Case Presentation

Verrucous keratotic melanoma: A misleading form of recurrence

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Keywords: atypical recurrence, differential diagnosis, verrucous keratotic melanoma

Dermatology Online Journal

Vol. 31, Issue 6, 2025

Abstract

Verrucous keratotic melanoma (VKM) is a rare variant, accounting for approximately 3% of melanomas. Its deceptive clinical presentation, often mimicking benign lesions such as warts or seborrheic keratoses, contributes to frequent misdiagnoses and delayed management. We report the case of an 84-year-old woman with a history of nodular melanoma of the left foot, presenting with recurrent keratotic verrucous lesions at the site of prior surgical excision. Histopathological analysis confirmed VKM with a Breslow thickness of 2 mm and Clark level III. No metastases were detected on positron emission tomography. This case underscores the plasticity of melanoma, which can recur in atypical forms, and highlights the importance of considering VKM in the differential diagnosis of hyperkeratotic lesions. Early recognition and surgical excision are critical to optimizing patient outcomes and reducing the risk of systemic dissemination. Increased awareness of VKM characteristics may improve diagnostic accuracy and management.

Introduction

Verrucous keratotic melanoma (VKM) is a rare and atypical variant, accounting for approximately 3% of all melanomas. It shows a slight predilection for women and commonly affects the extremities.[1] This variant can arise from any conventional clinical type of melanoma or appear de novo as a primary tumor. Unlike conventional melanomas, verrucous melanoma presents with a clinically misleading verrucous, hyperkeratotic surface, often mistaken for benign lesions such as warts or seborrheic keratoses. This diagnostic confusion occurs in more than 50% of cases, potentially delaying appropriate management and significantly affecting patient prognosis. We describe a case of melanoma recurrence presenting in a deceptive keratotic verrucous form.

Case Synopsis

An 84-year-old woman underwent surgery 3 years ago for a histologically confirmed nodular melanoma of the left foot. She consulted our dermatology department for the appearance of 2 painless keratotic verrucous lesions on the left foot, which had been evolving for 6 months. Clinical examination revealed 2 juxtaposed, round, gray-brown lesions, sharply demarcated with regular raised edges and a keratotic verrucous surface, each measuring 1.5 cm in length, located on the lateral border of the left foot over the prior melanoma surgical resection scar (**Figure 1**). Dermoscopy showed dominant hyperkeratosis with gray spots at the periphery (**Figure 2**). Examination of lymph nodes, particularly in the popliteal and inguinal regions, revealed no abnormalities.

A prior diagnosis of verrucous carcinoma or keratoacanthoma had been made by another dermatologist, who referred the patient for further management. Considering the history of melanoma and the appearance of the lesions on the resection scar, recurrence of melanoma in its keratotic verrucous form was the primary suspicion. A biopsy was performed, revealing papilliferous acanthosis and epidermal hyperplasia with elongated rete ridges and parakeratosis (**Figure 3**), along with proliferation of atypical melanocytes arranged along the basement membrane and throughout the epidermis (**Figure 4**). The entire lesion was subsequently excised with 2 cm lateral margins (**Figure 5**) and submitted for histopathological investigation, which revealed invasive melanoma with a Breslow thickness of 2 mm and Clark level III. Positron emission tomography showed no evidence of metastases.

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Figure 1. *Keratotic verrucous lesions located on the lateral border of the left foot over the resection scar.*

Case Discussion

VKM can develop de novo or arise from any conventional type of melanoma. For this reason, Clark et al[2] did not include it in their widely accepted classification, making this clinical variant less well known and less frequently reported in the literature. Clinically, this variant is characterized, as described by Steiner et al,[3] by a hyperkeratotic verrucous surface with scaling, relatively uniform dark pigmentation with a grayish hue, sharp demarcation with roughly well-defined contours, and a firm, fleshy consistency. These features, as observed in our patient, may erroneously suggest a diagnosis of seborrheic keratosis, as described in several case reports.[4,5] This underscores the importance of considering VKM in the differential diagnosis of hyperkeratotic lesions, with histopathological analysis being essential for definitive diagnosis.

Figure 2. *Dermoscopy image showing dominant hyperkeratosis with gray dots at the periphery.*

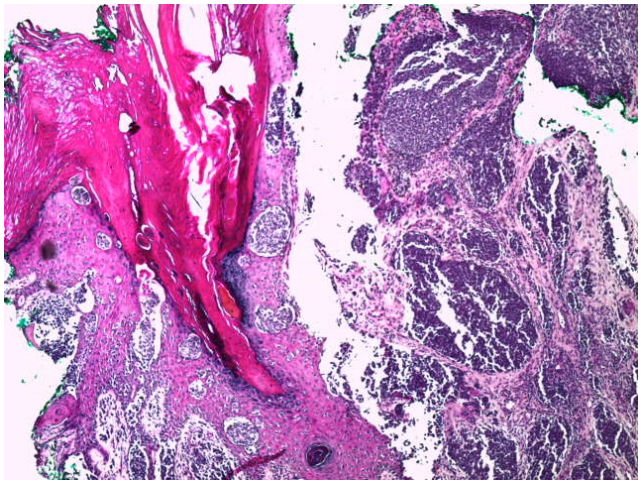

Figure 3. *Histology showing papilliferous acanthosis, epidermal hyperplasia with elongated rete ridges, and intraepidermal melanocytic proliferation (hematoxylin-eosin, original magnification ×50).*

Histopathological characteristics reported in the literature and observed in our case include epidermal hyperplasia with elongated rete ridges, orthokeratosis or irregular parakeratosis, and scattered atypical melanocytes throughout the basal layer and epidermis. A distinctive feature is the discordance between Breslow thickness and Clark level, noted in nearly all reported cases, in which clinically advanced lesions contrast with moderate tumor thickness, likely owing to marked epidermal hyperplasia and hyperkeratosis.[4]

The main risk factors for melanoma recurrence include advanced age at diagnosis, high Clark and Breslow

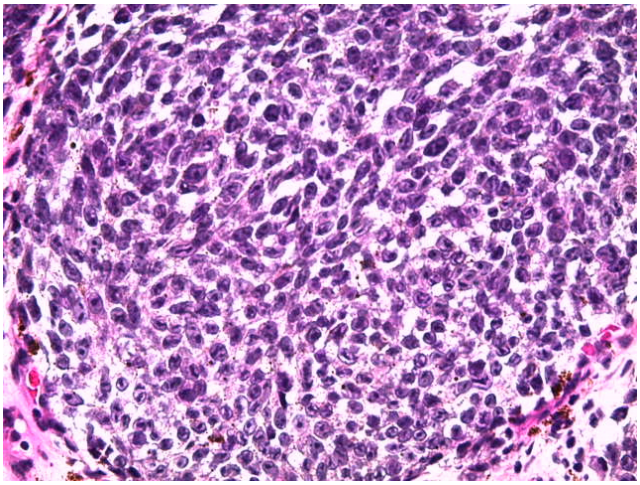

Figure 4. *Histology showing ovoid tumor cells with abundant cytoplasm, ovoid hyperchromatic anisokaryotic nuclei, and prominent macronucleoli (hematoxylin-eosin, original magnification ×100).*

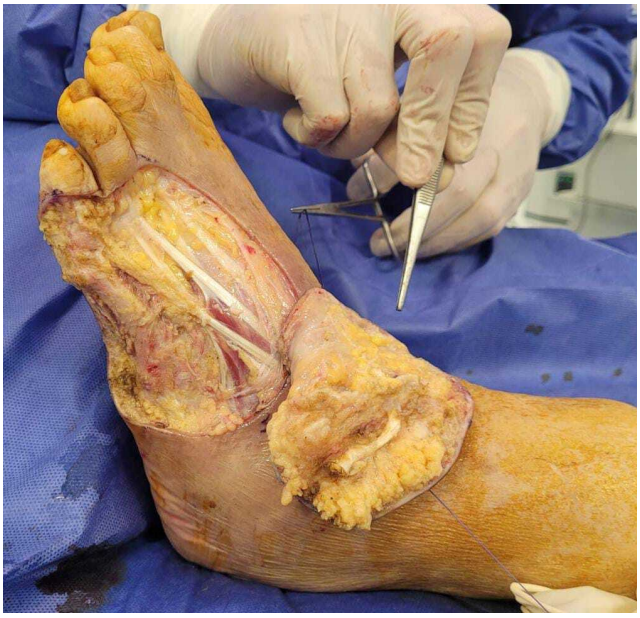

Figure 5. *Surgical excision of the lesion with wide lateral margins.*

levels, and the presence of ulceration.[6] Local recurrences, such as observed in our patient, raise questions regarding pathogenesis. Studies by Heenan[7] and Yu[8] suggest that local recurrences often result from local metastases rather than solely incomplete excision, indicating potential systemic dissemination at the time of initial diagnosis.

A particularly notable aspect of the present case is the altered clinical presentation during recurrence compared with the initial lesion. This morphological transformation, although rarely reported, illustrates melanoma's plasticity to adopt different clinical features during recurrence. It may reflect evolution toward a distinct histological subtype or changes in the local tumor environment influencing development.[9] This observation highlights the need for clinicians to remain vigilant when evaluating recurrences that may mask their malignant nature with atypical appearances.

Traditional recommendations for wide excision margins aim to reduce local recurrences. However, as demonstrated in studies by Heenan[7] and Yu,[8] this approach does not always significantly impact overall survival, particularly when local recurrences represent metastatic spread. In the present case, excision with a 2 cm margin was performed, consistent with guidelines for lesions of moderate depth. The absence of metastases on positron emission tomography emphasizes the importance of systematic monitoring to identify potential systemic progression promptly.

Conclusion

VKM, owing to its deceptive clinical presentation, is often underestimated in practice, leading to diagnostic delays and suboptimal management. The recurrence observed in this case highlights the melanoma's ability to present in a different form, further complicating identification. Surgical resection remains the primary treatment modality, emphasizing the importance of early recognition and heightened vigilance for this rare variant.

Potential conflicts of interest

The authors declare no conflicts of interest.

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