



Giant Retroperitoneal Liposarcoma of Gerota's Fascia

Authors

**Mukund B. Tayade, Girish D. Bakhshi, Kavita V. Jadhav, Rajesh Yadav,
Dinesh S. Pawar, Priyank Kothari**

Department of General Surgery, Grant Govt Medical College & Sir J.J. Group of Hospitals, Mumbai-08

ABSTRACT

Soft tissue sarcomas are rare and commonly develop in retroperitoneum. Liposarcoma is the most common amongst it. Liposarcoma accounts for at least 20% of all sarcomas in adults and up to 50% of all retroperitoneal sarcomas. Here we present a case of a giant retroperitoneal liposarcoma arising from Gerota's fascia of right kidney along with brief review of literature.

INTRODUCTION

Soft tissue sarcoma (STS) accounts for <1% of all malignant tumors in adults^{1,2}. About 10–15% of them are retroperitoneal¹. Liposarcoma is the most common variant and accounts for 20% of all STS, and upto 50% of retroperitoneal sarcomas³. The natural behavior and outcome of retroperitoneal liposarcomas (RLS) are dependent of the age of the patient, anatomical site, depth, size, and resectability of the tumor, as well as of histology, grade, nodal disease, and distant metastasis². RLS also carries high incidence of recurrence so demands complete excision.

CASE REPORT

A 75 years old female presented with lump in the right side of abdomen since 5 months which was gradually increasing in size. Patient also had

complaint of fullness and discomfort in abdomen but no history of pain.

Abdominal examination revealed a large lump occupying right iliac fossa, right lumbar and right hypochondrium. It was firm, mobile, lobulated, nontender and was occupying entire right quadrant of abdomen.

On investigations, ultrasonography (USG) was suggestive of illdefined heterogeneously enhancing mass 22x 15 x 15 cm in size extending from right hypochondrium to the pelvis most likely retroperitoneal sarcoma. Computed tomography (CT) scan with contrast was suggestive of large multiloculated mass in the right retroperitoneal region occupying entire right side of the abdomen measuring 27 x 20 x 14cm, displacing bowel loops inferiorly and to the left and right kidney anteriorly. Fat planes were well maintained with

surrounding structures (Fig.1a & 1b).

USG guided biopsy was taken and sample sent for histopathological analysis. It showed well differentiated liposarcoma.

Patient was operated with en bloc excision of tumour through right retroperitoneal approach. It was found to be arising from posterior aspect of Gerota's fascia of right kidney (Fig.2). It was removed in toto along with complete excision of Gerota's fascia. Right kidney was found to be free and was preserved. Specimen was sent for histopathology report (Fig.3).

Histopathology report was suggestive of low grade well differentiated liposarcoma arising from Gerota's fascia. Margins were negative. Follow up of 1 year has shown patient to be symptom and disease free.

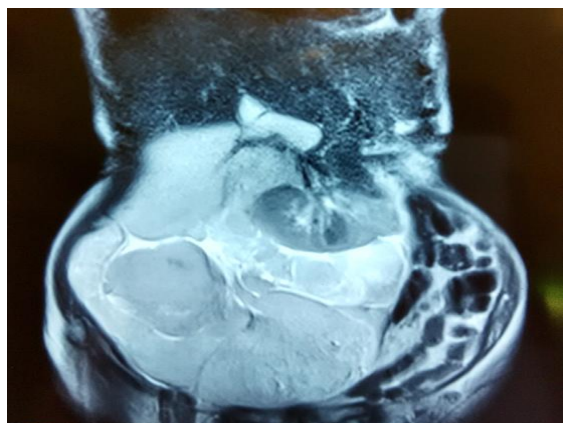


Fig 1a & 2b: CT scan axial and coronal views showing retroperitoneal liposarcoma with anterior displacement of kidney

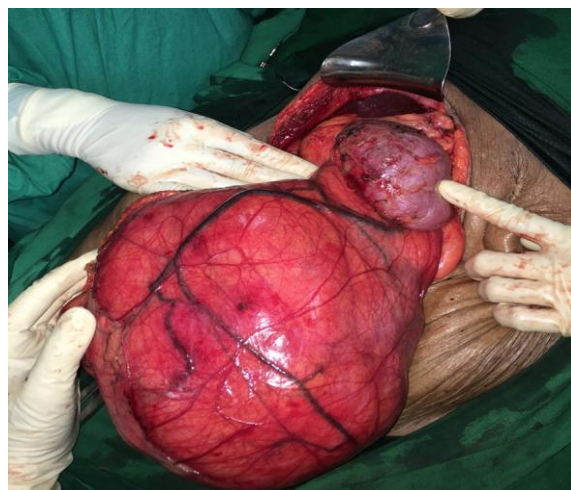


Fig.2: Intraoperative image showing RLS arising from Gerota's Fascia



Fig.3 : Specimen of RLS after excision

DISCUSSION

Retroperitoneal liposarcoma (RLS) are the malignant neoplasm of mesenchyma of retroperitoneum. The overall incidence of these tumours is 0.3-0.4% per 100000 population⁴. Most commonly encountered histologic subtype of retroperitoneal sarcomas are liposarcoma(41%), leiomyosarcoma(28%), fibrosarcoma(6%)⁵.

The etiology of these tumours seems to be genetic predisposition and exposure to ionizing radiation and history of systemic radiotherapy treatment^{6,7}. It often carries poor prognosis. Because of its rarity, complex anatomical location, size, fast

growing nature, local aggressiveness, these tumours are difficult to tackle. Even after complete excision these tumours are common to recur. That is why these patients need long term follow up. Recurrence & contiguous organ involvement are the causes for death of these patients.

In case reports mentioned in literature majority are male patients above 50 years age group. In present case, patient was 75 years old female having only complaint of right abdominal lump. There was no history of exposure to radiation.

In retroperitoneal liposarcoma, histological subtype, incomplete resection, contiguous organ resection, and older age are strongly associated with tumor-related mortality. It is necessary to individualise the treatment strategy. Currently chemotherapy for retroperitoneal soft-tissue sarcomas is not found to be effective, and radiotherapy showed limited efficacy due to the toxicity affecting adjacent intra-abdominal structures. Hence nowadays, complete surgical resection remains the most important predictor of local recurrence and overall survival.

In present case, investigations revealed it to be retroperitoneal liposarcoma. Intraoperatively it was found to be arising from Gerota's fascia of right kidney. It was not involving the kidney, so complete excision of tumour was done without nephrectomy. Patient is symptom & disease free over follow up of 1 year.

Few case reports have been presented of perinephric RLS in literature. Few of them were managed with total excision of RLS with nephrectomy and few without nephrectomy.

Salemis & Tsiambas et al⁸ presented a case of giant retroperitoneal liposarcoma with mixed histological pattern of right perinephric space and radical nephrectomy with right salpingo-oophorectomy were necessary to achieve complete excision in their 54 years old female patient. Funahashi et al⁹ reported a case of 66 years old male with RLS, diagnosed during gall bladder stone examination. Patient underwent surgical excision of the tumour

with concomitant resection of right kidney and adrenal gland. Hamano & Yamashita et al¹⁰ reported 2 cases of RLS arisen from perirenal fat tissue which could not be diagnosed preoperatively and both were male patients of 58 & 70 years old respectively who underwent left nephrectomy along with excision of RLS. Dalpiaz & Gidao et al¹¹ presented a case report of laparoscopic removal of retroperitoneal liposarcoma arising from Gerota's fascia without nephrectomy.

We can preserve the kidney in cases where kidney is not involved with complete excision of perinephric fat with RLS.

REFERENCES

1. Liles JS, Tzeng CWD, Short JJ, Kulesza P, Heslin MJ. Retroperitoneal and intra-abdominal sarcoma. *Curr Probl Surg*, 2009; 46 : 445–503.
2. Brennan MF. Management of Soft Tissue Sarcoma. 1st edi New York, NY : Springer; 2013. 380.
3. Dalal KMM.. Subtype specific prognostic nomogram for patients with primary liposarcoma of the retroperitoneum, extremity, or trunk. *Ann Surg* , 2006; 244 : 381–91.
4. Mettlin C, Priore R, Rao U. Results of the national soft tissue sarcoma registry. *J Surg Oncol*. 1982;19:224–7.
5. Windham TC, Peter WT, Pisters Retroperitoneal Sarcomas. *Cancer Control*.2005;12; 36–43.
6. Garber JE, Offit K.. Hereditary cancer predisposition syndromes. *J Clin Oncol*. 2005 ; 23 : 276–92.
7. Berrington de Gonzalez A, Kutsenko A, Rajaraman P. Sarcoma risk after radiation exposure. *Clin Sarcoma Res*. 2012; 2 : 18.
8. Salemis NS, Tsiambas E, Karameris A, Tsohataridis E. Giant retroperitoneal liposarcoma with mixed histological pattern:

- a rare presentation and literature review. J Gastrointest Cancer. 2009 ; 40 :138-41.
9. Funahashi Y, Kamihira O, Isobe Y, Kimura K, Sasa N, Matsuura O. Retroperitoneal liposarcoma: a case report. Hinyokika Kyo J. 2006 ;52 : 203-5.
 10. Hamano A, Yamashita Y, Katoh Y, Yumura Y, Mikata K, Takase K, Ohgo Y, Noguchi S, Nagashima Y. Two cases of retroperitoneal liposarcoma arisen from perirenal fat tissue, which could not be diagnosed preoperatively. Hinyokika Kyo J. 2004 ; 50 :857-60.
 11. Dalpiaz O, Gidaro S, Lipsky K, Schips L. Case report: Laparoscopic removal of 10-cm retroperitoneal liposarcoma. J Endourol. 2007 ; 21 :83-4.