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CASE REPORT

Rare Retroperitoneal Cystic Lesions Causing Diagnostic Dilemma – A Case Series

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Abstract

Retroperitoneal cystic tumours often cause a diagnostic dilemma and present several clinical challenges because of their rarity, relative late presentation, anatomical location, close relationship with several vital structures in the retroperitoneal space and the surgical expertise required for the management. We present three challenging retroperitoneal cystic space occupying lesions – hydatid cyst, dermoid cyst, and cystic lymphangioma. All 3 cases underwent surgery after initial diagnostic difficulty and had smooth postoperative recovery. Retroperitoneal cyst needs surgical expertise for complete excision which is often difficult due to neighbouring important vital anatomical structures.

Key words: Hydatid cyst, Dermoid cyst, Mesothelial cyst, Retroperitoneum

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Introduction

Retroperitoneal cystic lesions are a rare occurrence and often causes a diagnostic challenge for the clinicians. Since its usually not seen often in the clinical medicine, Cystic lesions of the retroperitoneum donot have any fixed classification. They are classified as either neoplastic or nonneoplastic. The most common neoplastic space occupying retroperitoneal cystic masses are cystic lymphangioma and cystic mesothelioma [1]. Other malignant cystic tumours are mucinous cystadenoma, cystic teratoma, Müllerian cyst, epidermoid cyst, tailgut cyst, bronchogenic cyst, cystic change in solid neoplasms, pseudomyxoma retroperitonei, and perianal mucinous carcinoma. Nonneoplastic lesions include primarily retroperitoneal fibrosis, non-Langerhans histiocytosis (Erdheim-Chester disease), extramedullary haematopoiesis, pancreatic pseudocyst, nonpancreatic pseudocyst, lymphocele, mesenteric cyst, urinoma, and hematoma [2].

We present 3 cases of retroperitoneal cystic lesions which underwent surgery after a lot of diagnostic dilemmas.

Case 1

40-year-old male patient presented with left low back ache of 6 months duration. Ultrasound abdomen revealed a space occupying hypoechoic lesion of 6cmX6cm with internal hyperechoic undulating membrane with close proximity to the left psoas muscle in the retroperitoneum. CT scan of the lower abdomen was inconclusive, and a

provisional diagnosis of hydatid cyst was made, and the patient was posted for surgery (Figure 1). On performing a laparotomy through a left lumbar extraperitoneal approach, a 6cmX8cm dermoid cyst seen attached with the L3 and L4 vertebra. The cyst contained cheesy material with hairs. Excision of the entire cyst done, and the cyst wall was sent for histopathology (Figure 2).



Figure 1. CT scan showing suspected dermoid cyst attached to the left psoas muscle.

Case 2

36-year-old male patient presented with occasional back pain with a vague swelling in the right lower back. Both ultrasound and the CT scan of lumbar region revealed hydatid cyst with thick encasing wall within the substance of the

right erector spinae muscle in the retroperitoneum (Figure 3). The patient underwent excision of the hydatid cyst with the extraperitoneal approach with a smooth postoperative recovery.

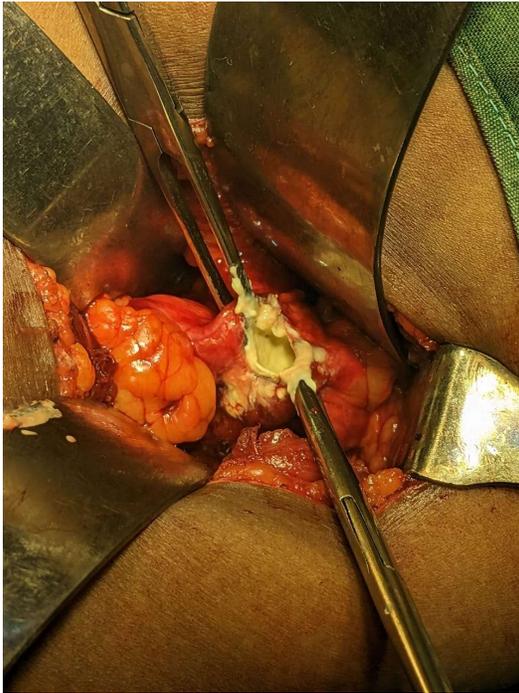


Figure 2- Intraoperative finding of dermoid cyst retroperitoneum

Case 3

A 62-year-old lady patient presented with pain in the lumbar region. Ultrasound diagnosis revealed a space occupying lesion of 3cmX3cm with provisional diagnosis of a cystic neoplasm. CT scan abdomen revealed a cystic lymphangioma with multilocular cystic mass with enhancing septations and lobulations in the psoas muscle (Figure 4). The patient underwent surgery with complete excision of the lymphangioma with a smooth postoperative recovery.

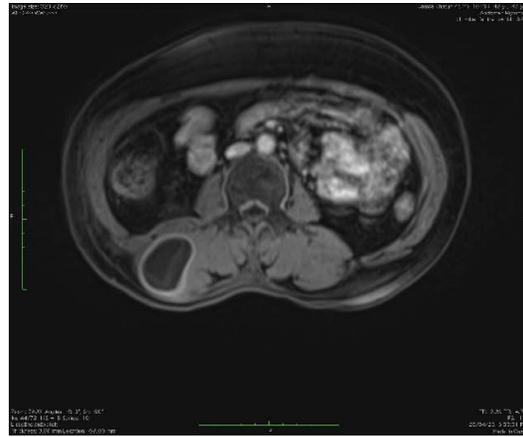


Figure 3. CT scan showing hydatid cyst of retroperitoneum.

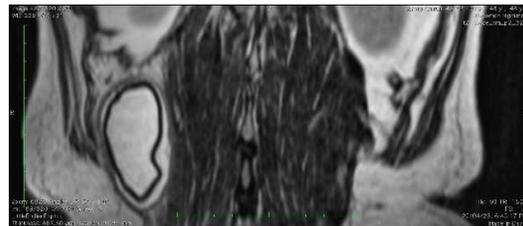


Figure 4. CT scan showing cystic lymphangioma retroperitoneum

Discussion

The reason for making this case series is to highlight the fact that usually the retroperitoneal cystic lesions are rare clinical entity and differentiating cystic retroperitoneal space occupying lesions from other cystic growths by imaging studies alone is often inconclusive and confusing and surgery is most frequently required for definitive diagnosis and to ameliorate the symptoms. A completely curative excision the retroperitoneal lesion even if it is seen to encase major vessels is possible with surgical expertise [3]. The differential diagnosis that these retroperitoneal cystic tumors often give rise to is being reported as ovarian tumours in radiology and ovarian cyst has the almost

similar ultrasound findings and clinical symptoms [4]. These tumours are also reported late or in the advance stages due to late clinical presentation and inaccessible clinical position. The surgical management should aim for complete excision in most of the retroperitoneal tumors. Few of the malignant retroperitoneal tumors like the liposarcomas, leiomyosarcomas, or Malignant Fibrous Histiocytomas require wide clear resection margins to allow local control of the disease. The factors affecting complete margin-negative surgical resection include tumor biology, invasion of adjacent structures, surgical management in high-volume centers and last but not the least is the expertise of the surgeon. The surgical skill is of paramount importance in the management of retroperitoneal lesions as surgeons should have a sound knowledge of the anatomy of the retroperitoneal space to avoid injury to the adjacent visceral, vascular, and nervous structures, resulting in intraoperative or postoperative

complications like haemorrhage and neurological complications. If a case is confirmed as benign retroperitoneal tumor, it can be treated conservatively with frequent radiological surveillance if the patient is asymptomatic.

In conclusion, every retroperitoneal cystic lesion of abdomen should be treated with utmost care with a high level of clinical suspicion. Every case of retroperitoneal cystic lesion invariably poses a diagnostic challenge and the clinical decision-making is of paramount importance for the management.

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Authorship and contribution disclosure

Conceptualization – Kaushik, Kiratpal, Sharad; Data curation – Jashanpreet, Mahesh, Diwaker; Formal analysis – Kaushik, Ghaiyoor; Methodology – Mahesh Kiratpal, Joe; Validation – Kaushik, Sharad, Mahesh; Writing, reviewing and Editing – Kaushik, Mahesh

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