

## A RARE CASE OF PRIMARY RETROPERITONEAL CYST

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### ABSTRACT

The Retroperitoneal cysts are very rare, and most of the time they are discovered incidentally. Retroperitoneal cysts are uncommon, with an estimated incidence of 1 in 250,000. A Forty year old female presented with complaints of pain for six months with history of loss of appetite and history of weight loss. She was a known Diabetes mellitus and Bronchial asthma on treatment. Per abdomen examination revealed soft, tender without any mass palpable in the right lower abdomen. All basic investigations were normal. Ultrasonographam (USG) revealed 5×3.6 centimetres sized mesenteric cyst. Contrast enhanced computerised tomography (CECT) abdomen showed ileocaecal mass and mesenteric cyst. But colonoscopy study was normal. Carcinoembryonic antigen (CEA) and Cancer antigen (CA) 125 were within normal limits. So proceeded to laparotomy where a separate cyst of size 8×7 centimetres arise from retroperitoneal wall and a separate left chocolate ovarian cyst found. Otherwise normal large and small bowel excision of both cysts done. Histopathological examination revealed simple cyst with mucous lining without any anatomical structure origin. Post operative period was uneventful .patient is on regular follow up. This case is being presented for its rarity.

**Keywords:** Mesenteric Cyst, Retroperitoneal Cyst, Ovarian Cyst, Ileocaecal

### CASES

**Clinical History:** A 40 year old female Presented with right lower abdominal pain on and off for 6 months duration with history of loss of appetite and loss of weight for 6 months .There was no history of altered bladder and bowel habits. She was a Known Diabetes mellitus and Bronchial asthma on regular treatment. There was no history of previous exposure to Tuberculosis or any anti tuberculosis treatment .the puerperal sterilisation (PS) surgery done 12 years back. She has regular cycles of menstruation.

**Clinical Examination:** Patient was conscious and oriented without fever. She was not pallor and jaundiced. There was no superficial significant lymphadenopathy. On vital examination - Pulse rate was 82 per minute and Blood pressure (BP)-110/80 millimetres of mercury. The respiratory rate was 14 per minute. The abdominal examination revealed tenderness in the right lower abdomen with no palpable organomegaly or mass. There was no evidence of free fluid in the abdomen. Per vaginal and digital rectal examination were normal.

**Investigations:** CBC(complete blood count)- Hb(haemoglobin)-12.6 g/dl, TC(total count)-10000 cells/cumm, DC(differential count)- Neutrophil- 68 %, Lymphocytes-24%, Basophil-2%,ESR(Erythrocyte sedimentation rate)-23mm/hr Renal function test- Urea- 26.6 mg/dl, Creatinine-0.8 mg/dl, Sodium-134 mEq/dl, potassium-4.2 Meq/dl, Chloride -101 mEq/dl ,Urine Albumin and sugar and deposits- nil. Blood sugar-122 mg/dl.

**Imaging Studies:** The Chest x ray PA view and x ray abdomen erect view were normal. The ultrasonogram(USG) study of Abdomen and pelvis revealed a 5×3.6 centimetres sized , well defined cystic lesion in R iliac fossa possibly of Mesenteric cyst and advised computerised tomography for further evaluation. The contrast enhanced computerised tomography (CECT) reported as a Mesentric cyst involving the right iliac fossa which was Abutting the right psoas muscle and there was a Circumferential wall thickening involving the terminal ileum and ileocaecal junction and also caecum and proximal ascending colon with pericaecal fat stranding with dilatation of the distal ileal loops possibly neoplastic(Sub acute obstruction due to Ileocaecal mass). The Appendix was normal and Bulky Uterus

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with multiple Fibroids. The Colonoscopy was Normal. In view of malignancy Carcino embryonic antigen (CEA) and cancer antigen (CA) done and found to be normal (CEA- 2.0 ng/ml, CA 125-27 U/ml).

**Experts Opinion:** Firstly The MGE opinion obtained after normal colonoscopy who suggested it could be a Mesentric cyst. Secondly from Gynaecologist for bulky uterus with multiple fibroids. The Gynaecologist suggested asymptomatic fibroids in uterus do not need surgery. In case ovaries are involved in the complex mass may need total abdominal hysterectomy with bilateral salpingo-oophorectomy. Thirdly from Chest physician gave the opinion of no evidence of pulmonary or extra pulmonary Tuberculosis.

**Operative Notes:** The sugary was carried out under general anaesthesia (GA) with endotracheal intubation (ET) and the patient in supine position with Bladder catheterisation .the lower midline incision (from umbilicus to pubic symphysis) was made and the Abdomen was opened in layers. During surgery the following Findings were noted. There was a cyst of sized 8x5 centimetres filled with clear fluid found to arise from retroperitoneal wall with stalk of tissue as a base and there was a left ovarian cyst in the pelvis. There was no free fluid, large and small bowel were normal. Both Liver and spleen normal. After ligation of base of pedicle cyst was excised in toto. The Excision of left ovarian cyst done under the supervision of Gynaecologist and advised nil intervention needed for asymptomatic uterine fibroids. After perfect haemostasis wound was closed in layers. The Dressing done. The excised specimen sent for histopathological examination. The post operative periods were uneventful. The patient Discharged on eighth post operative day and Suture removal done on twelfth post operative day. The Patient is on regular follow up.



**Figure 1.1: Intra-op picture shows a cyst from retroperitoneal wall**

**Histopathological Examination:** A simple (benign) cyst with mucous lining without any anatomical structrue origin with no degenerative or neoplastic changes (the above finding is consistent with the primary retroperitoneal cyst) (Ahmad *et al.*, 2008).



**Figure 1.2: Shows the excised cyst with clear fluid inside**

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### DISCUSSION

The Cysts that lie in the retroperitoneum without connection with any adult anatomical structure, except by areolar tissue. Retroperitoneal cysts are uncommon (Ahmad *et al.*, 2008), with an estimated incidence of 1/250,000. Approximately one third of patients with retroperitoneal cysts are asymptomatic (Dal *et al.*, 1004) and the cyst is found incidentally (Adams, 1989). Patients may be asymptomatic or present with abdominal pain, referred pain to the legs or weight loss. The retroperitoneal space is bounded posteriorly by the spine, psoas and quadratus lumborum muscles, superiorly by diaphragm and inferiorly by the levator muscles of pelvis (Kurtz *et al.*, 1986). Anteriorly, this space is bounded by posterior parietal peritoneum. This potentially large space contains organs derived from ectoderm and endoderm that are all embedded in a loose network of connective tissue. This allows both primary and metastatic tumours to grow silently before the appearance of signs and symptoms (Mann, 1996). These masses are divided into neoplastic (cystic lymphangioma, mucinous cystadenoma, cystic teratoma, cystic mesothelioma, müllerian cyst, epidermoid cyst, tailgut cyst, bronchogenic cyst, cystic change in solid neoplasms, pseudomyxoma retroperitonei, perianal mucinous carcinoma) and nonneoplastic (pancreatic pseudocyst, nonpancreatic pseudocyst, lymphocele, urinoma, hematoma) lesions. Based on embryologic origin and histological differentiation, RPCs are classified into (a): Urogenital; (b): Mesocolic; (c): Cysts arising in cell inclusions; (d): Traumatic; (e): Parasitic and (f): Lymphatic. Neoplastic Cysts

#### *Investigations (Nuzzo et al., 1996)*

CT is ideal for assessing RPCs because it provides discrete sectional images of the organs and retroperitoneal compartments, and in some case, familiarity with the most relevant radiologic features, in combination with clinical information, allows adequate lesion characterization.

#### *Management (Nuzzo et al., 1996)*

Symptomatic cysts should be enucleated or excised, while preserving the surrounding vital structures. At times, the cyst can be marsupialised or drained if surgical enucleation is difficult or the cyst is infected. However, draining the cyst usually result in a recurrence. In the analysis of the 162 patients who had mesenteric and RPCs, Kurtz *et al.*, (1986) concluded that patients with RPCs were more likely to have incomplete excision of the cyst and therefore had a higher incidence of recurrence. They also required marsupialisation more often.

#### *Conclusion*

The Retroperitoneal cysts are very rare and most of the time they are discovered incidentally. The patients may be asymptomatic or present with abdominal pain, referred pain to the legs or weight loss. So Imaging may help to diagnose these lesions. But Surgery is the keystone in confirming the diagnosis and also if malignant complete excision can be done. This case is very rare and very educational as it highlights an unusual presentation of a benign retroperitoneal cyst.

### REFERENCES

- Adams JT (1989).** Abdominal wall, omentum, mesentery and retroperitoneum. In: *Principles of Surgery*, 5th edition, edited by Schwartz SI, Shires GT and Spencer FC (McGraw Hill Book) 1491-1524.
- Ahmed Alzarara, Husam Mousa and Paul Dickens (2008).** Idiopathic benign retroperitoneal cyst: a case report. Department of General Surgery & Department of Histopathology, Tameside General Hospital, Manchester, UK, *Journal of Medical Case Reports* 2 43.
- Dal Mo Yang et al., (2004).** Retroperitoneal Cystic Masses: CT, Clinical, and Pathologic Findings and Literature Review Departments of Radiology and Pathology, Gachon Medical School Gil Medical Center, 1198 Guwol-Dong, Namdong-Gu, Incheon 405-760.
- Guile M, Fagan M, Simopolous A and Ellerkmann M (2007).** Retroperitoneal Cyst of Mullerian Origin: A case report and review of the literature. *Journal of Pelvic Medicine and Surgery* 13(3) 149-152.
- Kurtz RJ, Heimann TM and Becker et al., (1986).** Mesenteric and retroperitoneal cysts. *Annals of Surgery* 203 109,12.
- Mann CV (1996).** The peritoneum, omentum, mesentery and retroperitoneal space. In: *Bailey and Love's Short Practice of Surgery*, 22<sup>nd</sup> edition, edited by Mann CV, Russell RCG and Williams NS, (ELBS) 764-80.

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**Nuzzo G, Lemmo G and Marroco-Trishtta MM et al., (1996).** Retroperitoneal cystic lymphangioma. *Journal of Surgical Oncology* **61**(3) 234-7.

**Waisberg J, Pezzole S and Henrique AC et al., (1999).** Retroperitonealcyst lymphangioma. *Arquivos de Gastroenterologia* **36**(1) 37-41.