

Case Report

Primary torsion of the omentum

R Jeganathan, E Epanomeritakis, T Diamond

Accepted 12 March

Primary torsion of the omentum often presents as an acute surgical emergency, with typical signs and symptoms of acute appendicitis.

CASE HISTORY A 26-year-old man presented with a one day history of right iliac fossa pain which was aggravated by movement and coughing. He had a similar episode which lasted a few hours, two weeks previously. There was no history of trauma. On examination he was pyrexical, with marked tenderness in the right iliac fossa and right flank. His white cell count was $17.1 \times 10^3/\text{ul}$. A diagnosis of appendicitis was made.

At operation, through a Lanz incision, a normal appendix was found. The terminal ileum appeared normal and a Meckel's diverticulum was not found. However, there was some serosanguineous fluid in the right paracolic gutter and an ischaemic segment of omentum. A small midline laparotomy above the umbilicus was made. A segment of omentum had twisted and become ischaemic and necrotic (Figure). This was excised and an appendicectomy was performed. Histopathology revealed a normal appendix and 56g of infarcted omentum. He made an uneventful post-operative recovery.

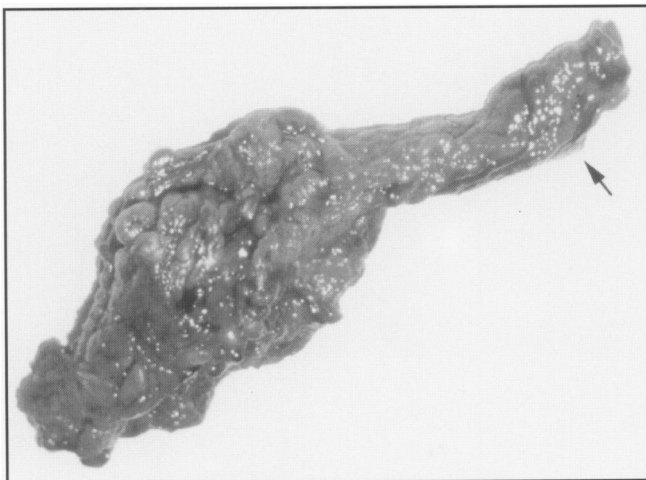


Fig. Infarcted omentum – arrow showing point of torsion.

DISCUSSION

Torsion of the omentum can be either primary (idiopathic) or secondary. Secondary torsion is usually associated with adhesions to the omentum, for example, to a cyst, tumour, hernias or foci of intra-abdominal inflammation. Primary or idiopathic omental torsion is rare and was first described by Eitel in 1899.¹ The cause is obscure. Leither *et al* described predisposing and precipitating factors.² Predisposing factors were anatomical variations including tongue like projections from the free edge of the omentum, bifid omentum, accessory omentum and obesity associated with irregular distribution of fat within the omentum.² Payr suggested that venous redundancy relative to the omental arterial blood supply was also a predisposing factor.³ Its longer and tortuous veins allow kinking, thus offering a point of fixation around which twisting may occur.³ Precipitating factors were those that cause displacement of the omentum, such as heavy exertion, sudden change in body position, coughing, straining and hyperperistalsis with over-eating.²

Primary torsion of the omentum is always unipolar as there is only one locus of fixation, whereas secondary torsion, which is more common, is usually bipolar – that is, torsion of a central portion between two fixed points.² The omentum in both primary and secondary torsion twists a variable number of times. An interesting aspect is the predominance of torsion involving the right side of the omentum. This may reflect its larger size and hence its greater tendency to tort.⁴ The

Mater Hospital Trust, Crumlin Road, Belfast BT14 6AB.

R Jeganathan, SHO in General Surgery.

E Epanomeritakis, MD, EQS, Registrar in General Surgery.

T Diamond, BSc, MD, FRCS, FRCSI, Consultant Surgeon.

Correspondence to

important differential diagnosis of appendicitis makes it imperative to operate on patients who are clinically unwell. In contrast, left sided primary omental torsion could possibly be diagnosed as acute diverticulitis and managed non-operatively.⁷ Hence, left sided torsions may be seldom seen because they are less often operated on and less frequently diagnosed.⁷

When torsion occurs, venous return becomes restricted and the distal omentum becomes congested and oedematous. Haemorrhagic extravasation results in a characteristic serosanguineous fluid in the peritoneal cavity. If the process continues for sufficient duration, haemorrhagic infarction and eventual necrosis occurs. If not excised, the mass becomes atrophied and fibrotic, and on rare occasions is autoamputated.

Clinically, primary and secondary torsion of the omentum are similar and occur in the fourth and fifth decades, males being affected twice as commonly as females. The most frequent presentation is pain in the right iliac fossa which is usually of sudden onset, and is constant with a gradual increase in severity. There may be a past history of similar but less severe pain,⁵ as occurred in our case. Nausea and vomiting occur in less than 50% of cases.² Moderate leucocytosis and fever are usually present. Tenderness with peritonism is invariably present. A mass may be felt if a large segment of omentum is involved.²

Computerised tomography has been used in diagnosing torsion of the omentum. It is very sensitive for showing an omental mass but not specific for making a diagnosis of torsion.⁶ During surgery, the presence of serosanguineous fluid in the peritoneal cavity in the absence of pathological conditions in the appendix, gall bladder and pelvic organs should alert the surgeon to the possibility of torsion of the omentum.² Treatment consists of resecting the infarcted omentum and treating the underlying aetiological condition in patients with secondary omental torsion.

REFERENCES

1. Eitel GG. Rare omental torsion. *N Y Med Rec* 1899; **55**: 715-6.
2. Leitner MJ, Jordon CG. Torsion, infarction and haemorrhage of the omentum as a cause of acute abdominal distress. *Ann Surg* 1952; **135**: 103.
3. Payr E. Weitere experimentelle und klinische Beiträge zur Frage der Stieldrehung intraperitonealer Organe und Geschwulste. *Dtsch Z Chir* 1906; **85**: 392-415.
4. Lipsett PJ. Torsion of the greater omentum: report of 2 cases. *Ann Surg* 1941; **114**: 1026-34.
5. Morris JH. Torsion of the omentum, its clinical importance. *Arch Surg* 1932; **24**: 40-76.
6. Cooper C, Jeffrey RB, Silverman M, Fedele MP, Chur GH. Computed tomography of omental pathology. *J Comput Assist Tomogr* 1986; **10**: 62.
7. Basson SE, Jones JA. Primary torsion of the omentum. *Ann Coll Surg Engl* 1981; **63**: 132-4.