Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Surgery

Deep Rhabdoid Melanoma of the Lower Limb: Synchronous Tumors of The Thigh and Leg - A Rare Case Report

Omar MOURAFIQ[1,2*], Mohammed TBOUDA[3], Abdellatif BENBOUHA[2], Hicham SALAHI[2], Omar MERGAD[2]

[1]Department of Orthopaedic Surgery and Traumatology, Oued Eddahab Military Hospital Agadir, Morocco
[2]Faculty of Medicine and Pharmacy of Marrakech, Cadi Ayyad University, Marrakech, Morocco
[3]Pathology Department, Oued Eddahab Military hospital, Faculty of Medicine and Pharmacy, Ibn zohr university, Agadir

DOI: https://doi.org/10.36347/sjmcr.2026.v14i09.002 | **Received:** 08.06.2026 | **Accepted:** 19.08.2026 | **Published:** 02.09.2026

***Corresponding author:** Omar MOURAFIQ
Department of Orthopaedic Surgery and Traumatology, Oued Eddahab Military Hospital Agadir, Morocco

Abstract | **Case Report**

Background: Rhabdoid melanoma is a rare and aggressive variant of malignant melanoma. Deep soft-tissue involvement is exceptional and may mimic other soft-tissue tumors. ***Case Presentation:*** A 45-year-old woman with no significant medical history presented with a six-month history of left lower-limb pain. Two deep soft-tissue masses were identified in the thigh and leg. MRI showed lesions measuring 38 × 34 mm and 26 × 19 mm, respectively. Incisional biopsy confirmed rhabdoid melanoma. CT and PET scans showed no distant metastases. Both tumors were widely excised with negative margins (R0), followed by ipsilateral inguinal lymph node dissection and adjuvant radiotherapy. Histopathology confirmed rhabdoid melanoma in both lesions with clear margins. ***Discussion:*** Synchronous deep rhabdoid melanoma of the thigh and leg is exceptionally rare and can mimic other soft-tissue neoplasms. Histopathological confirmation is essential, and wide surgical excision with negative margins remains the cornerstone of treatment in localized disease.

Keywords: Rhabdoid melanoma; deep soft tissue; thigh; leg; lower limb; melanoma.

INTRODUCTION

Rhabdoid melanoma is a rare and aggressive morphological variant of malignant melanoma characterized by rhabdoid tumor cells and often associated with diagnostic challenges due to loss of conventional melanocytic markers. Although mainly reported in cutaneous and metastatic sites, deep soft-tissue involvement is extremely uncommon and may mimic other soft-tissue tumors, including sarcomas and peripheral nerve sheath tumors. [1].

We report a rare case of synchronous deep rhabdoid melanoma involving the thigh and leg of the same lower limb in a 45-year-old woman. The patient was treated with wide surgical excision of both tumors, ipsilateral inguinal lymph node dissection, and adjuvant radiotherapy, with no evidence of recurrence at six months.

CASE PRESENTATION

A 45-year-old woman with no significant medical history presented to our department at the Oued Eddahab Military Hospital in Agadir with a six-month history of pain in the left lower limb, associated with localized inflammatory changes. Physical examination revealed a deep, painful mass on the medial aspect of the proximal third of the left leg, measuring approximately 4 × 3 cm, with overlying erythema. A second, painless mass was identified on the medial aspect of the distal third of the left thigh, measuring approximately 5 × 4 cm. (Figure 1)

Plain radiographs of the left femur and leg showed no evidence of bone involvement or other abnormalities. (Figure 2) Magnetic resonance imaging (MRI) of the left thigh and leg revealed two distinct soft-tissue masses. The thigh lesion measured 38 × 34 mm, whereas the leg lesion measured 26 × 19 mm. Based on their imaging characteristics, the lesions were initially considered suggestive of peripheral nerve sheath tumors or other soft-tissue neoplasms. (Figure 3)

A biopsy of the leg mass was performed. Histopathological examination revealed a rhabdoid melanoma. Given the rarity of this diagnosis and the presence of two lesions involving the same lower limb,

the case was discussed at a multidisciplinary tumor board.

A thoraco-abdomino-pelvic computed tomography (CT) scan showed no evidence of distant metastatic disease. A positron emission tomography (PET) scan was subsequently performed and also revealed no secondary lesions.

In view of the absence of distant metastatic disease and the possibility of complete surgical resection, both tumors were widely excised with negative surgical margins (R0 resection), together with ipsilateral inguinal lymph node dissection. (Figure 4) Histopathological examination of both surgical specimens confirmed the diagnosis of rhabdoid melanoma in both the thigh and leg lesions. Both tumors were completely excised with clear surgical margins. (Figure 5,6) The patient subsequently received adjuvant radiotherapy.

At six months of follow-up, the patient had a favorable clinical outcome, with complete resolution of the pain and no clinical evidence of recurrence. Follow-up MRI confirmed the absence of local recurrence. (Figure 7)

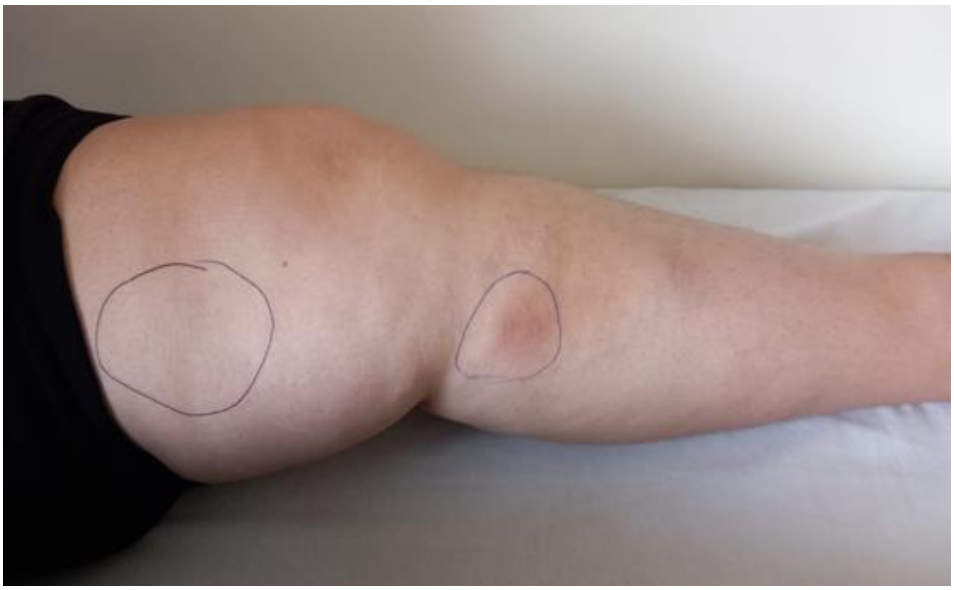

Figure 1: Clinical examination showing a deep, painful mass with overlying erythema on the medial aspect of the proximal third of the left leg (4 × 3 cm), associated with a second, painless mass on the medial aspect of the distal third of the left thigh (5 × 4 cm)

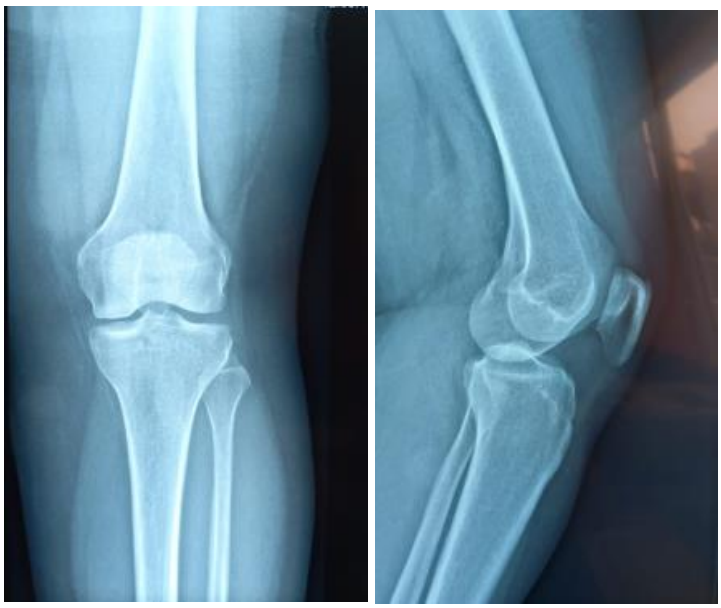

Figure 2: Plain radiographs of the left femur and leg showing no evidence of osseous involvement or other abnormalities

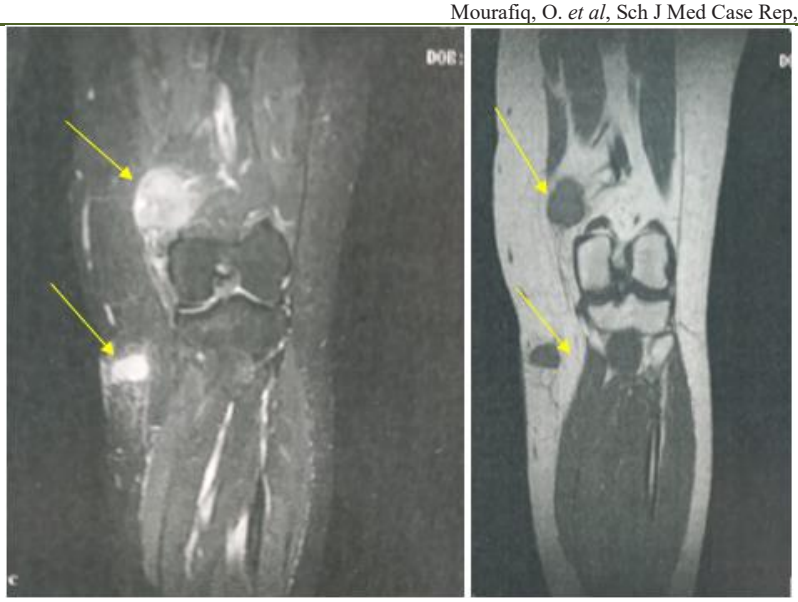

Figure 3: Magnetic resonance imaging of the left thigh and leg demonstrating two distinct soft-tissue masses measuring 38 × 34 mm and 26 × 19 mm, respectively. The yellow arrows indicate the location of the lesions. Based on their imaging characteristics, the lesions were initially considered suggestive of peripheral nerve sheath tumors or other soft-tissue neoplasms

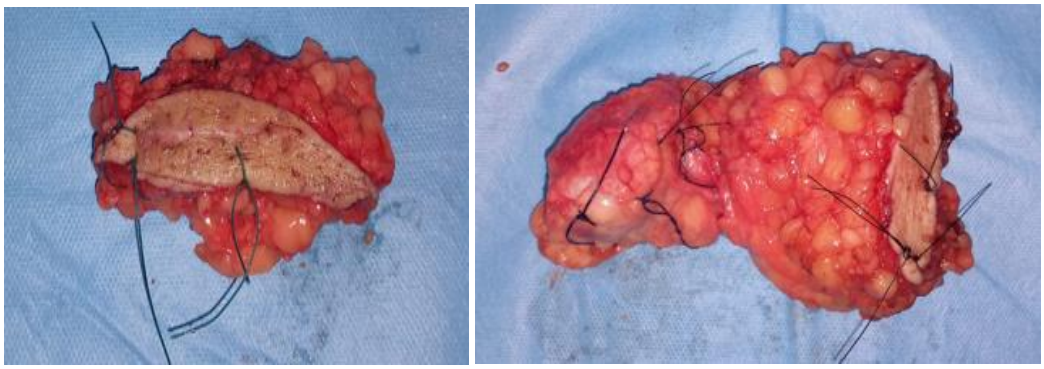

Figure 4: Wide surgical excision of both tumors with negative surgical margins (R0 resection)

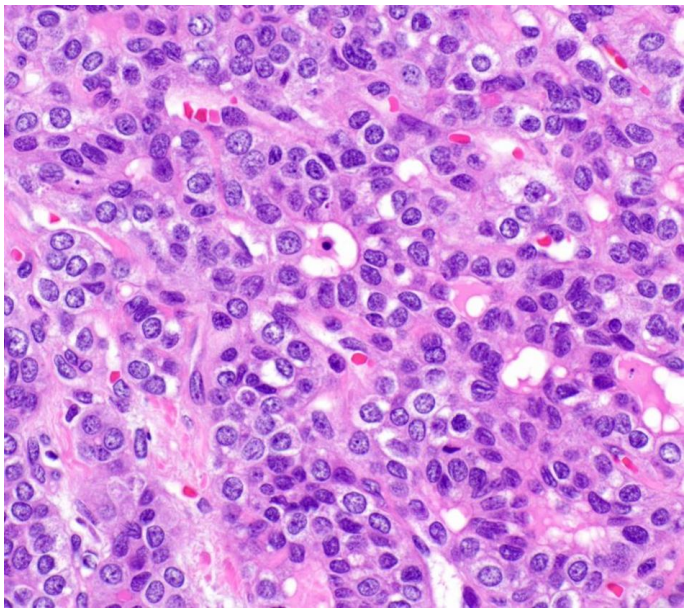

Figure 5: Tumor proliferation composed of sheets of pleomorphic round cells exhibiting rhabdoid features (H&E ×200)

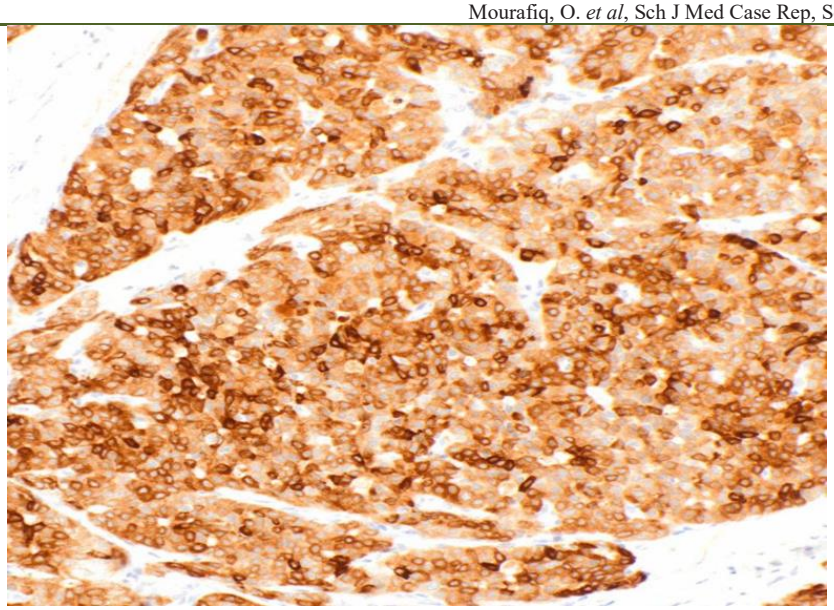

Figure 6: Strong expression of Melan-A by tumor cells on immunohistochemical staining (IHC ×200)

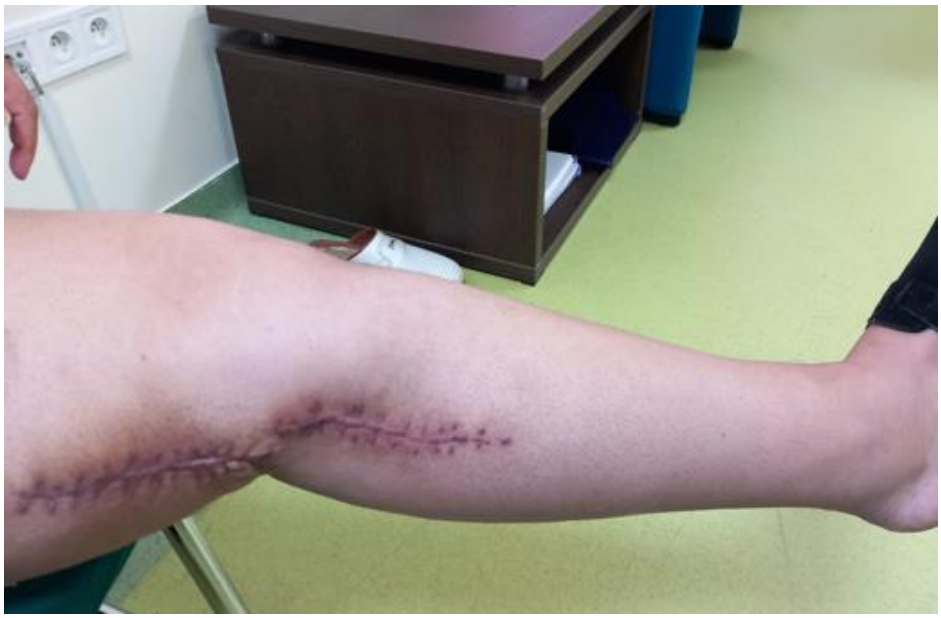

Figure 7: Clinical follow-up at six months showing a favorable outcome, with complete resolution of pain and no clinical evidence of local recurrence

DISCUSSION

Rhabdoid melanoma is a rare and aggressive morphological variant of malignant melanoma characterized by large cells with abundant eosinophilic cytoplasm, eccentric nuclei, and prominent nucleoli. It is mainly reported in cutaneous or metastatic lesions, whereas deep soft-tissue involvement is exceptionally rare.[2]

Our case is particularly unusual because of the simultaneous presence of two deep soft-tissue tumors involving the thigh and leg of the same lower limb in a patient without a previous history of melanoma. The absence of bone involvement and distant metastases on CT and PET imaging further emphasizes the atypical presentation. The initial MRI findings were nonspecific and suggested peripheral nerve sheath tumors or other soft-tissue neoplasms, illustrating the diagnostic difficulty of this entity.

Histopathological and immunohistochemical examination is essential for diagnosis. Rhabdoid melanoma may show reduced or absent expression of conventional melanocytic markers, particularly HMB-45 and Melan-A, and may mimic poorly differentiated soft-tissue sarcomas such as rhabdomyosarcoma or epithelioid sarcoma. A comprehensive immunohistochemical panel, including S100, SOX10 and other melanocytic markers, is therefore important. [3,4]

Because of its rarity, there is no specific standardized treatment for deep rhabdoid melanoma. For localized and resectable disease, wide surgical excision with negative margins remains the cornerstone of treatment. [5,6,7]

In our patient, both tumors were widely excised with negative margins (R0 resection), followed by ipsilateral inguinal lymph node dissection and adjuvant radiotherapy after multidisciplinary discussion. Complete staging with CT and PET was performed to exclude distant disease.

The prognosis of rhabdoid melanoma is generally considered poor, although the independent prognostic impact of rhabdoid morphology remains uncertain because of the limited number of reported cases. [8]) In our patient, the clinical outcome was favorable at six months, with complete resolution of pain and no evidence of local recurrence on follow-up MRI. Nevertheless, prolonged surveillance is necessary because of the potential for late recurrence and metastatic dissemination.

This case highlights the importance of considering rhabdoid melanoma in the differential diagnosis of deep soft-tissue tumors and emphasizes the role of multidisciplinary management and complete surgical excision in localized disease.

Conflict of Interest: No conflicts of interest.

REFERENCES

1. Taylor, M., Blomberg, W., & Taylor, K. (2022). Dedifferentiated primary melanoma with rhabdoid features: a case report and literature review. Journal of Dermatology &Amp; Cosmetology, 6(4), 108–110. https://doi.org/10.15406/jdc.2022.06.00221
2. Gavino, A. C. P., & Gillies, E. M. (2007). Metastatic rhabdoid melanoma: report of a case with a comparative review of the literature. Journal of Cutaneous Pathology, 35(3), 337–342. Portico. https://doi.org/10.1111/j.1600-0560.2007.00811.x
3. Rekhi, B., Santosh, A., & Rastogi, S. (2024). A Rare Case of a Malignant Epithelioid Neoplasm With an Underlying Novel Fusion, Identified on Next-Generation Sequencing (NGS). International Journal of Surgical Pathology, 33(1), 172–177. https://doi.org/10.1177/10668969241246462
4. Glutsch, V., Wobser, M., Schilling, B., Gesierich, A., Goebeler, M., & Kneitz, H. (2022). PRAME Expression as Helpful Immunohistochemical Marker in Rhabdoid Melanoma. Dermatopathology, 9(2), 148–157. https://doi.org/10.3390/dermatopathology9020019
5. Shalata, W., Attal, Z. G., Solomon, A., Shalata, S., Abu Saleh, O., Tourkey, L., Abu Salamah, F., Alatawneh, I., & Yakobson, A. (2024). Melanoma Management: Exploring Staging, Prognosis, and Treatment Innovations. International Journal of Molecular Sciences, 25(11), 5794. https://doi.org/10.3390/ijms25115794.
6. Iliesiu, A., Nimigean, V., Tapoi, D. A., & Costache, M. (2025). Primary Cutaneous Rhabdomyosarcomatous Melanomas—A Report of Two Cases and Literature Review. Diagnostics, 15(11), 1357. https://doi.org/10.3390/diagnostics15111357
7. Chung, B. Y., Ahn, I. S., Cho, S. I., Kim, H. O., Kim, K. H., Park, C. W., & Lee, C. H. (2011). Primary Malignant Rhabdoid Melanoma. Annals of Dermatology, 23(Suppl 2), S155. https://doi.org/10.5021/ad.2011.23.s2.s155
8. Ulici, V., Ameline, B., John, I., Dermawan, JK, Karunamurthy, A., Dehner, CA, Fernandez, AP, Azzato, E., Hattery, T., Kilpatrick, SE, Isaacson, AL, Ko, JS, Fritchie, KJ, Baumhoer, D., et Billings, SD (2026). Rhabdomyosarcome épithélioïde/pléomorphe cutané : un mélanome déguisé ? Étude immunohistochimique, moléculaire et épigénétique de 13 patients. Modern Pathology, 39(5), 100983. https://doi.org/10.1016/j.modpat.2026.100983In