Giant Liposarcoma of the Thigh in an Elderly Female: A Case Report.

Abstract

Background: Liposarcoma ranks among the most frequently occurring malignant soft tissue sarcomas that develop from adipocytic differentiation. These tumours commonly appear in the extremities, especially in the thigh area, and can grow without causing symptoms for extended periods. This silent growth allows the tumour to become quite large before patients seek medical attention. When liposarcomas in the extremities reach giant proportions, they become uncommon cases that create distinct challenges for both diagnosis and surgical treatment.

Case Presentation: This report describes a 70-year-old woman who came to medical attention with a gradually growing mass in her left thigh that had been present for 12 years. Physical examination showed an enormous, multi-lobed tumour that filled the front and outer portions of her thigh. Medical imaging studies indicated a large soft tissue growth that appeared to originate from fat cells. Surgeons performed a comprehensive removal of the tumour with wide margins around the affected area. The excised specimen had a weight of 6.2 kilograms. Histopathological examination of the tissue samples verified the diagnosis as well-differentiated liposarcoma. The patient recovered smoothly after surgery and was able to restore good movement and function in her leg.

Conclusion: Although giant liposarcoma of the thigh occurs infrequently, doctors should consider this diagnosis when patients have soft tissue masses that have been growing larger over many years. Thorough surgical removal with sufficient healthy tissue margins continues to be the primary treatment approach and serves as a key factor in reducing the likelihood of tumour recurrence.

Keywords: Giant liposarcoma, soft tissue sarcoma, well-differentiated liposarcoma, case report

Introduction

Soft tissue sarcomas represent uncommon malignant growths that develop from mesenchymal tissues, making up fewer than 1% of all cancers in adults. Liposarcoma stands out as one of the most frequently encountered types within this category, comprising roughly 15-20% of all soft tissue sarcomas.[1] These tumours develop from early mesenchymal cells that have the ability to transform into fat-like cells, rather than originating from fully developed fat cells.

This type of cancer typically affects adults during their fifth to seventh decades of life, most commonly appearing in the limbs, especially the thigh area.[2]Due to their tendency to grow slowly, these tumours often produce no symptoms for extended periods and can reach substantial sizes before patients seek medical care.

The World Health Organization has established 5 primary categories for classifying liposarcoma: well-differentiated, dedifferentiated, myxoid, pleomorphic, and mixed types.[1]The well-differentiated form occurs most frequently and typically offers patients a more favourable outlook than the other varieties.

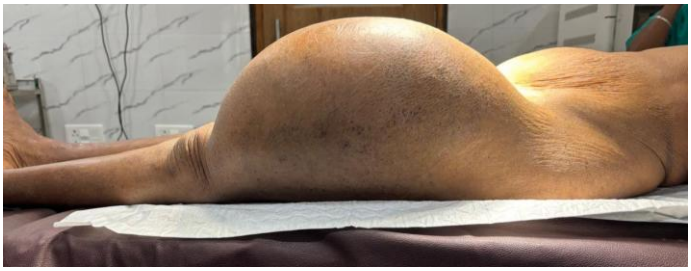
Medical literature contains very few reports of massive liposarcomas in the extremities which exceed 5 kg in weight.[3]Tumours of this magnitude can severely restrict normal function and dramatically alter the shape of nearby anatomical structures. Here we describe an unusual case involving a massive thigh liposarcoma weighing 6.2 kg in a 70-year-old woman, which was treated effectively through comprehensive surgical removal.

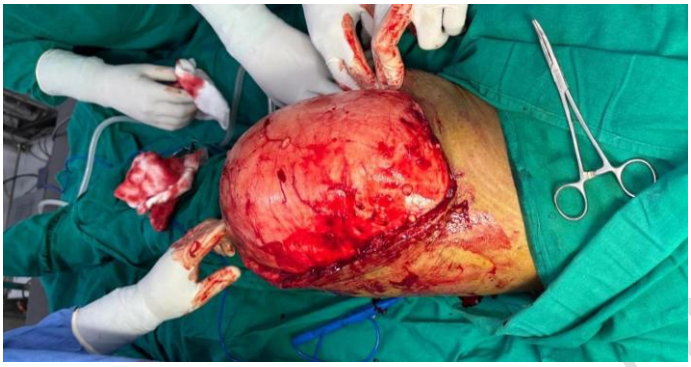
Case Report

A 70-year-old woman came to the surgical outpatient clinic complaining of a lump over the left thigh which was progressive over 12 years. The swelling started small and without pain but steadily grew bigger as time passed. The large size of the mass made it hard to carry out her normal daily tasks.She had no history of injury, fever, weight loss, or other general symptoms. The patient also had no previous cancer diagnoses.

On physical examination: A large swelling on the anterolateral aspect of the left thighmeasuring about 30 x 25 centimetres,firm in consistency, non-tender, stretched overlying skin, no dilated veins,no regional enlarged lymph nodes. Distal pulses palpable, no neurological deficit.

Magnetic Resonance Imaging (MRI) of the thigh showed: A large mixed soft tissue mass consisting mainly of fat tissue, thick internal dividing walls, no invasion into the underlying bone, no involvement of major blood vessels or nerves. The imaging results suggested a fatty soft tissue tumour, possibly a liposarcoma. Computed tomography scan of chest and abdomen showed no evidence of distant metastasis.





Management

Given the tumour’s large size and the patient's worsening functional problems, patient underwent wide excision of tumour under general anaesthesia.Margin status on histopathological examination was R0 - clear margins.

The excised specimen was a large, multi-lobulated yellowish lipomatous cut surface that weighed 6.2 kilograms. Histopathologicalexamination confirmed well-differentiated liposarcoma.

The patient's recovery after surgery was uneventful. She was able to move around early and left the hospital in good condition. On follow-up appointments at 1 month and 6 months, her surgical wound healed properly and she reported better mobility.

Discussion

Liposarcoma is one of the most common soft tissue sarcomas found in adults, typically developing in the extremities or in the retroperitoneum.[4] The thigh is especially susceptible because it has large amounts of fatty tissue and roomy spaces where tumours can grow unnoticed. These cancers usually progress slowly and rarely cause pain. Because they develop so gradually, patients often delay seeking medical care until the tumour has grown quite large.

These sarcomas arise from immature mesenchymal cells that are in the process of becoming fat cells. Genetic alterations, particularly amplification of the MDM2 and CDK4 genes, are commonly found in well-differentiated liposarcomas and dedifferentiated liposarcoma.Detection of these markers help confirm the diagnosis.[5]In the present case, MDM2/CDK4 immunohistochemistry was not performed due to resource constraints; however, the morphological features were diagnostic.Patients typically present with a slowly growing, painless mass, cosmeticconcerns, and progressive loss of function as thetumourenlarged.

Giant liposarcomas exceeding 5 kg in weight are extremely rare. Despite the large size, these tumours remain painless as they tend to expand along fascial planes rather than directly invading nerves in early stage.[2]Large tumours can compress surrounding muscles and distort normal anatomy, making surgical removal more challenging. MRI is the imaging method of choice for soft tissue masses because it offers excellent visualization of tumour extent and relationship to surrounding blood vessels and nerves.

Complete surgical excision with negative margins is the cornerstone of treatment for extremity liposarcoma. Limb-sparing surgery is preferred when neurovascular bundle is preserved. Adjuvant radiation therapy may be considered in certain cases to reduce the risk of

local recurrence, especially for high-grade tumours or when margins are close. Chemotherapy has limited utility and is generally reserved for metastatic disease.

Prognosis depends on several factors like: histologic subtype, tumour grade, completeness of resection, presence of metastases. Most important prognostic factor is completeness of resection, with well-differentiated liposarcoma carrying a favourable prognosis when margins are clear[6]

Conclusion

Giant liposarcomas that develop in the thigh represent uncommon tumours that can go undetected for extended periods because they grow very slowly. Identifying these tumours early and using proper imaging techniques are crucial steps for developing an effective surgical treatment plan. The primary treatment approach continues to be complete removal of the tumour with sufficient surrounding healthy tissue, which provides the greatest opportunity for successful treatment while maintaining normal leg function.

Patient consent

Written and informed consent was obtained from the patient for publication of this case reportand accompanying clinical details. The patient's identity has been protected.

Acknowledgement

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Conflict of interest

The authors declare that they have no conflicts of interest.

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