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Case Report

A case report on rare case of left thigh recurrent liposarcoma

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ABSTRACT

Lipomas are non-cancerous growths made up of mature fat cells and are considered the most common type of tumor, with an estimated occurrence rate of 10%. They can develop anywhere in the body, typically weighing a few grams and usually measuring less than 2 cm in size. Liposarcomas, on the other hand, represent 10% to 35% of all soft tissue sarcomas, comprising 24% of those found in the limbs and 45% in the abdominal cavity. These tumors can emerge in any area where fat is present and exhibit a variety of histological features, as well as diverse imaging characteristics and behaviors. We have studied a case of a 56-year-old male patient who presented with a complaint of swelling in left thigh since last 4 years, which varied in size with time. The patient was investigated and underwent surgical excision. diagnosis of liposarcoma was confirmed with histology. Lipomas have the potential to transform into one of three types of liposarcomas. Therefore, it is crucial to reevaluate the conventional view of all lipomas as benign growths and consider diverse approaches, as they can occasionally progress to a sarcomatous state. Aggressive forms often require a combination of surgery, chemotherapy, and radiation therapy for treatment. It is crucial to distinguish between different subtypes of liposarcomas due to their significant implications for treatment and prognosis. Liposarcomas tend to affect individuals aged 40 to 60 years, with an equal likelihood in both men and women.

keywords: Liposarcoma, Soft tissue sarcoma, Surgical excision

INTRODUCTION

Liposarcomas are mesenchymal tumors that represent the most common type of adult sarcomas, differentiated liposarcomas accounting for 40-50% of all adult liposarcomas.[1,2] Common sites-the extremities, retroperitoneal, the groin, scrotum, and the abdominal wall.[3,4] Dedifferentiated liposarcomas carry the risk of spreading to other parts of the body, recurrence, and higher mortality rates. Surgical treatment and histology are the most important prognostic factors. Complete surgical excision reduces local recurrence rate and incomplete surgical excision increases local recurrence.[5]

CASE REPORT

A 56-year-old male came with a chief complaint of swelling in the left thigh for the past 4 years, which appeared and increased insidiously in size, remaining constant in size for the initial 2-3 years. Patient had a history of excision and biopsy for a similar swelling at the same site in 2017, biopsy of which revealed well-differentiated liposarcoma infiltrating the muscle. On examination, there was a 20×15×6 cm sized single, vertically oval, smooth, soft, well-defined, mixed consistency, non-warm, non-tender, non-compressible swelling present over postero-medial aspect of thigh extending from just below perineal crease to up to 3 cm above the knee joint. The overlying skin shows a vertical healthy scar of previous surgery, with no other overlying skin changes. There is a 12 cm difference in thigh girth between the two limbs. The swelling is fixed to underlying muscles and cranio-caudal mobility is restricted. There was no neurological deficit or vascular compromise of limb. MRI of left thigh revealed 9.5×15×25 cm (AP×TR×CC) size Ill Defined multilobulated fat intensity lesion with multiple internal

septations in inter and intramuscular plane in medial and posterior aspects of left thigh, superiorly extends upto left gluteal sulcus and inferiorly upto upper part of popliteal fossa and infiltrate semimembranosus muscle, displaces and compresses adductor longus, adductor magnus muscle and sciatic nerve, with focal loss of fat plane with adductor magnus muscle. Significant post contrast enhancement with multiple enhancing septations. No evidence of any calcification within the lesion, intrinsic hyperintensity or post contrast enhancement.

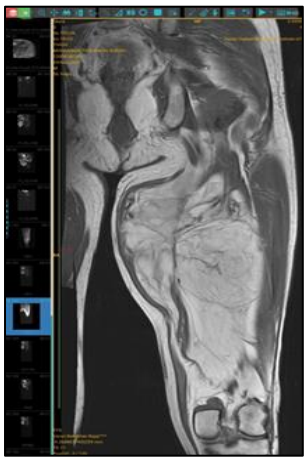

Figure 1: MRI showing mass in left thigh with internal septations.

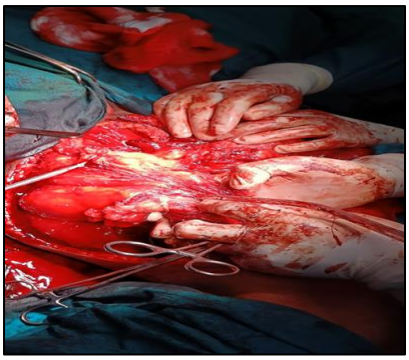

Figure 2: Intraoperative image showing yellowish mass in relation with muscles and sciatic nerve.

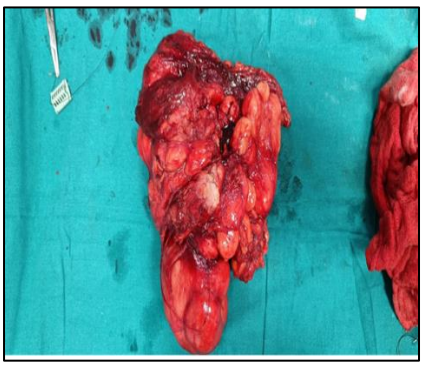

Figure 3: Post operative image of excised specimen.

Histopathology report revealed well differentiated liposarcoma. Infiltration into the skeletal muscle tissue, resected surgical margin, negative patient was discharged on post operative day 4 with adequate muscle power in the lower limb and was able to walk without support.

DISCUSSION

Liposarcomas represent 10–35% of all soft tissue sarcomas, second most common type after fibrosarcoma. Histological subtypes well differentiated (30-50%), dedifferentiated (15-20%), myxoid (25-30%), round cell (5-10%) and pleomorphic (5%). The diversity of these lesions is reflected by their clinical and biological behavior, which ranges from non–metastatic tumors (well–differentiated liposarcoma) to tumors with high metastatic potential (pleomorphic liposarcoma).[6] Because of this behavior, pathological and radiological evaluation was critical for establishing an appropriate therapy.[7]

The image on MRI and the morphological relationship between the areas of fat and non-fat components allows the identification of the histological subtype of liposarcomas.

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. Prognosis and treatment of these tumors is strongly related to their anatomical location. For subcutaneously located lesions, surgical excision with 1-2 cm margins is sufficient; in such cases, local recurrence is minimal to nonexistent. Studies have shown that local recurrence rate is of 43% for lesions located in the extremities, 70% for groin tumors and 91% for retroperitoneal lesion. The rate of relapse in such cases is high because of the difficulty of obtaining negative surgical margins. In these instances, radiotherapy may be used as adjunctive therapy to decrease local recurrence rate. Mortality associated with multiple complications of local recurrence is significant when well differentiated liposarcoma are located in the retroperitoneal (33%) or inguinal (14%) areas and is insignificant for extremities lesions, if dedifferentiation does not appear in this case. Concerning our patient, there was muscle invasion and fixity to sciatic nerve but no vascular or bone tumor invasion, therefore negative surgical margins achieved. The lower degree of aggressiveness of the tumor correlates with a favorable prognosis.

CONCLUSION

Liposarcoma is one of the most common forms of soft tissue sarcoma, presenting a broad spectrum of clinical behavior. This is closely related to the histological type of

liposarcoma and patient management, the evolution being different for each case. Liposarcomas are usually well–differentiated tumors with non-metastatic potential, especially if they are located in the extremities. Understanding and recognizing the broad spectrum of radiological aspects and pathological bases of extremities, liposarcomas allow an improved management of these patients. Despite the huge size that these tumors can reach, large excision decrease local recurrence rate to almost zero. Studies have shown that well–differentiated liposarcoma located on the extremities does not require adjuvant therapy unless negative surgical margin achieved and overall, they have prolonged survival and favorable prognosis.

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