

## CASE REPORT

## Giant well-differentiated liposarcoma of retroperitoneum

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**Abstract:** Liposarcoma is a malignancy of fat cells that occurs in deep soft tissue and mostly seen in limbs and retroperitoneum. It is the most common mesenchymal tumor of the retroperitoneum. It is detected at very late stages especially when the tumor gains substantial size, weight of several pounds at the time of diagnosis because it is grows very silently in deep tissues in the retroperitoneal area. Therefore, most of the patients with liposarcoma have no symptoms until the tumor is getting very large and pressurizes on neighboring structures which causes tenderness, pain, or functional disturbances.

A 61 year-old male patient admitted with one-year history of abdominal pain, distention. Computed tomography demonstrated a large retroperitoneal mass in fat density filling the pelvic cavity extending to epigastric region especially in the left side of abdomen, and displacing intestines to the right and left kidney and pancreas gland posteriorly. At laparotomy the retroperitoneal tumor weighed 13.2 kg, Histologically it was a well-differentiated liposarcoma. Total extirpation surgery is still the most effective treatment in well-differentiated liposarcomas. Close follow-up after surgery is mandatory due to high rates of recurrence (*Fig. 3, Ref. 10*). Full Text (Free, PDF) [www.bmj.sk](http://www.bmj.sk).

Key words: retroperitoneal well-differentiated liposarcoma.

Soft tissue sarcomas are rare malignancies, accounting 1–2 % of all malignancies. Of all soft tissue sarcomas 15–20 % are located in retroperitoneum (1). Liposarcoma is the most common soft-tissue sarcoma in adults. They are mostly located in limbs (41 %) and retroperitoneal region (1). They grow slowly and they are painless neoplasms, arising from fat cells and mostly seen in 5th decade of life (2).

The World Health Organization currently recognizes four subtypes of liposarcoma: well-differentiated (or atypical lipoma), myxoid, pleomorphic and dedifferentiated (3).

We reported the case of well-differentiated retroperitoneal liposarcoma that weighted 13.2 kgs.

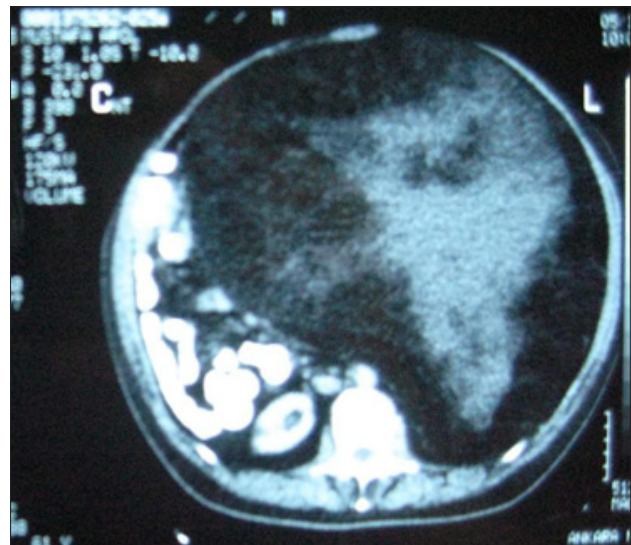
## Case report

A 61-year old man admitted to our department with a one-year history of abdominal pain, distention, dyspepsia, nausea, alteration in intestinal habits and a mild dyspnea. His complaints had significantly increased in the past 2 months. He didn't have any loss in weight, on the contrary he put on weight. The remainder of history was unremarkable. On physical examination, his abdomen had a marked distention and a palpable mass was filling the whole of his abdomen. Laboratory findings showed no significant changes, also tumor markers were within the normal range.

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**Fig. 1.** Preoperative computed tomography scan of retroperitoneal mass.

Abdominal ultrasonography revealed a hypoechogenic mass in retroperitoneal region that was displacing the left colon anteriorly and medially. Also, computed tomography demonstrated a large retroperitoneal mass of fat density that was filling his pelvic cavity and extending to epigastric region especially in the left side of abdomen, displacing intestines to the right and left kidney and pancreas posteriorly (*Fig. 1*).

At laparotomy, a largely lipomatous tumor located in retroperitoneum and filling the whole of his abdominal cavity was



Fig. 2. Macroscopic appearance of resected tumor.

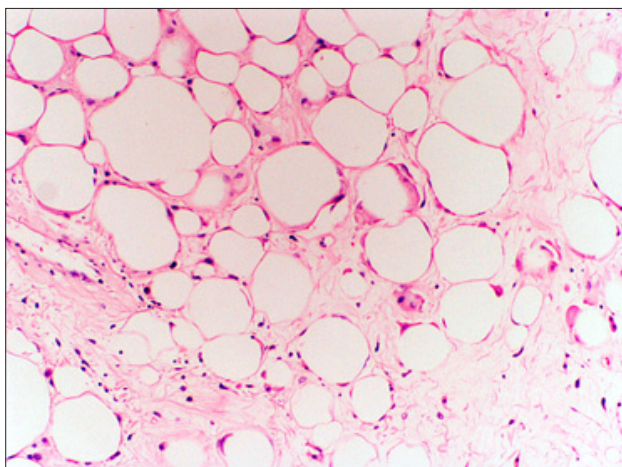


Fig. 3. Mature fat cell appearing in tumor tissue and large-sized multivacuolated atypical fat cells. (H&E x 20).

found. Left colon was displaced to the right due to presence of retroperitoneal tumor, the fact of which was confirmed by CT scan. After opening the peritoneum along the reflection, a solid, encapsulated and multilobulated yellowish lipomatous mass was totally excised. It could be seen that the tumor had no invasion to the major vessels and adjacent organs. Gross appearance revealed a 55x44x15 cm fatty mass 13.2 kg in weight (Fig. 2).

On microscopic examination of the resected material, the lipoma-like appearance was evident. By increasing the sampling number, any possible misdiagnosis was prevented, and consequently very rare lipoblasts were seen in the sections. It was noted that the presence of multivacuolated fat cells that were bigger in size than normal fat cells was sporadic. Because of the localization and size of the tumor, which was also showing atypical changes in fat cells in patches, this phenomenon was diagnosed as a lipoma-like type of well-differentiated liposarcoma (Fig. 3).

There was no additional complication after the operation and the patient was discharged one week after operation. No radiotherapy or chemotherapy has been given in the post-operative period. The patient has been asymptomatic on regular follow-up for the past 3-years, namely in 3-month intervals in the first two years and in 6-month intervals in the third year.

## Discussion

Liposarcoma is a malignancy of adipose tissue mostly found in the soft tissue of limbs, retroperitoneum, trunk and mediastinum. Liposarcomas mostly arise de-novo. Their development from benign lipomas is very rare. A slight male predominance can be seen in patients. No evidence of association with race and geography is known (4).

Clinical behaviours of liposarcomas are related closely to histological characteristics. In low-degree well-differentiated lesions, local recurrence is observed more often and in general these do not have the tendency to form distal metastases, while the high-degree lesions are generally aggressive tumors that are accompanied with histologically poor differentiation and wide metastatic invasion (5).

Only 15 % of primary sarcomas arise from retroperitoneum, and in 25–35 % liposarcomas consist of soft tissue sarcomas located in retroperitoneal region (6). Patients with liposarcoma usually have no symptoms till tumor reaches large size and causes disturbances in adjacent structures. Also, in the retroperitoneal region liposarcomas are diagnosed in late stages, therefore tumors grow to large size (7).

Well-differentiated liposarcomas are further classified as a) adipocytic, b) sclerosing, c) inflammatory, or d) spindle-cell subtypes. These subtypes show considerable morphological combination and make the differential diagnosis problematic.

Well-differentiated liposarcoma accounts for about 40 % to 45 % of all liposarcomas and therefore represents the larger subgroup of adipocytic malignancies (8).

Computed tomography and magnetic resonance imaging are the most effective radiological procedures determining the extent of local and distal tumor invasions. Well-differentiated liposarcomas can be differentiated radiologically from other types by their largely lipomatous appearance and malignancy potential increases with the degree of tumor's heterogeneity and contrast enhancement (4).

Recognition of lipoblasts is the key finding in histological diagnosis of liposarcoma. Well-differentiated liposarcomas show a predominant presence of mature fat cells, and the amount of widely diffused lipoblasts is relatively low (8).

In the management of liposarcomas, wide surgical excision is the most effective procedure preventing the recurrence and dedifferentiation. The roles of adjuvant chemotherapy and radiotherapy are controversial. Some studies showed that local control of retroperitoneal sarcomas was enhanced with radiotherapy but none of them supported an increase in survival. Also there is no evidence that chemotherapy increases the survival. In our case the patient did not get any adjuvant therapy because the

tumor was histologically assessed to be of well-differentiated (lipoma-like) type and totally excised with clear margins (9–10).

The outcomes of chemotherapy and radiotherapy in the treatment of retroperitoneal sarcomas suggest that surgery is the most effective choice. Complete resection of tumor plays an important role in preventing the local recurrence, metastases and survival. Close follow-up after surgery is mandatory due to high rates of recurrence.

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