Laparoscopic Diagnosis of Adult Retroperitoneal Cystic Lymphangioma.

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Citation

S Zachariah. *Laparoscopic Diagnosis of Adult Retroperitoneal Cystic Lymphangioma.*. The Internet Journal of Surgery. 2009 Volume 23 Number 2.

Abstract

Retroperitoneal cystic lymphangiomas are rare benign tumours of the lymphatic system, most often seen in children and rarely in adults. Although various imaging modalities have been described, accurate preoperative diagnosis is often difficult. Here we report a rare case of retroperitoneal lymphangioma in a 62-year-old male which was confirmed at laparoscopy. The lymphangioma was excised intact. Diagnostic laparoscopy can be a useful pre-operative method to identify abdominal cystic lymphangiomas. Transillumination test and laparoscopic cushion test seem to be useful to identify cystic lymphangiomas during laparoscopy.

INTRODUCTION

Retroperitoneal cystic lymphangiomas are rare, benign mesodermal tumours arising from the retroperitoneal lymphatics and are rarer than abdominal lymphangiomas of mesenteric origin[1]. More than 95% of the lymphangiomas are situated in the head, neck, axilla and extremities[2]. Other sites of occurrence including the abdomen constitute only 5% of cases[3]. Retroperitoneal lymphangiomas account for approximately 1% of all lymphangiomas[4]. Nearly one-third of mesenteric cysts occur in children younger than 15 years of age and one-fourth occur in patients younger than ten years of age[5, 6]. A case of adult retroperitoneal cystic lymphangioma which was diagnosed by laparoscopy is presented here.

CASE REPORT

A 62-year-old male presented with complaints of vague abdominal pain, postprandial fullness, and bloating of 6 months duration. He was treated elsewhere as a case of acid peptic disease but had no significant relief of symptoms. An upper gastrointestinal endoscopy done at our facility was normal. Laboratory investigations were within normal limits. Ultrasonography revealed an isolated thin-walled unilocular lesion with clear fluid measuring 14 by 8 by 6cm in the left lumbar region suggestive of a retroperitoneal lymph cyst. The pancreas and the kidneys appeared normal. A CT scan was suggested but the patient was unable to afford it, hence a diagnostic laparoscopy was performed. Pneumoperitoneum was created by open technique and a 30-degree 10mm telescope was used. An additional 5mm port was placed in the right iliac fossa for the grasper tool. Laparoscopy showed a large thin-walled cyst with smooth surface, and straw-coloured clear fluid was observed through the wall. These findings suggested benign aetiology, and seemed to be characteristic of cystic lymphangioma. The cyst was seen arising retroperitoneally and displacing the adjacent small bowel. The lesion transilluminated well with the scope light and was soft to touch with the forceps. Owing to its position and anticipated difficulty in excising it without rupturing it, the procedure was converted to a laparotomy. The laparoscopic light source was used to transilluminate the cyst and correctly delineate the cyst margin. The entire lesion was excised intact (figures 1, 2, 3). The histopathology report was consistent with cystic lymphangioma.

Figure 1

Figure 1: The retroperitoneal cystic lymphangioma is being well transilluminated by the laparoscopy light source.

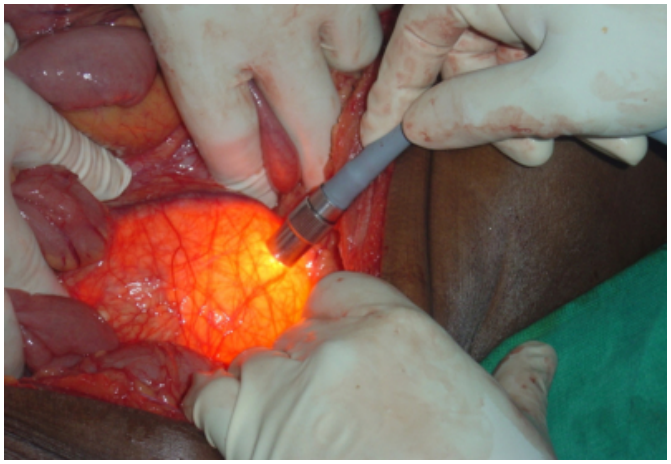


Figure 2

Figure 2: Dissection of the cyst in progress; the margins are well appreciated by transillumination technique.

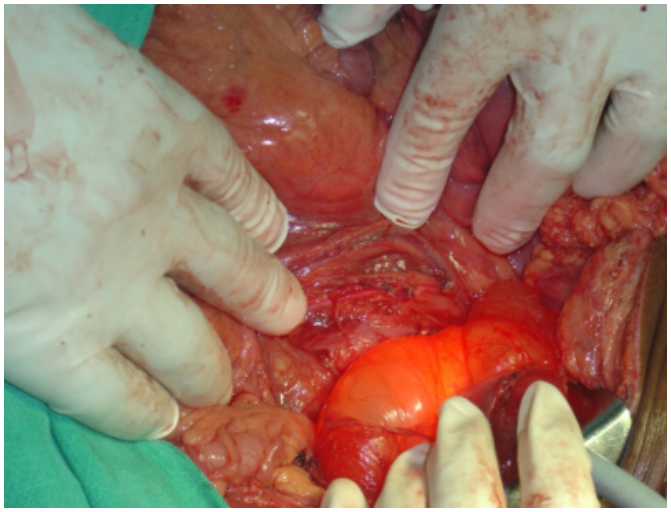
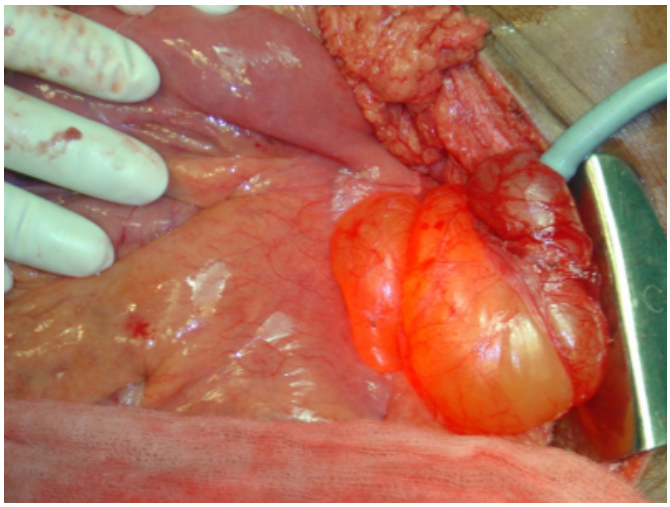


Figure 3

Figure 3: The cyst excised in toto



DISCUSSION

Retroperitoneal cystic lymphangiomas are rare benign tumours of the lymphatic system, most often seen in children and rarely in adults. There are two schools of thought as far as the etiopathogenesis is concerned. The first believes this to be an acquired condition, consequential from obstruction of chylous vessels due to inflammation, trauma or degeneration[7]. The second supports the theory of congenital maldevelopment where lymphangiectasis occurs from the failure to establish a patent communication with the lymphatic system[8]. Lymphangiomas have been classified into three types: capillary, cavernous and cystic, depending on the size of the lymphatic spaces.

Clinical presentation is diverse and can range from an incidentally-discovered abdominal mass to symptoms due to complications. The symptoms include vague abdominal pain and sense of heaviness along with fever, fatigue, and weight loss[7,8]. First presentation in adulthood is rare, and lymphangioma usually presents incidentally in later life, slowly enlarging and remaining asymptomatic for a long period

Accurate preoperative diagnosis of lymphangiomas is often difficult. Various imaging modalities described include plain abdominal radiographs, ultrasonography, CT and MRI[9]. The differential diagnosis includes cystic pancreatic tumours and pseudocysts, liposarcoma, leiomyosarcoma, fibrosarcoma, haematoma, abscess and lymphoceles from previous interventions. Image-guided biopsy of the lesion is frequently difficult and rarely attempted due to the location of the tumours. The typical sonographic appearance of lymphangioma is a sharply marginated, unilocular or

multilocular cystic mass, as seen in our case. In this case a diagnostic laparoscopy was performed which helped confirm the diagnosis of retroperitoneal lymph cyst. Laparoscopy has been documented as a safe and effective diagnostic as well as therapeutic tool for treating intrabdominal cystic lymphangiomas[10]. Characteristic laparoscopic findings described are 1) lymph vascular dilatation filled with lymph disseminated on the serosal surface, 2) light-permeability and translucency and 3) soft touch when compressed with forceps known as laparoscopic cushion sign[11].

Total surgical excision is recommended to avoid complications such as super-infection, further growth, rupture or bleeding. Excellent prognosis is achieved by complete resection. If not excised completely, the intra-abdominal cystic lymphangioma has a 10% postoperative recurrence rate[12].

CONCLUSION

Laparoscopy can be a convenient tool to diagnose rare tumours such as retroperitoneal and intrabdominal cystic lymphangiomas and can serve as a useful adjunct to presently available radiological investigations. Transillumination using the laparoscopic light source can help visualise the cyst better during surgery. Transillumination test and laparoscopic cushion test seem to be useful to identify cystic lymphangiomas during laparoscopy.

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