

INFECTED MESENTERIC DERMOID CYST: A RARE CAUSE OF ABDOMINAL PAIN.

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INTRODUCTION:

Mesenteric cysts are one of the rarest intra-abdominal tumours. A dermoid cyst is a teratoma and belongs to the group of congenital cystic tumours developing from an embryonic rest. Such tumours vary from those which contain only epidermal cells to those containing various dermal derivatives, such as glandular cells, hair and teeth. These tumours can arise wherever two ectodermal surfaces fuse together in the developing embryo when an ectodermal implant is retained deep in the surface. Patients usually present with abdominal pain and/or a mass. The cysts can also be asymptomatic and may be an incidental finding. Mesenteric cysts can occur anywhere in the mesentery, from the duodenum to the rectum and may extend into the retroperitoneum. The main differential diagnosis includes an ovarian cyst, pancreatic pseudocyst, meconium pseudocyst, urachal cyst, peritoneal hydatidosis or hydrometrocolpos. They rarely rupture, tort or obstruct.

CASE PRESENTATION:

A nulliparous woman in her early 20s presented with a 24-hour history of lower abdominal pain, distension, nausea and vomiting. She also reported early satiety and intermittent bloating. She was otherwise systemically well with no fever. There was no history of weight loss. She did not have any symptoms of haematemesis, rectal bleeding or mucus discharge. She denied a history of constipation or urinary symptoms. She attended her GP one month previously with lower abdominal pain. She commenced treatment with oral doxycycline 100mgs bd and metronidazole 400mgs for 14 days for suspected pelvic inflammatory disease. Her high vaginal swabs were negative. She had a copper coil in situ. Her medical history included a diagnosis of neurofibromatosis type 1. She underwent spinal surgery to correct her scoliosis in her teenage years. Her medications included sertraline 150mgs od. She was a non-smoker and did not consume alcohol. On exam, her observations were as follows: BP 96/59mmHg, heart rate 115 beats per minute, SpO2 98% on air, respiratory rate of 14 and temperature of 35.8C. She was of short stature and weighed 47kgs. There was no palpable lymphadenopathy, pallor, jaundice or oedema. Physical examination confirmed abdominal distension with left sided abdominal and epigastric tenderness. A well-defined left-sided abdominal mass was palpable. There was no peritonism or shifting dullness. Normal bowel sounds were present on auscultation. Speculum exam showed a normal cervix with no vaginal discharge. Digital rectal examination was unremarkable.

INVESTIGATIONS:

Urinalysis confirmed leucocytes, protein, blood and ketones 3+. Microscopy was unremarkable. Her pregnancy test was negative. A VBG showed a metabolic alkalosis. Her lactate was 1.2mmol/L. Laboratory investigations confirmed an elevated white cell count of 14.8x10⁹/L, with a neutrophilia of 11.97x10⁹/L and a raised CRP of 197mg/L. A 12-lead ECG showed sinus tachycardia. An US abdomen showed a normal liver, gallbladder, kidneys, spleen, pancreas and abdominal aorta. There was no intra-abdominal free fluid. Her TV USS showed a 47mm x 50mm cylindrical, solid, avascular lesion arising amongst the peritoneum/omentum

in the hypogastrium. **[Figure 1]** The origin of this lesion could not be established, however, it was clear of the uterus and ovaries. Furthermore, the lesion appeared to correlate with the area of maximum tenderness and was very painful upon gentle transducer pressure. Her anteverted uterus appeared normal. The endometrium was regular in outline. Both ovaries were normal. In view of her neurofibromatosis, it was thought that the sonographic appearances may represent a neurofibroma. The exact aetiology was not certain and further cross-sectional imaging was recommended. Further investigation with a CT abdomen and pelvis with contrast showed a rounded 4.8cm homogenous well-circumscribed fat density mass within the mesentery with extensive stranding and adjacent nodularity. **[Figure 2]** An MRI abdomen showed a 46mm well-defined structure located to the left of the midline in the lower abdomen. **[Figure 3]** It had central high T2 signal which was fat suppressed. There was a thin well-defined wall which restricted on diffusion weighted sequence. Her genital swabs were unremarkable.

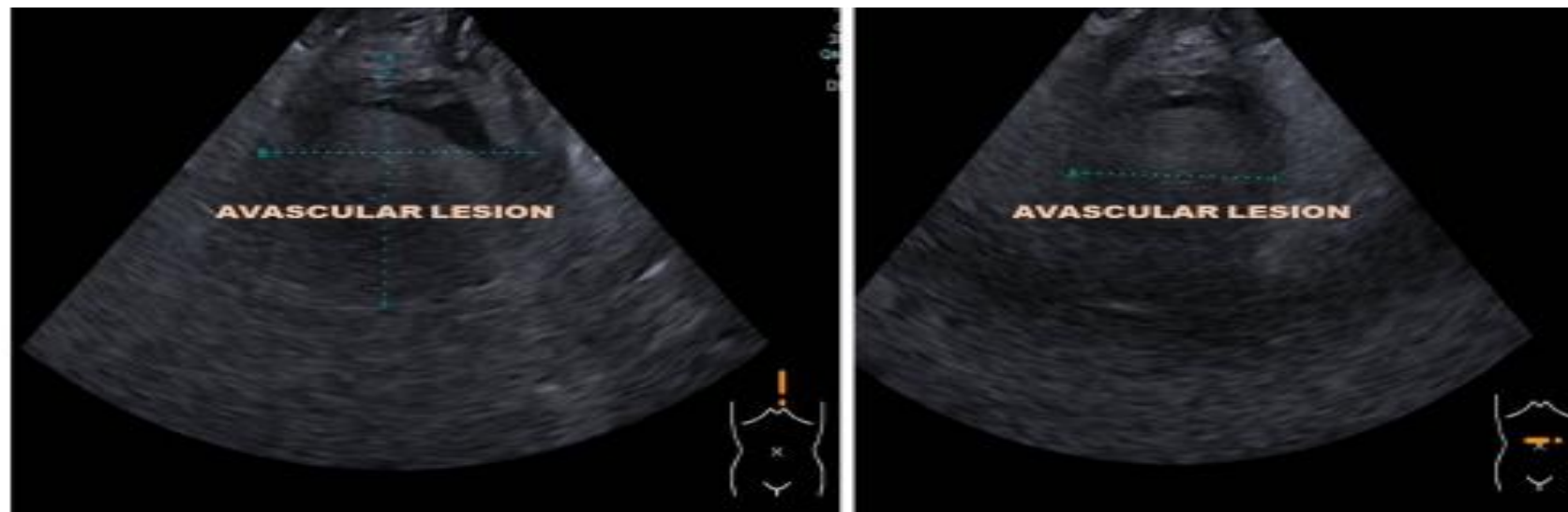


Figure 1.

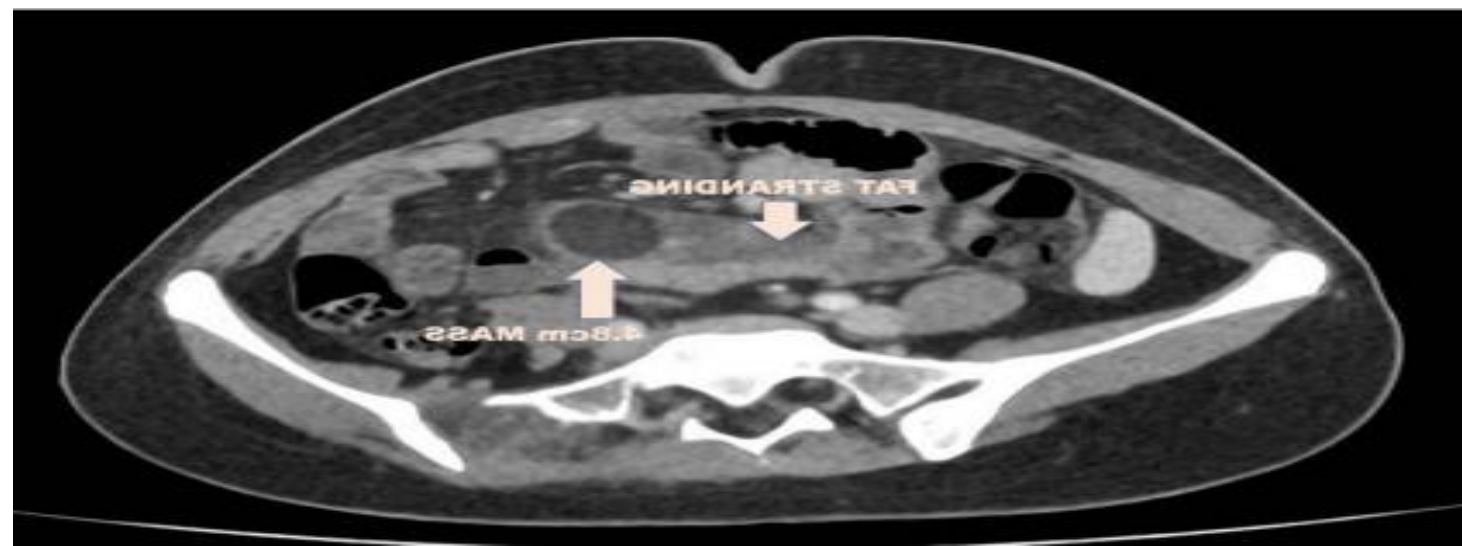


Figure 2.

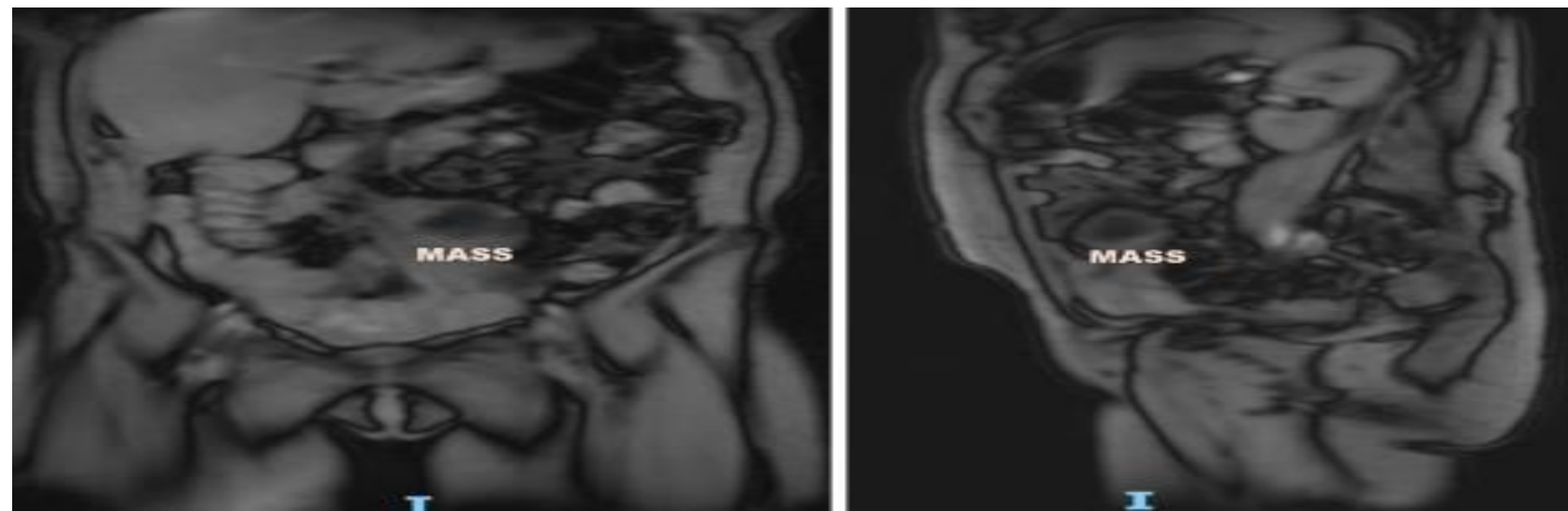


Figure 3.

DIFFERENTIAL DIAGNOSIS:

As her CT scan showed normal ovaries, the diagnosis was unlikely to be an ovarian dermoid but favoured a mesenteric dermoid cyst. The presence of inflammatory stranding with swirling of the mesenteric vessels implied this to be an infected mesenteric dermoid cyst. There was no evidence of torsion.

TREATMENT:

Her copper coil was removed. Cultures were negative for Actinomyces. She commenced treatment with intravenous antimicrobial therapy: tazocin 500mgs three times daily for 48 hours. As she was systemically well with a reduction in inflammatory markers observed, she was down-stepped to co-trimoxazole 960mgs every 12 hours and metronidazole 400mgs three times daily for seven days. She was also reviewed by the pain team and continued her pain management with codeine phosphate 60mgs qds and oral paracetamol.

OUTCOME AND FOLLOW-UP:

She was reviewed by the mental health team at the woman's request due to her health-related anxiety. She continued treatment with sertraline 150mgs once daily. Elective surgical resection was performed six months later. Her recovery was unremarkable. Histology confirmed the diagnosis of a mesenteric dermoid.