

Benign retroperitoneal cyst – important differential diagnosis of retroperitoneal mass

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Received: 2023-01-07.

Accepted: 2023-05-10



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J Clin Med Kaz 2023; 20(3):112-114

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Abstract

Retroperitoneal cyst is very rare clinical condition having incidence 1:5750 to 1:250,000. Most of the retroperitoneal lesions are asymptomatic.

We are presenting a case of retroperitoneal cyst in a 65 years old female patient who presented with vague pressure symptoms. Exploratory laparotomy was performed. A large cystic right lumbar retroperitoneal mass displacing overstretched inferior vena cava, abdominal aorta and right psoas muscle seen intraoperative. Intact retroperitoneal cyst filled with its contents was removed.

Large lesion as in our study cause abdominal pain, mass effect on kidney and major vessel consistent. We excised cyst in totocyst preserving vital structure to prevent spillage and avoid further recurrence which is consistent with standard literature.

Retroperitoneal cysts are rare in incidence and asymptomatic. Due to silent nature and critical anatomy multidisciplinary approach is must for management of retroperitoneal cyst.

Key words: benign retroperitoneal cyst, retroperitoneal mass, benign cyst, case report

Introduction

Retroperitoneal cyst is very rare clinical condition having incidence varying from 1:5750 to 1:250,000 [1]. Large retroperitoneal mass may cause pressure symptoms on organs like duodenum, colon, kidneys, aorta, lymphatic or cause renal failure due to ureteric obstruction. Retroperitoneal cyst have embryonic origin, may result from trauma, parasitic infection or arise from lymphatic cell inclusion or inherited genetically like Noonan syndrome or trisomy 21 in cystic lymphangioma. Retroperitoneal mass can be unilocular (epidermoid cyst, mucinous cystadenoma) or multilocular (pseudomyxomas, cystic mesotheloma, perianal mucinous carcinoma) [2,3,4]. On computed tomography scan abdomen, well circumscribed mass containing fluid, adipose tissue and calcification is seen in cystic teratoma, single spot or curvilinear calcification in pseudomyxoma retroperitonei [5], multiloculated cyst lesion with septal calcification in perianal mucinous carcinoma and wall calcification in cystic lymphangioma. We are presenting a case of retroperitoneal cyst in a 65 years old female patient presented with vague pressure symptoms.

Case presentation

A 65 year old female presented with complaint of vague abdominal discomfort, early satiety, and easy fatigability of 3 year duration. She had no other relevant positive history.

On Examination: Patient was vitally stable. On per abdomen examination: vague retroperitoneal mass extending from right hypochondrium to right lumbar region was palpable. Superiorly mass extended below the right costal margin separate from liver. The percussion note was tympanic.

Contrast enhanced computer tomography (CECT) of abdomen showed cystic mass of 12X10X14 cm occupying right retroperitoneal space extending behind duodenum to right lateral side of Aorta. The lesion had non enhancing thin wall without any solid component. The lesion displaced inferior vena cava anteromedially, with anterior displacement of duodenum and uncinate part of pancreas. It abutted the right psoas muscle but maintained its planes with the muscle. No intraosseous extension seen. Impression was suggestive of benign retroperitoneal cyst.

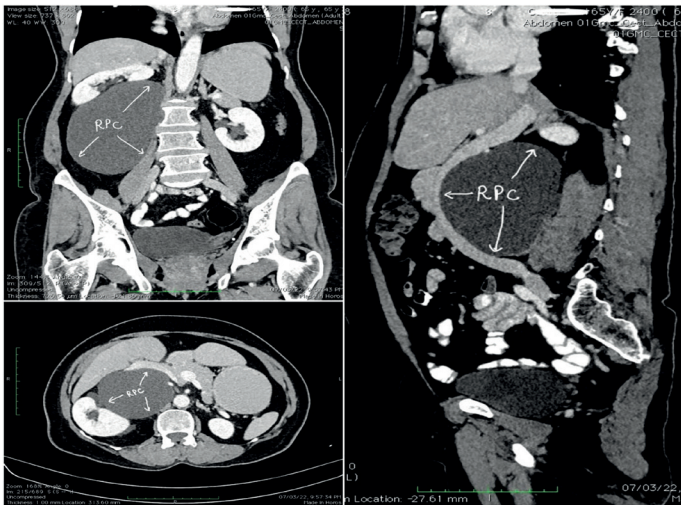


Figure 1 - CECT (Contrast Enhanced Computer Tomography) Abdomen [coronal view (upper left), axial view (lower left), sagittal view (right)] showing right retroperitoneal mass in right lumbar region displacing right kidney displacing abdominal aorta and inferior vena cava.

Operative procedure

Exploratory laparotomy was performed by chevron roof top incision. A large cystic retroperitoneal mass noticed in right lumbar region the peritoneal organs in the right hypochondriac and right lumbar regions. Catell–Braasch maneuver was performed to expose retroperitoneal area. Careful dissection done to separate the cyst from displaced and overstretched inferior vena cava, abdominal aorta and right psoas muscle. Intact retroperitoneal cyst filled with its contents was removed.

Intraoperative finding:

- 15x10x15 cm retroperitoneal cystic mass occupying right retroperitoneal space pushing the right kidney and the right ureter along the lateral abdominal wall, stretching inferior vena cava, duodenum and hepatic flexure antero-medially.
- Posteriorly mass was densely adherent to the right psoas muscle, anterior surface of vertebral column and right lateral surface of abdominal aorta.
- Excised cyst contain straw colored fluid and inner layer of cyst studded with fine granules.

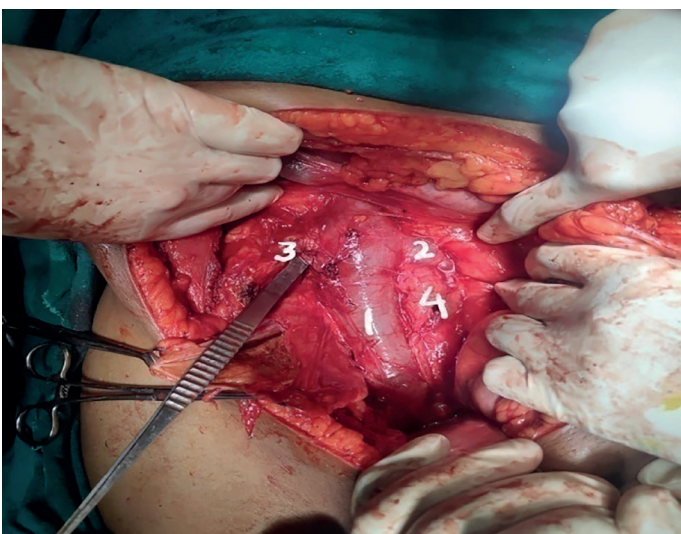


Figure 2 - Intraoperative finding after dissecting of retroperitoneal cyst from surrounding structures (1- inferior vena cava, 2- left renal vein, 3- right renal vein, 4- Aorta).

Histopathological examination: retroperitoneal benign cyst

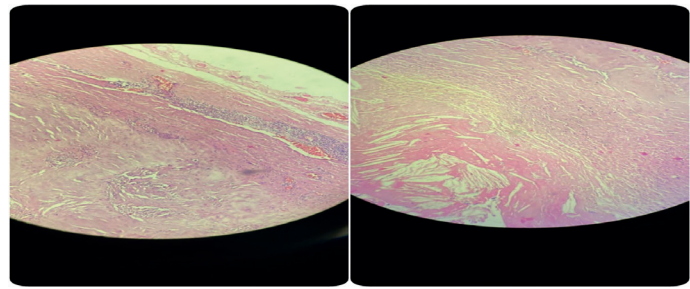


Figure 3 - 5x microscopic image (right) & 40x microscopic image (left)

Postoperative follow-up: Patient tolerated the procedure well. Post-operative period went uneventful and discharged in satisfactory condition after 10 days.

Discussion

Retro peritoneum cystic mass varied from neoplastic lesion to non-neoplastic cyst [6]. Most of the retroperitoneal lesions are asymptomatic [7]. Large lesion as in our study cause abdominal pain, mass effect on kidney and major vessel consistent with finding mentioned in standard data.

Retroperitoneal mass can occur at any age but mainly involve adult population. cyst mesothelioma, presacral tailgut cyst occur in middle age women [8], paraganglioma in third to fifth decade female, perianal mucinous carcinoma found in middle aged male where cystic lymphangioma more common in <2 year male child. Radiologically imaging techniques such as CECT and MRI help to diagnose stage and guide the further management of retroperitoneal mass [9]. Retroperitoneal cystic lesion can be treated by percutaneous interventional drainage where surgical excision considered as treatment of choice. Recurrence of this cyst (up to maximum 25%) depends upon on type, nature and amount of excision of cyst. We excised cyst in toto cyst preserving vital structure to prevent spillage and avoid further recurrence which is consistent with the standard literature.

Conclusion

Retroperitoneal cysts are rare in incidence and asymptomatic. Due to silent nature and critical anatomy detail study of retroperitoneal mass is very important. Multidisciplinary approach involving surgeon, radiologist, pathologist is must for appropriate diagnosis and management of retroperitoneal cyst.

Disclosures: There is no conflict of interest for all authors.

Acknowledgements: None.

Funding: None.

Patient informed consent: Obtained.

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