International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

# Management of Chronic Neglected Recurrent Synoviosarcoma of the Shoulder - A Case Report

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**Abstract:** ***Synovial sarcoma comprises approximately 8% of all soft tissue sarcomas. It occurs at all ages and it has a predilection for the extremities of young adults. We report here a patient who had recurrence synovial sarcoma over the left shoulder joint and operated twice before for local wide excision but recurred two times & presented with 3rd recurrence after 10 years of initial tumor. This patient was operated for FOREQUARTER AMPUTATION TO include wide (Radical) tumor excision. This being locally malignant tumor, and since there was no dissemination or metastasis of this huge extensive tumor, the prognosis in terms of long-term survival is expected to be excellent.***

**Keywords:** Synovial, sarcoma, tumor, shoulder, heterogenous.

## 1. Introduction

Synovial sarcoma is a rare malignant soft-tissue tumour, first described in 1893, and accounts for approximately 8% of all soft-tissue sarcomas. It can occur at any age and at various anatomical sites but shows a predilection for the extremities of young adults. In developing countries, patients often present late because of delayed diagnosis, limited access to healthcare, or lack of awareness, sometimes with life-threatening disease.

We report a case of a patient who presented three years after a third recurrence of synovial sarcoma of the shoulder region with a massive, fungating, infected tumour. This case highlights the importance of meticulous preoperative evaluation, multidisciplinary planning, and the role of forequarter amputation as a life-saving procedure in advanced disease.

## 2. Case Report

A 55-year-old right-hand-dominant housewife presented with a 36-month history of a progressively enlarging mass over the left shoulder. She had a 10-year history of recurrent swelling at the same site and had undergone two previous excisions since 2008 at outside institutions.

On admission, the patient was moribund with features of septicaemia. Local examination revealed a foul-smelling, fungating, “cauliflower-like” malignant mass measuring approximately 25 × 25 × 15 cm, with extensive slough, necrosis, and maggot infestation. The mass encircled the shoulder and scapular region, was extremely painful, and shoulder movements were severely restricted (Fig. 1A and 1B).

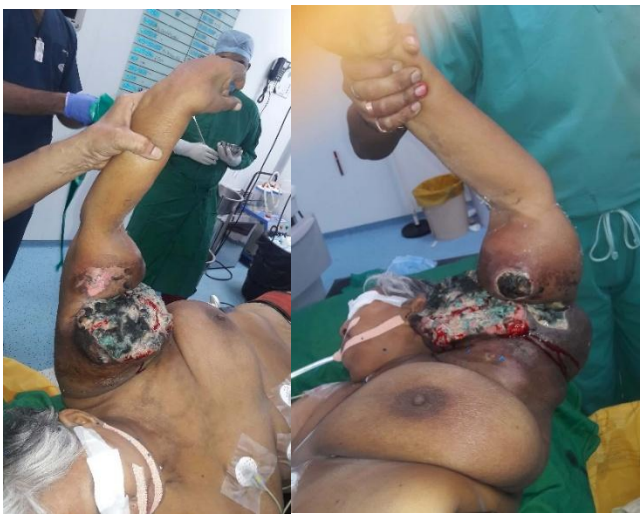

**Figure 1 (A) & 1 (B):** Clinical picture showing huge fungating mass on front of shoulder

Magnetic resonance imaging showed an 18.4 × 15.2 × 12.6 cm intramuscular lesion involving the left pectoral region with encasement of the axillary neurovascular bundle. CT angiography demonstrated a heterogeneous mass located anterior to the shoulder joint and clavicle. Mammography of the left breast and whole-body imaging showed no evidence of distant metastasis. A local piecemeal biopsy confirmed the diagnosis of monophasic synovial sarcoma.

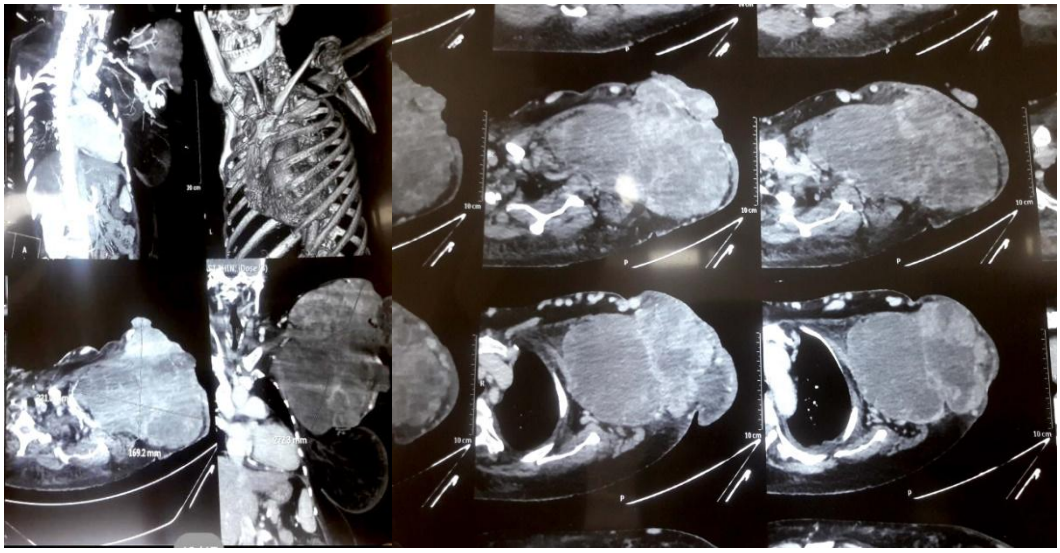

**Figure 2 (A) & 2 (B):** CT/MRI images show heterogeneous mass anterior to shoulder

Initial management focused on resuscitation and control of local sepsis. A multidisciplinary team approach was adopted, involving intensive medical support, broad-spectrum antibiotics, regular wound dressings, and nutritional optimization. With improvement in both local and general condition, the patient was deemed fit for major surgery.

After detailed counselling regarding prognosis and treatment options, the patient consented to a forequarter amputation, as limb-salvage surgery was considered unsafe and oncologic ally inadequate in view of the massive recurrent fungating tumour with neurovascular involvement.

***Surgical technique (forequarter amputation)***

A modified Berger anterior forequarter amputation was performed. The patient was positioned in the right lateral decubitus position. An elliptical incision was made, with the superior apex over the clavicle extending infero laterally, and the inferior apex placed at the mid-axillary line, continuing posterosuperiorly over the scapula to join the superior limb of the incision. Dissection was carried out at the fascial plane over the pectoralis major. The clavicle was divided in its proximal third, taking care to protect the underlying subclavian vein. The subclavian artery was identified, ligated, and divided first, followed by ligation and division of the subclavian vein to minimize collateral bleeding. The proximal trunks of the brachial plexus were ligated and divided. The chest-wall attachments of the pectoral muscles were released.

Posteriorly, fasciocutaneous flaps were elevated, all periscapular muscles were detached, and the scapula was included in the specimen. This allowed en bloc removal of the entire left upper limb along with the clavicle and scapula. The defect was closed primarily using anterior and posterior flaps. Dog-ears were excised, suction drains were placed, and the wound was closed in layers (Fig. 3 and Fig. 4).

**Figure 3:** Amputated limb with mass

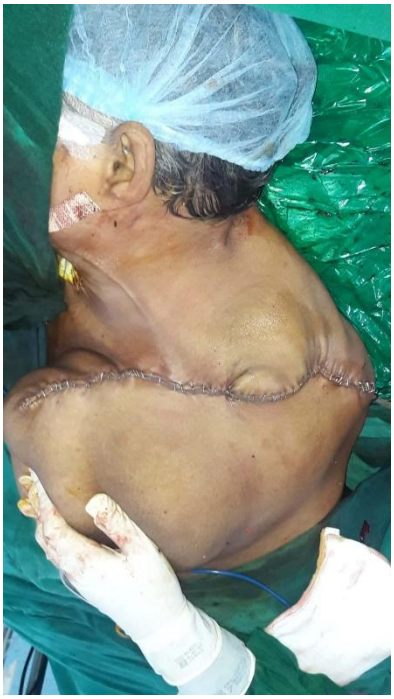

**Figure 4:** Post operative photo of patient.

Postoperatively, the patient underwent regular wound care. A custom tight-fitting brassiere was fabricated to support the large, pendulous left breast and to reduce tension on the surgical incision. Sutures were removed at four weeks. Complete wound healing occurred by seven to eight weeks with a healthy scar and no ulceration.

***Histopathological findings***

Gross examination revealed a large fungating mass measuring approximately 40 cm over the anterior aspect of the shoulder, with extensive necrosis extending into the intramuscular planes. Multiple sections were taken from the tumour and surrounding tissues.

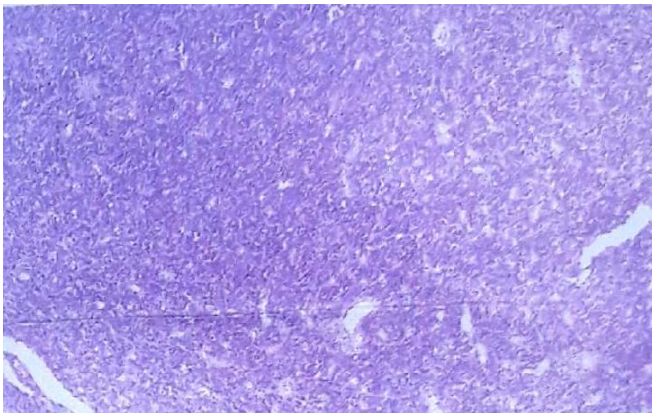

**Figure 5:** Microscopic examination

Microscopic examination showed a grade III monophasic synovial sarcoma with extensive tumour necrosis. Surgical margins were free of tumour with clearance ranging from 1 to 3 cm, and the skin margin was free by approximately 10 cm. Nine lymph nodes were identified, all of which were negative for metastasis. Major nerves and vessels within the tumour field were grossly swollen and infiltrated by tumour tissue (Fig. 5).

## 3. Follow-up

At three-month follow-up after surgery and planned adjuvant therapy, there was no clinical evidence of local recurrence. At six months, CT imaging showed no evidence of local or regional recurrence. Functionally and psychologically, the patient adapted well to limb loss and expressed significant relief from being cured of a foul-smelling, painful, and life-threatening tumor.

## 4. Discussion

Large synovial sarcomas involving the shoulder girdle pose a major therapeutic challenge. The primary goal of treatment is complete excision with negative margins while preserving the brachial plexus and major vessels whenever possible; failure to do so often results in a non-functional limb. Historically, shoulder disarticulation and forequarter amputation have been associated with severe disability and poor cosmetic and psychological outcomes.

With advances in imaging, chemotherapy, radiotherapy, and reconstructive techniques, limb-sparing surgery is preferred when oncologically safe margins can be achieved. However, in the present case, the tumor represented a third recurrence following two prior excisions, had reached an enormous size, was infected, and demonstrated neurovascular invasion. These factors significantly increased the risk of further recurrence and rendered limb salvage both unsafe and functionally futile.

Forequarter amputation, although mutilating, offered the best chance for local control and survival in this critically ill patient and was therefore justified.

The role of chemotherapy in synovial sarcoma remains limited and is generally reserved for advanced or high-risk disease. Its benefit in localized tumours, whether as neoadjuvant or adjuvant therapy, remains controversial. In this case, neoadjuvant chemotherapy resulted in partial central necrosis and mild symptomatic improvement but did not alter resect ability.

## 5. Conclusion

In cases of massive, recurrent synovial sarcoma of the shoulder girdle with neurovascular invasion and systemic compromise, forequarter amputation can be a life-saving procedure when limb-sparing surgery cannot achieve safe oncological margins. Surgery remains the cornerstone of treatment. Chemotherapy has a selective and controversial role, while postoperative radiotherapy is recommended, particularly when margins are close. Early presentation and a multidisciplinary approach improve the chances of limb preservation and long-term survival.

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