

Case Report

Report on an Idiopathic Primary Retroperitoneal Cyst

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Article information

Accepted: March 6th, 2025; Published: March 31st, 2025

Cite this article

Al-Mulla AE, Al-Tabeeh A Al-Huzaim R, Elayouty KA. Idiopathic primary retroperitoneal cyst: A case report. *Surg Res Open J.* 2025; 10(1): 1-4.

ABSTRACT

Retroperitoneal cysts are rare; they are divided into neoplastic and non-neoplastic cyst. Incidences are 1 in 5750 to 1 in 250,000. They are often asymptomatic. Lymphangioma are benign cyst whereas 95% of them are found in the neck and axilla only 1% is in the abdomen. This is a case report describing the course of management for a 30-year-old male who presented to our outpatient clinic with abdominal discomfort due to retroperitoneal cyst.

Keywords

Retroperitoneal Cyst; Ultrasound; Histopathology.

INTRODUCTION

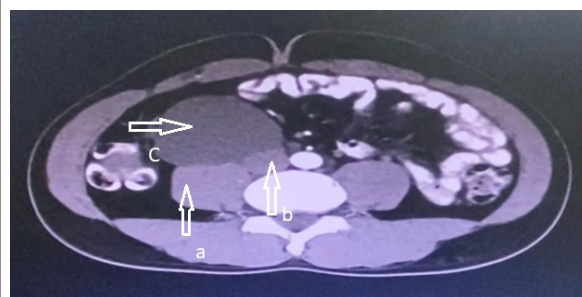
A retroperitoneal cyst is uncommon, most of the time they are discovered incidentally. Incidences are 1 in 5750 to 1 in 250,000,¹ they can be divided into benign or neoplastic cysts. Approximately, one third of patients are asymptomatic, and they are routinely discovered during a regular abdominal examination, sonography, or other imaging such as computer tomography scan (CT-scan) and magnetic resonance imaging (MRI).² However, sometimes they grow into considerable sizes causing pressure symptoms. An idiopathic retroperitoneal cyst may originate from kidneys, ureters, pancreas, muscles, lymphatic's, and meso-colic.³ This is a case report describing the course of management in 30-year-old male presented with abdominal discomfort due to retroperitoneal cyst to our outpatient department.

CASE PRESENTATION

A 30-years-old male presented to surgical outpatient department, complaining of 3-months history of abdominal heaviness and discomfort. He had no previous medical or surgical history. He had normal appetite, with no weight loss nor abdominal symptoms. Upon examination vitally stable P. 78 bpm, BP 130/80 mmHg, Temperature 37.0 °C. Abdominal examination showed fullness at the right Iliac Fossa with mild tenderness.

Ultrasound was done showed a 2 cm retroperitoneal mass at the right iliac fossa; thus, a CT-scan was ordered to evaluate the nature of the ultrasound finding. CT-scans showed ovoid cystic lesion located mainly at the right lumbar region, it was anterior to the distal inferior vena cava (IVC), adherent to the ascending colon and right psoas muscle (Figure 1), it exerts a mass effect on the surrounding structures and stretching of the blood vessels without local invasion (Figure 2), it measures about 5.6×6.1×7 cm. Impression a benign retroperitoneal cystic lesion.

Figure 1. Transverse View CT-Abdomen with IV and Oral Contrast, Showing the Location of the Cyst Near



a. Right psoas muscle. b. Inferior vena cava. c. Retroperitoneal cyst.

Figure 2. Coronal View of the Retroperitoneal Cyst, Stretching the Ascending Colon and Vessels



Pre-Operative Evaluation

He was admitted for an elective surgery, the appropriate investigations were order and pre-operative antibiotics were administered for the patient.

Intra-Operative

A mid-line incision was done. The retroperitoneal mass was obvious at right iliac fossa region, with right ureter passing anteriorly. Mobilization of the right colon towards the midline (Cat tell-Braas-

Figure 3. Intra-Operative Finding of the Retroperitoneal Cyst and the Right Ureter Passing Anteriorly

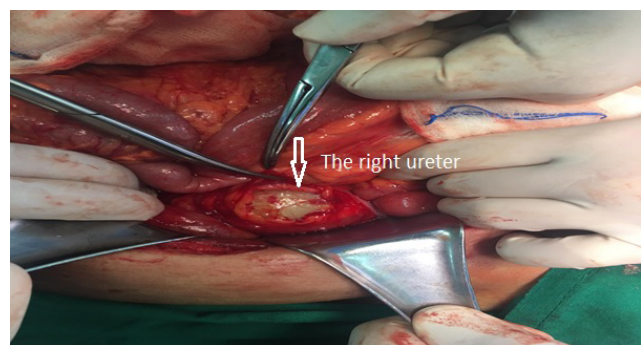


Figure 4. Delivering the Retroperitoneal Cyst



ch manœuvre), exposing the retroperitoneal mass, and carefully separating it from the right ureter, right psoas muscle and IVC. The retroperitoneal cyst was removed completely (Figures 3 to 6).

Figure 5. Retroperitoneal Cyst Bed Clear of Any Remint

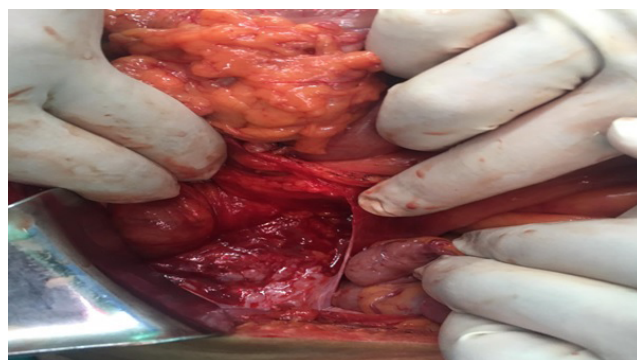
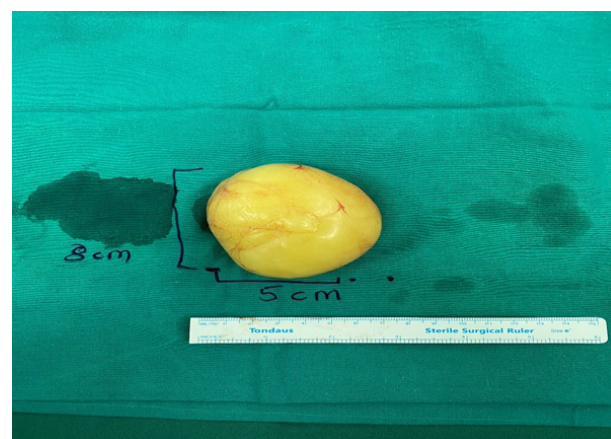


Figure 6. Retroperitoneal Cyst Removed Completely



Post-Operative Follow-up

Patient stayed four days in the ward due to post-operative ileus which was treated, conservatively later discharged home to be followed in surgical outpatient department after fourteen days. On first visit, he was doing well, no complaint and normal bowel habit and appetite, examination wound was clean. Histopathology result showed grossly well-circumscribed soft pale-yellow cystic mass measures about 7×6×5 cm cut section yield a thin creamy-yellowish fluid, no solid areas or papillae were seen. Microscopically it consists of loose fibrous connective tissue with few dispersed aggregates lymphocytes and some mononuclear cells, On immunostaining it showed lymphatic/chylous origin. Impression Retroperitoneal benign cyst.

DISCUSSION

Retroperitoneal cystic lesions are uncommon presentation. They are divided into neoplastic and non-neoplastic cystic lesion. Neoplastic lesions include cystic lymphangioma, mucinous cysto-ad-

enoma, cystic teratoma, cystic mesothelioma, mullerian cyst, epidermoid cyst, tailgut cyst, bronchogenic cyst, pseudomyxoma retroperitoneal, and perianal mucinous carcinoma. non-neoplastic cysts are pancreatic pseudocyst, non-pancreatic pseudocyst, lymphocele, urinoma, and hematoma.⁴ Based on the previous histological it appears that the patient had a benign lymphangioma.

Although idiopathic lymphocele cysts are thought to be of unknown aetiology, 12-24% of patients with a radical lymphadenectomy, or renal transplant may develop lymphangioma.⁴ It is also suggested to be congenital rather than acquired tumours. After birth they may become markedly enlarge due to the collection of fluid and the holding of the space. They have no gender preference and occur in more during childhood rather than adulthood. 95% of lymphangioma are in the head, neck, and axilla, only 1% are discovered in abdominal retroperitoneum.^{5,6}

Lymphatic cysts are subdivided into those formed in the lymphatics returning from the intestine and known as chylous cysts, and those arising in the lymphatic field behind the peritoneum and not connected with the intestine and are analogous in their origin, to the single cystic lymphangioma seen in the head and neck.³ They are unilocular or multilocular cysts containing clear or milky fluid and lined with a single layer of flattened endothelium. One third of patients are asymptomatic, but cysts with considerable size may cause local compressing affect leading to stretching of vessels, adjacent organs, oedema, and subsequent thromboembolic complications.^{7,8}

Diagnosis of retroperitoneal cyst is challenging they are often diagnosed by chance in CT-scan or MRI, the most characteristics is large tumour containing uncomplicated fluid with or without septa. In CT-scan they appear large and thin walled in MRI usually demonstrate signal changes of fluid filled cyst.⁹

Surgical excision is the treatment of choice, it is important to remove the cyst completely to prevent recurrence. When treating the large retroperitoneal cyst, laparotomy is the best choice, allowing better access preventing spillage and having to leave part of the cyst behind. Minimal invasive procedure also has a similar outcome; however larger cysts had to be aspirated prior to removal allowing better excision and permit mobilization. This has been described by Yagihashi et al⁹ they suggested using a normal aspiration needle may allow spillage, thus they developed a new with a designed double balloon catheter (SAND) for aspiration to minimize cyst constant into the retroperitoneal cavity. This balloon was developed for benign ovarian cysts.¹⁰ Another method was mentioned is an extraperitoneal approach, it prevents blood loss and leads to a quicker recovery, this was described in a retrospective analysis of eight patient over with hydronephrosis due to lymphatic cysts, upon which all patients underwent successful operations, with no reported recurrence.¹¹

CONCLUSION

Idiopathic cysts which arise from the retroperitoneal compartment are rare; they are often asymptomatic, however with overgrowth they may present with obstructive symptoms. They are difficult to

predict or detect pre-operatively; thus, they are found in routine ultrasound, CT-scans, or MRI. Surgical excision is the main choice of treatment, several approaches were described in the literature and successful result were obtained.

CONSENT

The authors have received written informed consent from the patient

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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