

REVIEW ARTICLE

FLANK MONOPHASIC SYNOVIAL SARCOMA IN A FILIPINO PATIENT MIMICKING A CHEST WALL TUMOR: A RARE DIAGNOSTIC CHALLENGE

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ABSTRACT

Synovial sarcoma (SS) is a rare and aggressive soft tissue malignancy, comprising 5%–10% of all soft tissue sarcomas (STS). It predominantly affects young adults and typically arises in the extremities, with atypical presentations in the trunk, such as the flank, being exceedingly rare.¹ Due to its insidious growth and histological resemblance to other spindle cell tumors, SS presents significant diagnostic challenges, leading to delays in treatment. This case underscores the complexity of diagnosing and managing SS in an unusual location, particularly in an older adult.

Keywords:

Soft tissue sarcoma, Synovial sarcoma, uncommon sarcoma site.

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INTRODUCTION

Synovial sarcoma (SS) is an uncommon malignant neoplasm of mesenchymal origin, most frequently encountered in the extremities of young adults. It is extremely uncommon to find it in the trunk, especially the flank, and it presents difficulties for diagnosis and treatment. We describe a 48-year-old Filipino woman who has a rapidly growing mass on her right flank. Surgical excision was carried out after imaging revealed a soft tissue tumor. Immunohistochemical staining with TLE-1 positivity verified the monophasic SS found by histopathological examination. To address the high risk of recurrence, the patient was subsequently started on chemotherapy based on doxorubicin. This case highlights several crucial issues. First, the unusual location of SS in the flank emphasizes how important it is for medical professionals to remain vigilant when assessing soft tissue tumors outside of the extremities. Second, the monophasic subtype—which has spindle cell morphology without epithelial differentiation—can resemble other sarcomas, highlighting the importance of immunohistochemistry in making a conclusive diagnosis. Third, adjuvant chemotherapy is crucial for reducing the risk of recurrence, especially in aggressive subtypes, even though surgical resection is still the mainstay of treatment.

This case adds to the limited epidemiological data on SS in the Asia-Pacific area, where soft tissue sarcomas are underreported, in addition to its clinical implications. Recording uncommon manifestations like flank SS advances knowledge of disease variability and highlights the significance of multimodal treatment approaches.

CASE REPORT

We describe the case of a 48-year-old Filipino woman who developed a growing mass on her right flank. The patient first reported a slight, painless swelling that quickly grew larger over the course of three months, necessitating a medical examination. The lesion was firm, non-tender, and fixed to the underlying structures upon physical examination, which raised the possibility that it was a malignant soft tissue tumor. A heterogeneous soft tissue mass with ill-defined borders was discovered by radiologic imaging, including computed tomography (CT) and ultrasound, which is consistent with a neoplastic process. The flank, an unusual site for synovial sarcoma, and its fast growth pattern made the diagnostic process more difficult. The objective of surgical excision was total tumor removal. The monophasic subtype of synovial sarcoma was identified by histopathological analysis as a

spindle cell neoplasm organized in fascicles without epithelial differentiation. The diagnosis was further supported by immunohistochemical staining, which demonstrated strong TLE-1 positivity, a sensitive marker for synovial sarcoma. This discovery was essential in differentiating the tumor from other spindle cell sarcomas, such as fibrosarcoma or malignant peripheral nerve sheath tumor, which can exhibit similar histological characteristics.

DISCUSSION

The case demonstrates a unique occurrence of synovial sarcoma (SS) which presents in the flank area whereas the disease usually appears in the knee and thigh areas of the body. The trunk, and specifically the flank, represents an unusual site for SS making this case noteworthy both clinically and epidemiologically.

Clinicians experience diagnostic delays with uncommon presentations because they first check for typical soft tissue tumors which occur in these locations, including liposarcoma, fibrosarcoma, or malignant peripheral nerve sheath tumors. The rarity of flank involvement requires clinicians to use extensive differential diagnosis methods when they assess rapidly growing soft tissue tumors which appear outside of extremity regions.

We used multiple treatment methods because synovial sarcoma shows aggressive biological behavior and tends to recur locally while spreading to distant body parts. The patient began treatment with Doxorubicin-based systemic chemotherapy which serves as the standard treatment for high-risk soft tissue sarcomas.

The medical team selected chemotherapy treatment to achieve three goals which included reducing recurrence risk and extending disease-free survival while treating potential micro metastatic disease. The patient receives ongoing medical treatment while doctors monitor them closely and they will have follow-up imaging tests to detect any signs of cancer recurrence or metastatic spread.

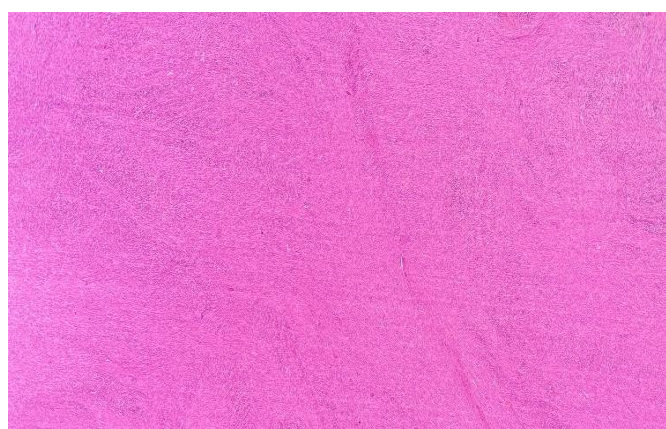


Figure 1: Right flank mass (40x)

A high-power microscopic view showing a cellular mass with fibrous stroma. The tissue demonstrates a dense arrangement with subtle textural variation, consistent with a neoplastic lesion.

High-power view showing densely packed eosinophilic tissue with fibrous stroma. The section highlights increased cellular detail and compact architecture, consistent with a neoplastic process.

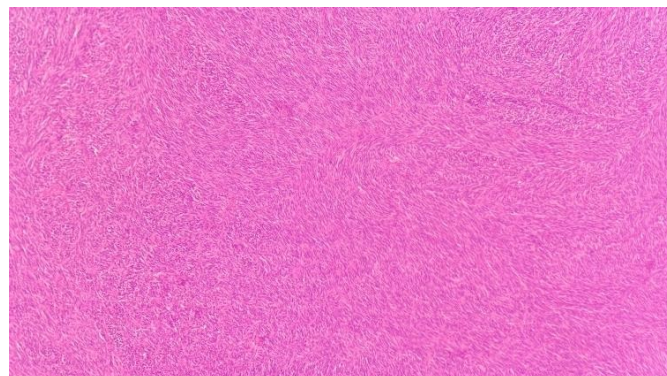


Figure 2: Right flank mass (100x)

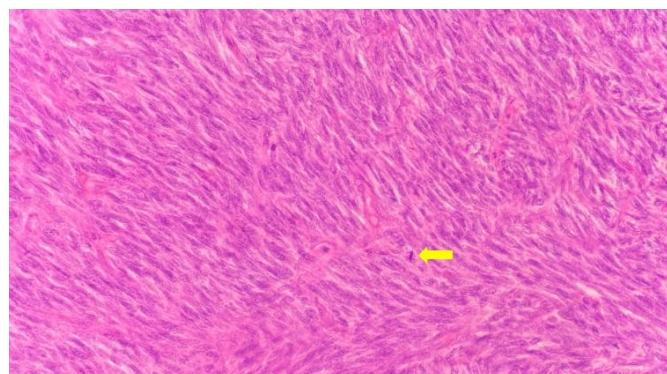


Figure 3: Right flank mass (400x)

High-power view demonstrating spindle-shaped cells arranged in interlacing fascicles, with eosinophilic cytoplasm and elongated nuclei. The section highlights cellular detail, including nuclear features and occasional mitotic activity, consistent with a spindle cell neoplasm. This case demonstrates three main points which show that synovial sarcoma creates diagnostic problems when it appears in unusual places and immunohistochemistry testing proves essential for making correct diagnoses while patients need multiple treatment methods to achieve the best possible results. The presence of synovial sarcoma in an elderly patient shows that doctors must keep checking for this condition because it occurs in people who are not part of the typical age group. The documentation of these uncommon clinical presentations provides essential information which helps to fill existing gaps in the epidemiological research about synovial sarcoma found in the Asia-Pacific region.

CONCLUSION

Flank monophasic synovial sarcoma is a rare and diagnostically difficult presentation of an already rare soft tissue malignancy. Its occurrence in the non-extremities, especially the trunk, is atypical and serves as a reminder to healthcare providers to keep an open mind when approaching quickly growing soft-tissue lesions. Our case shows the occurrence of this histologic subtype of synovial sarcoma in an elderly population and adds to our understanding the demographic profile for patients with synovial sarcoma, insuring for screening across all age demographics. Diagnosis can be arrived at only by careful histopathological examination, with the help of immunohistochemistry even for an atypical case. The spindle cell morphology and lack of epithelial differentiation in the monophasic variant can be very

similar to other sarcomas, highlighting the need for TLE-1 as a confirmatory marker. In their absence, misclassification is likely to remain substantial and contribute to delayed treatment and negative patient outcomes. Synovial sarcoma management should be multimodal. Surgery remains the mainstay of treatment, but adjuvant systemic therapy with Doxorubicin-based chemotherapy is necessary due to the aggressive biology of this tumor, and in efforts to decrease the risk of recurrence and improve long-term survival. Here, we demonstrate the value of incorporating local therapy with systemic treatment when faced with such a high-risk presentation for optimal patient management. This case provides useful epidemiologic information about synovial sarcoma in the Asia-Pacific region, where soft tissue sarcomas are underrepresented in published literature. Documenting cases like flank SS furthers regional cancer registries and increases the likelihood that healthcare providers will become more aware of these rare conditions; this will ultimately allow for improved treatment guidance to be established for patients.

The findings of this case also point out that strong clinical suspicion, appropriate diagnostic methods, and comprehensive treatment strategies are critical to ensuring the recognition and effective management of very rare soft tissue sarcomas.

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