old man presented to the emergency department at Riyadh care hospital with lower abdominal pain of two days duration. He described the pain as continuous, severe and of sudden onset; it started at the epigastrium and then localized to the right lower abdomen. There was no vomiting, change of bowel habits or urinary symptoms. On examination he was febrile with a temperature of 37.8°C. Pulse was 98/minute and blood pressure was normal. The abdomen was distended, tense with muscle guarding and tenderness all over with marked tenderness at the right iliac fossa. Blood investigations including full blood count, coagulation screen and urea and electrolytes were normal apart from leucocytosis of 12.8×10^3 . The abdominal ultrasound failed to demonstrate the appendix but showed a minimum fluid collection in the pelvis and right paracolic gutter. Diagnosis of acute appendicitis was made and the patient was admitted for open appendicectomy. At surgery the appendix was found to be normal; a small amount of blood stained fluid was found in the pelvis and the right iliac fossa. A formal laparotomy through midline incision was carried out which revealed a 360-degree clockwise twist of the distal part of the greater omentum (figure 1), with

complete infarction of the distal part (figure 2 and 3). Resection of the infarcted omentum was performed. The patient recovered uneventfully and was discharged home. Pathology revealed an acute hemorrhagic infarct and diffuse fat necrosis.

Figure 1

Figure 1 showing a 360-degree clockwise twist of the omentum with infarction of the distal omentum.

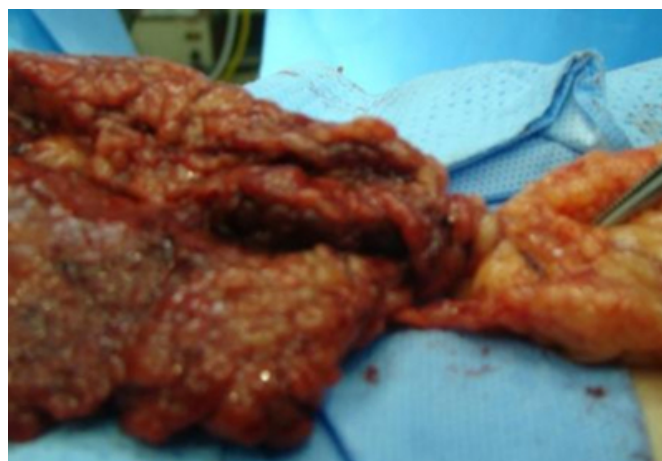


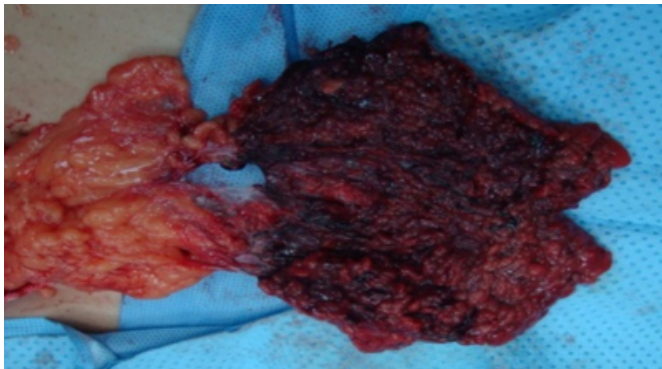
Figure 2

Figure 2 showing the infarcted omentum.



Figure 3

Figure 3 showing untwisted omentum without evidence of improved blood supply.



DISCUSSION

Torsion of the omentum is a condition in which the organ twists on its long axis to such an extent that its vascularity is compromised.

Segmental infarction of the large omentum is an uncommon condition that may present as acute abdomen in any age group, mainly in the fourth and fifth decade of life, with a male to female ratio of 2:1 (1).

The rarity of the condition is reflected in the fact that less than 400 cases have been published in the English literature, since it was first reported by Eitel in 1896 (2).

Omental torsion can be primary or secondary. Primary torsion without any underlying cause is less common. Possible predisposing factors include obesity, malformation of the greater omentum with tongue-like projections, a bifid/accessory omentum, and vascular abnormality (e.g., redundant omental veins). Secondary torsion, the more common entity, occurs with underlying abnormalities such as hernial sacs, tumours, and foci of inflammation or

adhesions (3). Precipitating factors comprise trauma, increased intra-abdominal pressure following coughing, exertion, heavy meal and change in body position, which probably result in sudden misplacement of the omentum and compromised blood flow (1).

Because of its rarity and nonspecific clinical features, the diagnosis is seldom made preoperatively (4) and is usually made at laparotomy for suspected appendicitis (5).

Preoperative diagnosis of torsion of the omentum is difficult. Accurate preoperative diagnosis was reported in the range of 0.6-4.8 % (6).

Clinical symptoms and signs include sudden onset of pain and signs of peritoneal irritation on the right side of the abdomen (as the right side of the omentum is the most frequently involved portion, believed to be due to its increased length and mobility) (7,8,9,10,11). The condition may be associated with nausea, vomiting, or low-grade fever. An abdominal mass may be palpable in half of the patients.

This right-sided acute pain and rebound tenderness is often mistaken for acute appendicitis. Unlike acute appendicitis, however, patients with omental torsion usually do not have any significant gastrointestinal symptoms, and their clinical appearance is not consistent with appendicitis of that duration (7, 12, 10) (as we observed in our patient).

Until recently, omental torsion was diagnosed only on exploratory surgery for presumed acute appendicitis or similar abdominal emergency. The increasing use of high-quality imaging, especially computerized tomography, in the diagnosis of appendicitis and the acute abdomen, has allowed preoperative diagnosis to be made much more often (13).

Abdominal ultrasound and CT scan reveal, in the majority of cases, solid hyperechoic lesions and a whirling mass with hyper-attenuated fatty tissue, respectively (14, 15, 16). The presence of concentric linear strands in abdominal CT scan is highly characteristic of omental infarction and allows accurate preoperative diagnosis.

Similarly, the increasing use of laparoscopy in the management of cases of suspected appendicitis offers substantial advantages for the patients while permitting definitive diagnosis and treatment (17).

Although conservative management for omental infarction

has been suggested for selected patients (18, 19), laparotomy/laparoscopy remains the gold standard of diagnosis and treatment. Delayed treatment may lead to the formation of intra-abdominal abscesses, sepsis, and adhesions (20, 21).

CONCLUSION

Primary torsion of the greater omentum is a rare entity. Because of its rarity and non-specific clinical features, the diagnosis is seldom made preoperatively. Awareness of the surgeons of the condition and use of CT scan in clinically suspected cases may increase its accurate preoperative diagnosis and reduce its intra-operative surprise. It also allows the use of a minimally invasive approach of management.

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