A rare cause of acute abdominal distension presenting as a surgical emergency

Introduction

This article reports a case of a giant multilocular cystic lymphangioma in a 16-year-old man presenting as an emergency with acute onset abdominal distension. The investigation and treatment of this case are discussed as well as a short review of the scientific literature.

Discussion

Lymphangiomas are uncommon lesions and 80–90% are diagnosed within the first few years of life (Hanagiri et al, 1992). Of these 75% are found in the neck, 20% in the axilla and the remaining 5% are found elsewhere in the body including the abdomen (Roisman et al, 1989). The most common location of intra-peritoneal lymphangiomas appears to be the mesentery of the small bowel (Hardin and Hardy, 1970). Different theories have been proposed regarding the aetiology of lymphangiomas.

Lymphangiomas are classified as simple, cavernous or cystic. The simple type is usually situated superficially in the skin and composed of small thin-walled lymphatic vessels. The cavernous type is composed of

Figure 1. Abdominal X-ray showing no gas shadow on the right side with shifting intestine to the left.

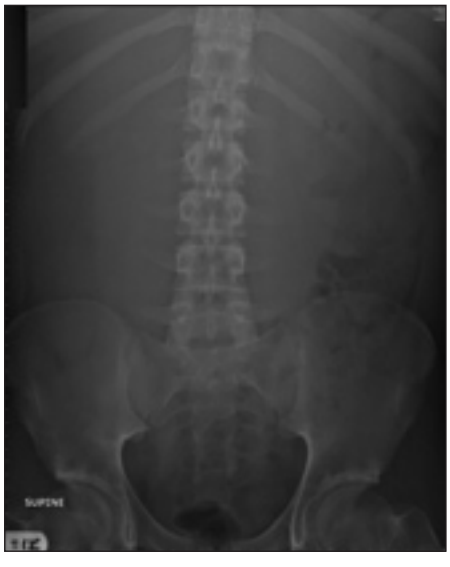


Figure 2. Abdominal computed tomography scan showing multilocular fluid-filled mass lesion occupying the majority of the peritoneal cavity.

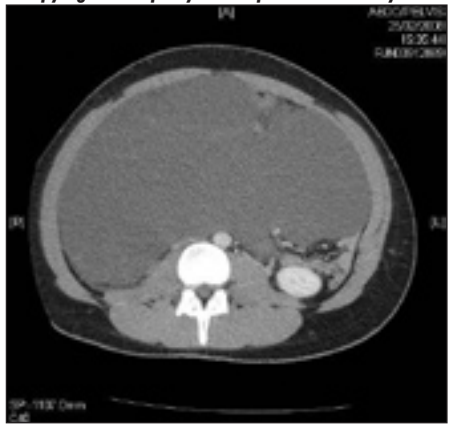


Figure 3. Excision of the lesion during surgery.

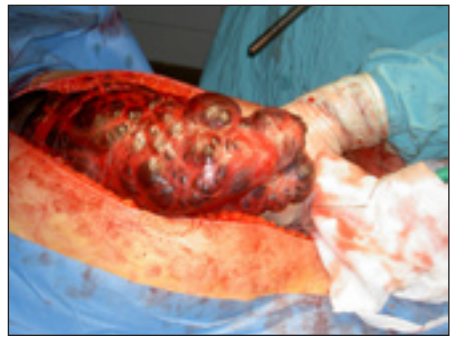
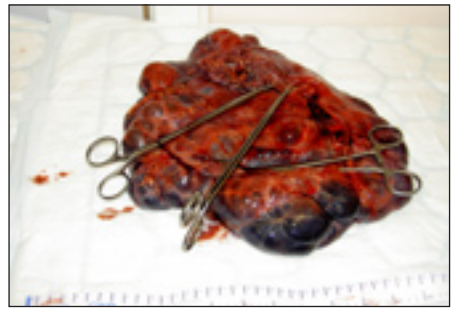


Figure 4. Multilocular cysts, measured 35x25 cm with haemoserous fluid inside.



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Case Report

A 16-year-old man, who was previously fit and well, presented as an emergency with a 2-day history of abdominal distension. Clinical examination showed a diffusely distended non-tender abdomen dull to percussion.

Plain abdominal X-ray (*Figure 1*) showed no gas shadows on the right side of the abdomen, suggesting displacement of the intestine to the left side. Abdominal computed tomography scan (*Figure 2*) showed an enormous, multilocular fluid-filled mass lesion occupying most of the peritoneal cavity and measuring about 152 x 259 x 384 mm with no evidence of a solid component. The intestine was shifted to the left of the abdomen. There was evidence of compression of the retroperitoneal structures, in particular the renal vessels.

Laparotomy and resection of this lesion was undertaken following mobilization of the lesion and division of the feeding vessels. Following excision of the lesion, a large defect in the mesentery of the ascending colon was found on the right side of the superior mesenteric vessels. The lesion contained haemoserous fluid (*Figures 3* and *4*).

Histological examination of the lesion showed that the multicystic mass was partly lined by a single layer of flattened attenuated cells, fibrous tissue and histiocytes with foreign body-type giant cell reaction associated with cholesterol-like clefts. The fluid in the cyst lumen contained inflammatory cells, red blood cells, proteinaceous fluid and fibrin. The overall histological appearance, supported by immunohistochemistry, favoured the diagnosis of multilocular cystic lymphangioma.

The patient made a good postoperative recovery and was discharged. He underwent surveillance computed tomography scan 6 months following surgery and a surveillance ultrasound scan 12 months following surgery and no evidence of recurrence was found. Further surveillance was planned with clinical review and abdominal ultrasound scans every 6 months for the next 2 years and annually thereafter.

dilated lymphatic vessels and lymphoid stroma, and has a connection with spaces of various normal adjacent lymphatics. The cystic type consists of lymphatic spaces of various sizes that contain fascicles of smooth muscle and collagen bundles, but have no connection with adjacent normal lymphatics (Rieker et al, 2000).

Mesenteric lymphangiomas are usually asymptomatic until they enlarge. Abdominal pain and distension are the most common symptoms. Incidental discovery is also common. Pressure symptoms to adjacent structures and complications such as haemorrhage, infection and torsion of the cyst may also be the presenting pattern (Hanagiri et al, 1992).

The optimal treatment is radical excision (Hanagiri et al, 1992). Incomplete excision of the lesion may result in local recurrence. Although the risk of recurrence after complete excision of the lesion is very small clinical follow up with imaging surveillance in the form of computed tomography or ultrasound scanning is recommended. As these lesions are uncommon it is difficult to establish the appropriate frequency and duration of surveillance following excision. **BJHM**

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Hardin WJ, Hardy JD (1970) Mesenteric cysts. *Am J Surg* **119**: 640–5

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