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Case Report

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Recurrent myxoid liposarcoma of thigh

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ABSTRACT

We are presenting the case of a 78 year old man who presented to our out-patient clinic with a history of a recurrent mass over the anteromedial aspect of the left thigh. The aim of this case report is to study the clinical, radiological findings, diagnosis and surgical management of a well differentiated liposarcoma

Keywords: Liposarcoma, Recurrence, Soft tissue sarcoma

INTRODUCTION

Soft tissue sarcomas account for less than 1% of the malignant tumours in adults-accounting for less than 4-5cases per lakh population.[1] Liposarcomas are the most common of the soft tissue sarcomas-45% of the total soft tissue sarcomas are liposarcomas. Commonly classified on their histologic basis, STS are very heterogeneous and carry a varying prognosis. The natural behavior and outcome of STS are dependent of the age of the patient, anatomical site and depth, size, and respectability of the tumor, as well as of histology, grade, nodal disease, and distant metastasis.[2] Distant Metastasis is the most important prognostic factor. We present a patient with a large lipomatous tumor of the thigh along with diagnostic and therapeutic aspects.[3]

CASE REPORT

A 78 year old male patient came to the outpatient clinic with complaints of recurrence of a thigh swelling-left side, for which he was operated 6 months ago. He complained of a large mass over the anteromedial aspect of the left thigh, which he noticed 1.5 years ago. It was insidious in onset and gradually progressive in nature. He approached a local hospital for the same and underwent a skin sparing excision of the tumour.

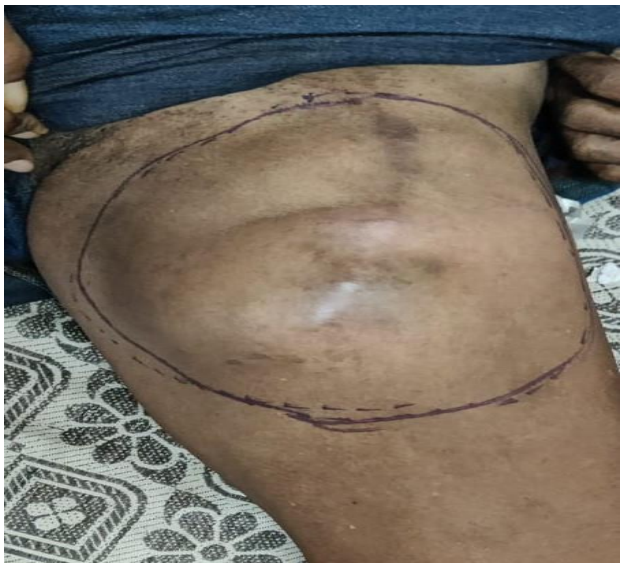

Figure 1: Pre-operative marking of the mass for wide local excision.

Histopathology showed the tumour is composed of low grade spindle cells.

After 3 months of surgery, he noticed that a new mass arising from the same site.

Local examination revealed a firm to hard mass over the left anterior thigh, skin above the swelling was not pinchable, with no inguinal lymphadenopathy.

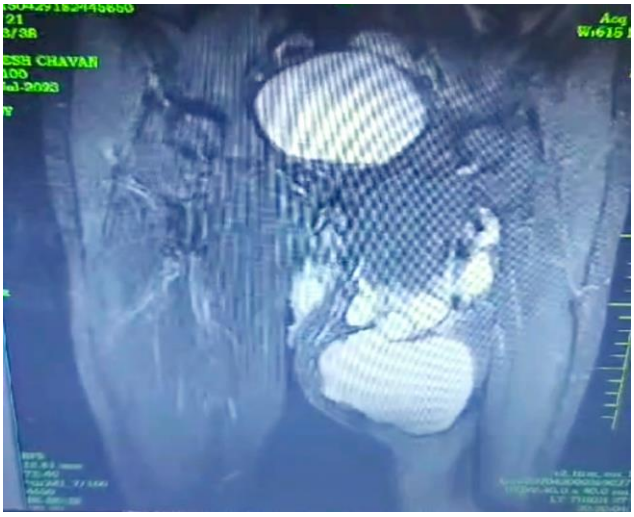

Figure 2: MRI coronal view showing the large mass pushing the femoral neurovascular bundle with encasement. Bladder enhancement can also be noted in this T2 weighted image.

MRI done showed a tumour mass in the subcutaneous plane of upper half of the left thigh. Few of these lobulations are seen extending into the intermuscular plane and along the left femoral neurovascular bundle, completely encasing the proximal one third of the femoral artery with maintained flow voids.

All haematological and biochemical investigations were normal. CT thorax abdomen showed no evidence of any metastasis.

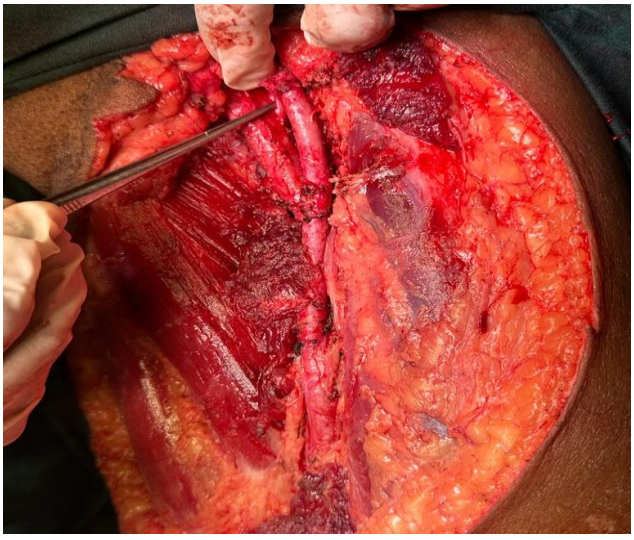

Figure 3: Intraoperative photo-note the dissected out neurovascular bundle, adductor longus of the muscle medially 1 cm of which has been shaved off for ensuring R0 resection.

Patient was induced under epidural anaesthesia, a large, well-marked encapsulated tumor (dimensions 25/20 cm), was found, situated between the adductor muscles and the large muscles that push muscles aside with focal areas of suspicious involvement. These suspicious areas were involved in the incision with margin of 1 cm-which included the adductor longus and the sartorius muscle. The femoral neurovascular bundle was meticulously dissected out with utmost care whilst keeping the PTFE graft ready in the untoward but very much possible injury to the female artery. the large skin defect left behind was bridged using a sartorius rotation flap.

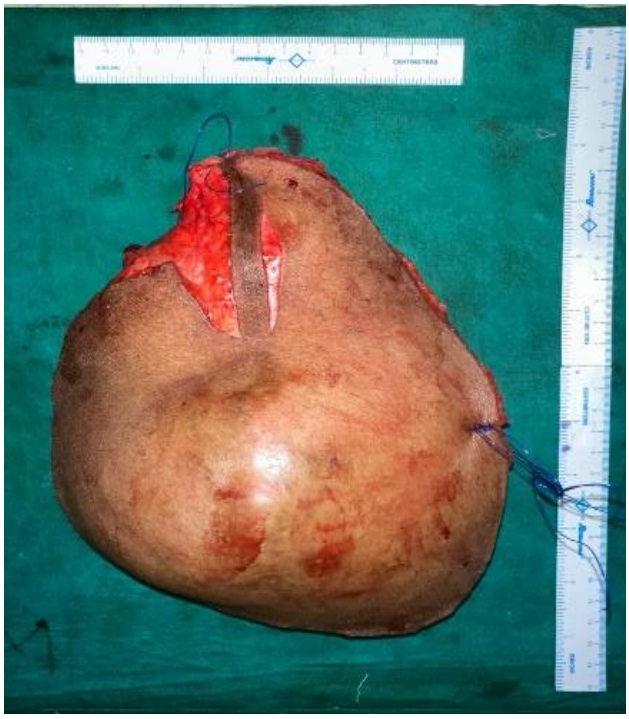

Figure 4: Resected specimen measuring 25×20 cm with scale for measure. Superior pole marked with short thread, lateral margin marked with long thread.

Histopathology reported a spindle cell neoplasm composed of short spindle cells in abundant myxoid stroma. Few adipocytes seen with atypical mitosis. No evidence of necrosis. On Immunochemistry the cells came negative for SMA, S100, CD34 and MDM2.[4] Patient has been on post operative follow up for 2 years now, with no signs of recurrence or disability. He did not receive any chemo or radiotherapy.

DISCUSSION

Liposarcoma is the most common soft tissue sarcoma which accounts for about 20% of sarcoma in adults. The liposarcomas were divided into 4 main subtypes according to WHO's recommended classification (1969): well-differentiated, myxoid, round cell and pleomorphic types. However, current clinical practice is not optimized according to different histologic subtypes and clinical protocol often does not reflect such difference.[5] Well-

differentiated liposarcoma most frequently affects the deep soft tissues of extremities (65-75% of cases); over 50% of these are located in the lower limbs, especially the thigh. Macroscopic appearance of well-differentiated liposarcoma is a large white-yellow well-circumscribed mass. Well-differentiated liposarcoma have no metastatic potential unless dedifferentiation, but they may have local recurrences.[6] In subcutaneously located tumours, wide local excision is said to be the complete treatment. Even though a well circumscribed tumour, the chances of recurrence is high-43% in the thigh region, increasing upto 70% in the retroperitoneum. These cases recur because of the difficulty in achieving a negative surgical margin and hence these kinds of cases need to be given adjuvant radiotherapy.[7]

Supernumerary circular and giant rod chromosomes genetically characterize all subtypes of well-differentiated liposarcomas.[8] However there has been no proven genetic association with liposarcomas. Malignant transformation of lipoma is a very rare occurrence and usually arises de novo. Radiological studies help to study the ratio of different soft tissue components within the tumour-most well differentiated liposarcomas have thick septa >2 mm, with fat lobules with poor vascularity. Lipomas have thinner septae and poorly differentiated tumours show signs of local infiltration.

Features that suggest malignancy include increased patient age, large lesion size, presence of thick septa, presence of nodular and/or globular or non-adipose mass like areas, and decreased percentage of fat composition.[9]

The potential for metastasis varies according to the histological type of liposarcomas. Metastasis if they do occur, occurs through hematogenous route and has been considered the most important prognostic factor. [10]

Myxoid liposarcomas often metastasized to extrapulmonary sites and did so significantly more frequently than pleomorphic tumors. Imaging of the abdomen, retroperitoneum, and extra-pleural chest should be performed for accurate staging and posttreatment follow-up of patients with myxoid liposarcoma, like which was done in our case report. Other histological subtypes of liposarcomas tend to metastasize to the lungs. The myxoid liposarcoma occurs predominantly at the level of the muscular chamber of the limbs and more specifically in the thigh in more than 2/3 of the cases; it rarely occurs in the retroperitoneum or the subcutaneous tissue.[11]

CONCLUSION

Liposarcoma is one of the most common forms of soft tissue sarcoma. Histopathologically they can be divided. Liposarcomas are usually well-differentiated tumors with non-metastatic potential, especially if they are located in the extremities. Studying the natural course of the disease has helped standardize the final treatment protocol for these patients. Though, these tumours can reach large sizes, studies have proven that surgical resection with a well-maintained margin is the final treatment, provided there is no distant metastasis. Patients should undergo regular follow up to ensure that there is no recurrence. Studies have shown that well-differentiated liposarcoma located on the extremities does not require adjuvant therapy and overall, they have prolonged survival and favorable prognosis. Although local recurrence was present in all five subtypes, a significant increment in local failure was seen in patients with high-grade liposarcomas. Distant metastasis after the initial operation was not found in patients with well-differentiated liposarcoma and rare in the patients with myxoid liposarcoma. In contrast, 50% of the patients with fibroblastic, lipoblastic, and pleomorphic liposarcoma had a distant relapse within 5 years.

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