ORIGINAL RESEARCH PAPER

Orthopaedics

MYXOID LIPOSARCOMA OF THE SHOULDER EXTENDING INTO THE AXILLA: DIAGNOSTIC AND SURGICAL MANAGEMENT

KEY WORDS: Liposarcoma, Myxoid Liposarcoma, Shoulder Mass, Soft Tissue Sarcoma, Axilla, Limb-sparing Surgery.

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ABSTRACT

Liposarcoma is the most common soft tissue sarcoma, comprising approximately 17% of all soft tissue sarcomas. It typically presents as a slowly enlarging, painless, non-ulcerated submucosal mass. Four histological subtypes are recognized: well-differentiated, dedifferentiated, pleomorphic, and myxoid/round cell types. Liposarcomas are slightly more common in males, with the thighs, retroperitoneum, and inguinal region being the most frequent sites. We report a case of a 47-year-old female who presented with a 2-month history of a rapidly enlarging painful swelling over the right shoulder extending from the clavicle to the axilla and breast region. Imaging suggested a malignant soft tissue sarcoma, and histopathology with immunohistochemistry confirmed a diagnosis of myxoid liposarcoma. The patient underwent wide local excision with limb preservation followed by adjuvant radiotherapy. At 6-month follow-up, she demonstrated normal limb function with no evidence of recurrence. This case highlights the importance of early diagnostic imaging, histopathological confirmation, and multidisciplinary management in achieving optimal outcomes for myxoid liposarcoma of the shoulder region.

INTRODUCTION

Liposarcoma, first described by Virchow in the 1860s, is a malignant tumor arising from adipocytic tissue. It represents the most common soft tissue sarcoma in adults, with an annual incidence of approximately 2.5 cases per million population and accounting for nearly 17% of all soft tissue sarcomas. Although typically occurring in middle-aged individuals, it is rare in children and young adults.

Liposarcomas are categorized into four histological subtypes:
Well-differentiated liposarcoma, Dedifferentiated liposarcoma, Pleomorphic liposarcoma, Myxoid/round cell liposarcoma

The most common anatomical sites include the thigh, retroperitoneum, and inguinal region. Clinically, they present as well-circumscribed, painless, slowly growing soft tissue masses. Myxoid liposarcomas often demonstrate distinctive radiological features, including homogeneous or mildly heterogeneous signal intensity and a pseudo capsule on MRI.

Management consists primarily of surgical excision with wide margins. Adjuvant radiotherapy is often recommended in high-grade or myxoid variants, while chemotherapy remains controversial and is generally reserved for select cases.

We present an unusual case of myxoid liposarcoma involving the shoulder girdle, extending from the clavicle to the axilla, posing diagnostic and therapeutic challenges.

Case Presentation

A 47-year-old female presented with a 2-month history of a progressively enlarging swelling over the right shoulder, extending from the clavicle to the axilla and breast region. The swelling was associated with pain radiating to the entire arm and scapula. There was no history of trauma, fall, or road traffic accident. She had no significant comorbidities.

On examination, a firm, tender swelling was noted over the right shoulder with restricted shoulder movements. Neurovascular status of the limb was intact.

Imaging

- Chest X-ray: Mild soft tissue swelling; no significant bony changes.

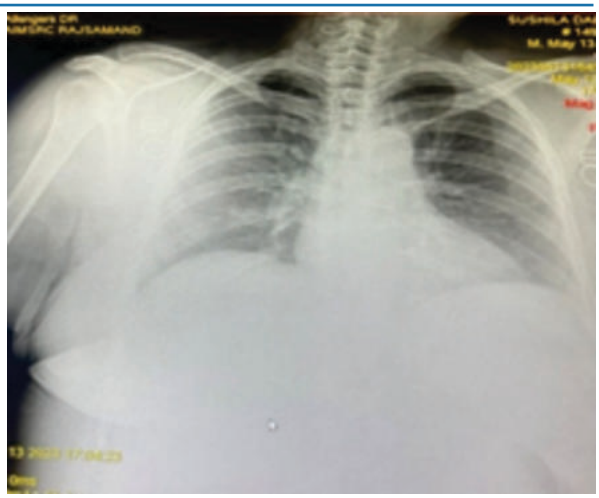

Fig :1 Chest X Ray : Mild Soft Tissue Swelling;

Ultrasound: Suggested a possible hemangioma; findings were inconclusive.

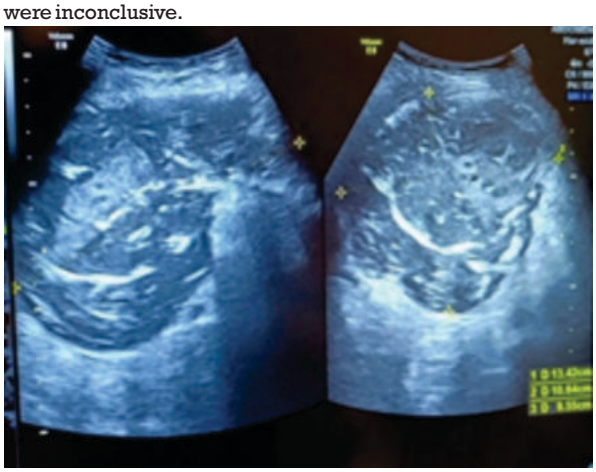

Fig 2 : Ultrasound Show Hemangioma

- MRI of Right Shoulder: Revealed a large expansile lytic mass involving the coracoid process and glenoid of the

right scapula with bony destruction, suggestive of a malignant soft tissue tumor (possible chondrosarcoma or sarcoma).

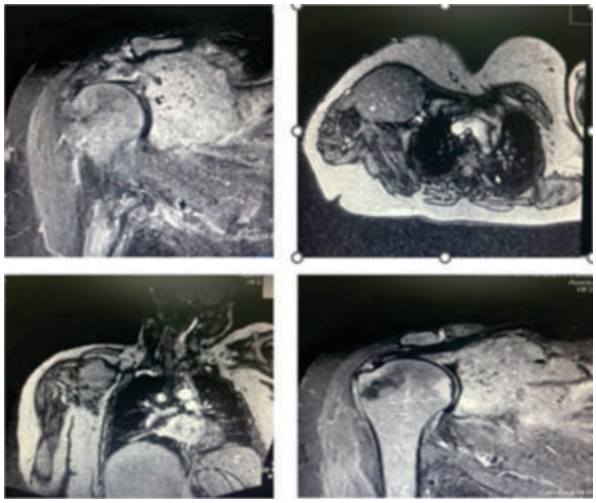

Fig 3 : Mri Of Right Shoulder Large Lytic Mass of the Right Scapula (Coracoid and Glenoid) with Bone Destruction, Suspicious for Malignant Soft-tissue Tumor (e.g., Chondrosarcoma/Sarcoma)

- True-cut biopsy: Reported features of clear cell sarcoma; however, immunohistochemistry favoured myxoid liposarcoma.
- Whole-body PET-CT: Showed a hypermetabolic lobulated mass in the right shoulder with internal necrosis and calcification; a second hypermetabolic renal mass was also noted.

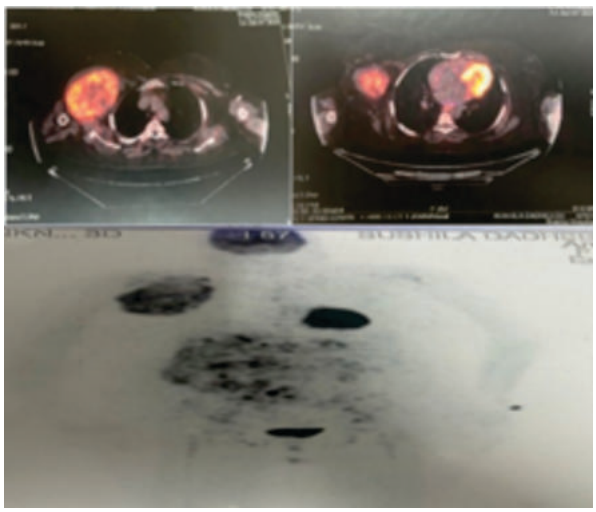

Fig 4: Whole-body PET-CT: Showed a Hypermetabolic Lobulated Mass in the Right Shoulder with Internal Necrosis and Calcification

Management

The patient underwent wide local excision of the shoulder tumor with preservation of major muscles, vessels, and nerves. Hemostasis was achieved, and limb-sparing surgery was successful.

She subsequently received postoperative radiotherapy due to high-grade histology and close surgical margins.

Follow-Up

At 3-month and 6-month follow-up visits, clinical assessment and CT imaging revealed:

- No local or regional recurrence
- Preserved limb function
- A postoperative depression at the resection site, with no cosmetic concern

DISCUSSION

Liposarcoma represents the most common soft tissue sarcoma and commonly presents as a painless, slowly enlarging mass. Myxoid liposarcoma is the second most common subtype and typically affects the extremities. The shoulder girdle is an uncommon site, making this case clinically significant.

Histopathological confirmation remains essential. For deep or large tumors, incisional or core-needle biopsy is preferred. Imaging plays a central role: MRI is useful for assessing soft tissue extension, while CT is superior for detecting bone involvement.

Surgical excision with wide margins remains the cornerstone of treatment. Myxoid liposarcoma is particularly radiosensitive, and adjuvant radiation therapy improves local control. Chemotherapy has limited proven benefit and is not routinely recommended.

This case underscores the importance of a thorough multidisciplinary approach, especially for rare anatomical presentations such as shoulder girdle involvement.

CONCLUSION

Liposarcoma of the shoulder is rare and requires a high index of suspicion. Comprehensive preoperative assessment, including MRI and histopathology, is essential for diagnosis. Limb-sparing wide local excision remains the mainstay of treatment, with adjuvant radiotherapy recommended for high-grade lesions or close margins. Early diagnosis and appropriate multidisciplinary management can result in excellent functional and oncologic outcomes.

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