Abdominal pain in a 9-year-old: omental torsion masquerading as appendicitis

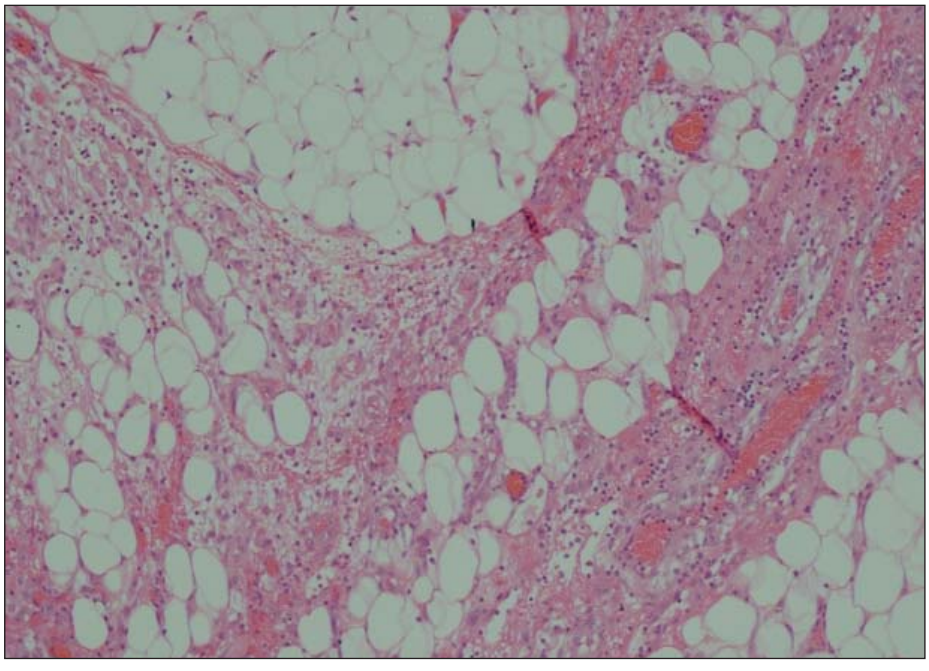
Discussion

Omental torsion was first described in 1899 by Eitel. It is classified as either primary (idiopathic), or secondary, which arises as a result of adhesions between the omentum and intra-abdominal pathologies such as hernias or tumours (Jeganathan et al, 2002). Predisposing factors include obesity (Theriot et al, 2003) with an abnormal fat distribution within the abdominal cavity and congenital factors such as a bifid omentum. Physical exertion or alterations in body position and polyphagia with resultant hyperperistalsis have been implicated as triggering events.

Physiologically, it is thought that, as venous return is occluded the distal omentum becomes congested and releases serosanginous fluid into the abdominal cavity. Anatomically, there is a preponderance of right-sided torsions which may be attributable to the larger amount of omentum in the right side of the abdomen. Clinically, it mimics acute appendicitis. The diagnosis is rarely made preoperatively (Mallick and Al Bassam, 2006).

In this patient, with a protracted history, the diagnosis was made intraoperatively after finding a normal appendix, characteristic serosanginous fluid and a mass of thrombosed omentum (Basson and Jones, 1981). Suspicion should be raised in overweight children with minimal systemic upset and a long history of pain. Treatment should consist of appendicectomy and excision of the thrombosed segment to avoid adhesions. BJHM

Figure 1. Haematoxylin and eosin slide (x 40) showing omental torsion.



Case Report

A 9-year-old boy was referred to the emergency department by his GP with abdominal symptoms. He complained of periumbilical pain for 3 days which had gradually radiated to his right iliac fossa in the 12 hours before presentation. The pain was colicky, intermittent in nature and exacerbated by moving or eating. There was associated anorexia and nausea but no vomiting. Bowel pattern had remained normal throughout and no urinary symptoms were noted. On presentation he graded the pain as 10/10. A collateral history was taken from his mother who verified the symptoms. There was no history of trauma.

On examination he was flushed, dehydrated but apyrexial. Cardiorespiratory examination was normal. Abdominal examination revealed tenderness and guarding in the right iliac fossa. Bowel sounds were normal and he had a positive Rovsing's test. Laboratory investigations revealed a normal full blood count (white cell count of 8.76 x 10^6), a normal renal profile and a normal serum amylase. Erythrocyte sedimentation rate was marginally elevated at 18 mm/hr. Urinalysis was normal.

A clinical diagnosis of appendicitis was made. A Lanz incision was made and on opening the peritoneum blood-stained fluid was noticed. On close inspection the appendix looked healthy and a routine appendicectomy was carried out. The incision was extended medially and the caecum and small bowel were fully inspected with no pathology identified. Near the right hepatic flexure an area of necrotic omentum was identified with thrombosed veins. Another area of omentum was seen which had twisted upon itself (omental torsion). This was excised and tied with vicryl sutures. Postoperatively, the patient went home on day 3 after an uneventful recovery. Histopathology revealed a normal appendix. The excised omentum revealed fat necrosis and ischaemic changes consistent with torsion (*Figure 1*).

Basson SE, Jones PA (1981) Primary torsion of the omentum. *Ann R Coll Surg Engl* **63:** 132–4

Jeganathan R, Epanomeritakis E, Diamond T (2002) Primary torsion of the omentum. *Ulster Med J* **71**(1): 76–7

Mallick MS, Al-Bassam AA (2006) Primary omental torsion in children. The pre-disposing factors and role of laparoscopy in diagnosis and treatment. *Saudi Med J* **27**(2): 194–7

Theriot JA, Sayat J, Franco S, Buchino JJ (2003) Childhood obesity: a risk factor for omental torsion. *Paediatrics* **112**(6 pt 1): e460

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