# Case Report

# Spindle Cell Carcinoma of Right Thigh – A Case Report

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Soft-tissue swellings are growths visible throughout the body, ranging from skin cells to muscle or bone growth. They can be benign or malignant, with benign masses being more common and typically small in size (<5 cm). Atypical spindle cell tumors (ASPLT) are benign adipocytic neoplasms with ill-defined margins and variable proportions. Spindle cell non-osteogenic bone sarcomas (SCS) are rare and varied malignant tumors. High-grade SCS are managed using the same protocols as osteosarcomas, including neoadjuvant chemotherapy, surgical excision, and post-operative chemotherapy. Lower extremities experience SCS more commonly than upper extremities. Most soft-tissue neoplasms manifest as asymptomatic lumps, and pain rarely occurs unless they reach a massive size or compress neurologic structures. Laboratory investigations, imaging studies, and histopathological examination guide the approach to management, which can include surgical, chemotherapy, radiotherapy, or a combination of these modalities. Once established as a malignant tumor it should be managed in a prompt manner.

**KEY WORDS:** Soft-tissue swellings, Sarcomas, lump, abscess, thigh swelling, Atypical spindle cell tumor, pleomorphic lipomatous tumor, ASPLT, benign adipocytic neoplasm, Spindle cell non-osteogenic bone sarcomas, SCS, fibrosarcomas, leiomyosarcomas, angiosarcomas, malignant lymphomas, osteosarcomas, neoadjuvant chemotherapy.

## INTRODUCTION

Soft-tissue swellings are growths which can be seen anywhere over the body, which can range from growth of the skin cells, subcutaneous mass, growth from the muscles, or the bones. Softtissue tumors can emerge anywhere in the body from tendons, muscle, ligaments, cartilage, nerves, blood vessels, fat, or other tissues. They can be benign or malignant (sarcomas). Benign masses are more common than the malignant counterparts. In general, they are small in size (<5 cm) but can present in any size or shape. Sizes larger than 5 cm have a high risk of malignancy. On palpation, they may be firm or soft. They may be painful or painless. Benign masses have a slow growth with a long history as compared to malignant masses that have rapid growth and a short history.

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## CASE REPORT

A 65-year-old female presented with chief complaints of right thigh swelling for 6 months, which was gradually increasing in size, and was approximately 15 × 10 cm in its current dimensions. The patient had no complaints of pain, trauma, fever, and weight loss. On examination, the swelling was located in the lateral aspect of mid-thigh on the right thigh. It was non-tender, had no local rise of temperature, no color change, and no other signs of inflammation. There were no skin changes over the mass. The mass was immobile on flexing the underlying muscles, suggesting a muscular origin. The blood investigations done were within normal limits. MRI of right thigh was done which suggested large lobulated T2/STIR hyperintense signal lesion seen in the muscle plane in anterior compartment in vastus muscles from proximal to mid-thigh. Mass shows no infiltration of overlying cutaneous and subcutaneous fat planes. There is no bony cortex the structure of femur noted-likely neoplastic etiology. The patient was admitted, investigated, and was managed surgically. The mass was excised under spinal anesthesia and was sent for histopathological examination. During the surgery, a tourniquet was tied around the right thigh to decrease the blood loss.

| | |
|---|---|
| Hemoglobin | 12.1 g% |
| Total leukocyte count | 8450/mm$^3$ |
| Differential count | $N_{78}L_{17}E_{02}M_{03}$ |
| Platelet count | 2.52 lac/mm$^3$ |
| Total RBC count | 4.44 million/mm$^3$ |
| Prothrombin time | 13.9 s |
| INR | 0.89 |
| Australia antigen | Negative |
| HIV (screening) test | Negative |
| HCV | Negative |
| S. Bilirubin-Total | 0.25 mg/dL |
| S. Bilirubin-Direct | 0.13 mg/dL |
| SGOT | 18.0 IU/L |
| SGPT | 20.0 IU/L |
| S. Protein | 6.5 g% |
| S. Albumin | 3.4 g% |
| S. Alkaline phosphatase | 85 mg/dL |
| S. Urea | 18 mg/dL |
| S. Creatinine | 0.8 mg/dL |
| Sodium | 137.0 mmol/L |
| Potassium | 4.5 mmol/L |
| Chloride | 101.0 mmol/L |
| Total Calcium | 8.0 mg/dL |
| Plasma glucose random | 101.0 mg/dL |

Dissection was carried out and mass was located under the vastus lateralis muscle. The mass was located in a separate fascial encasement which separated it from the vastus above and the underlying structures. The mass was excised en bloc. Hemostasis was achieved and the skin was closed after putting in a negative pressure drain in the newly created space. Skin was approximated properly and tension free. Post-operative period was uneventful and the patient was discharged under satisfactory condition. The mass was sent for histopathologic examination, which suggested spindle cell carcinoma of the right thigh.

## DISCUSSION

Atypical spindle cell tumor (also known as pleomorphic lipomatous tumor - ASPLT) is a benign adipocytic neoplasm with ill-defined tumor margins and variable proportions of mild to moderately atypical spindle cells, adipocytes, lipoblasts, pleomorphic cells, multinucleated giant cells, and a myxoid or collagenous extracellular matrix. Patients of any age can develop ASPLT; however, it primarily affects middle-aged individuals. There is a small male majority. The most frequent anatomical distributions are the hand, foot, and thigh.[1] Spindle cell non-osteogenic bone sarcomas (SCS) are a rare and varied group of malignant tumors that include fibrosarcomas, leiomyosarcomas, angiosarcomas, and malignant lymphomas. High-grade SCS is now managed using the same protocols as osteosarcomas, which include neoadjuvant chemotherapy, surgical excision of all detectable diseases, and post-operative chemotherapy. SCS often refers to a class of high-grade cancers with a high risk of early disseminating. A poor prognostic indicator for survival was metastatic disease at presentation. It is generally recognized that prior therapeutic radiation predisposes one to the development of sarcoma. A bad prognostic indicator for tumor size was tumor size above the average size of 9 cm.[2] Lower extremities experience soft-tissue sarcomas 2:1 more commonly than upper extremities. It should be emphasized that the majority of benign and malignant soft-tissue neoplasms manifest as asymptomatic lumps. Many medical professionals think that only painful masses should be concerned. Soft-tissue sarcomas rarely produce pain unless they get to a massive (10 cm) size or compress neurologic structures.[3]

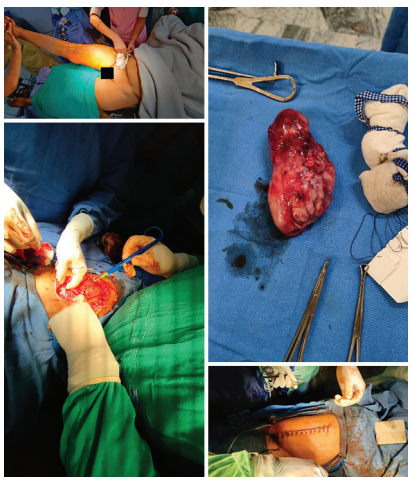
There are no specific laboratory investigations to detect soft-tissue tumors. However, these investigations may provide information regarding comorbidities of the patient and for further management of the patient. Imaging studies such as X-ray, ultrasonography, contrast-enhanced computed tomography, magnetic resonance imaging of the region, or positron emission tomography may provide valuable information regarding the structure, extent, adherence to the surrounding structure, distortion of tissue planes, vascularity, and dissemination of the disease. Histopathological examination of a biopsy specimen may provide adequate information regarding the type of tumor or sarcoma and the course of management that must be taken.

Depending on the clinical impression and investigations, the patient may be managed surgically, with chemotherapy, with radiotherapy or a combination of these modalities.

## CONCLUSION

Soft-tissue tumors may occur anywhere in the body and can originate from skin cells, subcutaneous mass, growth from the muscles, or the bones. Clinical findings and investigations, mainly radiological and histopathological, guide the approach to management of the tumor. The patient can then be managed surgically or with chemotherapy or with a combined approach that can be decided according to the origin, type, sensitivity, and metastasis status.

## CASE PHOTOS



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