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Images in medicine

Abdominal lymphangioma

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Introduction

Lymphangiomas are benign vascular lesions with lymphatic differentiation.^{1,2} Abdomen is an uncommon site of occurrence.² However, the space available permits lymphangiomas to attain huge sizes whilst causing minimal symptoms.³ Classical images of a giant abdominal lymphangioma are shared along with a synopsis of the topic.

Case Report

A 20-year-old female patient presented with pain in central abdomen of 15 days duration, with fatigue. Examination revealed pallor and 15 cm × 15 cm, partially mobile lump occupying

central and lower abdomen. Laboratory investigations were normal, except low hemoglobin (7.4 gm%). Ultrasonography showed an irregularly septated cystic lesion within the abdominal cavity. Computerized tomography showed a large well-defined hypoattenuating nonenhancing multiloculated mass epicentered in the mesentery, displacing bowel loops peripherally. The images were classically characteristic of lymphangioma (Figs. 1–3). Fine-needle aspiration revealed reddish brown fluid suggesting bleed into lymphangioma, explaining patient's anemia. Laparotomy revealed giant lymphangioma, partly retroperitoneal and partly intraperitoneal, occupying right and transverse colonic mesentery. It had insinuated into root of transverse mesocolon till origin of middle colic vessels and was inseparably adhered to hepatic flexure necessitating small segmental excision of colon along with it (Figs. 4 and 5). Histopathology showed ecstasic spaces lined by endothelial cells and surrounded by fibroadipose tissue with lymphoid aggregates/germinal centers, confirming the diagnosis (Fig. 6). The patient is well on a year's follow-up without recurrence.

Discussion

Sequestration of lymphatics from the lymphatic system during development leads to formation of lymphangiomas, which are either capillary, cavernous, or cystic, as in our case.^{1,2} Although, common in neck (75%)/axilla (20%), which present in childhood, 5% are abdominal, which manifest in adults.^{1,2}

Four varieties of abdominal lymphangiomas are known³: I – pedicled, which are brought to attention by torsion;

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Fig. 1 – Ultrasonography picture showing a cystic lesion within the abdominal cavity, and showing irregular septations within.

Fig. 2 – Computerized tomogram in arterial phase showing a large well-defined hypoattenuating nonenhancing multiloculated mass epicentered in the mesentery, displacing bowel loops peripherally.

Fig. 3 – Computerized tomogram in delayed phase showing the lymphangioma.

Fig. 4 – Peroperative photo showing the lymphangioma and its relations. SMV, superior mesenteric vein.

Fig. 5 – Lymphangioma seen in the ileo-colic mesentery.

Fig. 6 – Photomicrograph showing ectatic spaces lined by endothelial cells and surrounded by fibroadipose tissue with lymphoid aggregate. (Hematoxylin-eosin, original magnification $\times 100$).

II – sessile, frequently sandwiched between leaves of mesentery; III – retroperitoneal; and IV – multicentric, which may involve organs, both intra- and retroperitoneal. Our case was a combination of types II and III. Obviously, the lymphangiomas do not feel obliged to conform to the compartmentalization convenient to human mind.

Most cystic lymphangiomas are asymptomatic, and hence, reach large sizes.³ However, they may come to attention either by abdominal discomfort and palpable lump or by any complication that may occur in it, such as bleed/infection/rupture or be caused by its effect on adjacent organs, such as volvulus/obstruction.¹⁻⁴ Our case had anemia due to multiple hemorrhages into the cyst, as evidenced by the aspirated fluid, which also lead to abdominal pain. Some may even present with clotting abnormalities due to consumption coagulopathy.

Imaging of lymphangiomas are classical.^{1,2} On ultrasonography, lymphangiomas appear mostly as multiloculated anechoic cysts or cysts with echogenic debris in minority. On CT, lymphangiomas appear as thin walled, multiseptated large cystic masses, which have varying attenuation. The fluid is often homogeneous and of low attenuation; negative attenuation when the fluid is chylous; and high attenuation when the fluid is hemorrhagic – where it may mimic solid mass. Lymphangiomas do not conform to compartments and frequently cross them. Minority shows wall calcification. The

mass is often seen to displace or compress adjacent organ/hollow viscus.

Cystic lesions, such as, liquefying hematoma, pseudocyst, duplication/ovarian/urogenital/hydatid cysts, and cystic mesothelioma/teratomas/metastases are some of the conditions that need consideration and exclusion.³

The treatment is excision, either open or laparoscopic.¹⁻⁴ Drainage and sclerotherapy are employed in select cases where excision is not possible/desirable.¹⁻⁴ The extensive insinuation of lymphangioma into mesentery especially along major vessels, as in our case, makes the dissection without collateral damage challenging.⁴ Resection of gut is necessary, occasionally, for comprehensive removal.⁴ The prognosis is excellent when excision is complete.¹⁻⁴

Conflicts of interest

The authors have none to declare.

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