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# Verrucous melanoma masquerading as a seborrheic keratosis

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## Abstract

Seborrheic keratosis is a benign condition that can mimic many different non-melanoma and melanoma neoplasms. There have been several case reports of underlying squamous cell carcinomas or intraepidermal carcinomas appearing within lesions that look analogous to seborrheic keratoses. We present a patient with a verrucous melanoma that could be mistaken for a benign skin tumor like an inflamed seborrheic keratosis. In our patient's case, her verrucous plaque was initially clinically suggestive of a benign seborrheic keratosis. However, given the patient's complaint of pain associated with the lesion, a biopsy was performed and revealed a verrucous-keratotic malignant melanoma, which was subsequently removed through surgical excision. It is important to remain vigilant of this diagnosis, as treatment for inflamed seborrheic keratosis often includes a trial of cryotherapy, which potentially could lead to a delayed diagnosis of an underlying malignant lesion.

*Keywords: malignant melanoma, verrucous melanoma, verrucous-keratotic melanoma, seborrheic keratosis*

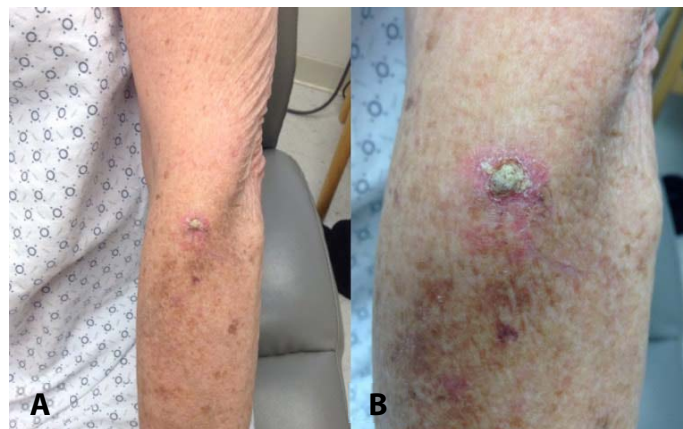
## Introduction

Seborrheic keratosis is a benign condition that can mimic many different non-melanoma and melanoma neoplasms. There have been several case reports of underlying squamous cell carcinomas or

intraepidermal carcinomas appearing within lesions that look analogous to seborrheic keratoses. We present a patient with a verrucous melanoma that could have been mistaken for a benign skin tumor like an inflamed seborrheic keratosis. It is important to remain vigilant of this diagnosis, as treatment for inflamed seborrheic keratosis often includes a trial of cryotherapy, which potentially could lead to a delayed diagnosis of an underlying malignant lesion.

## Case Synopsis

A 78-year-old otherwise healthy woman presented with a several-month history of an approximately one cm tender, hyperkeratotic brown verrucous stuck-on plaque on her left forearm. She had no



**Figure 1. A)** On the left upper extremity, there is an approximately one-centimeter tender, hyperkeratotic, brown, verrucous stuck-on plaque. **B)** A close-up view of the lesion.

personal or family history of non-melanoma or melanoma skin cancers. Given the patient's complaint of pain associated with the lesion, a biopsy was performed and revealed a verrucous-keratotic malignant melanoma, which was subsequently removed through excision.

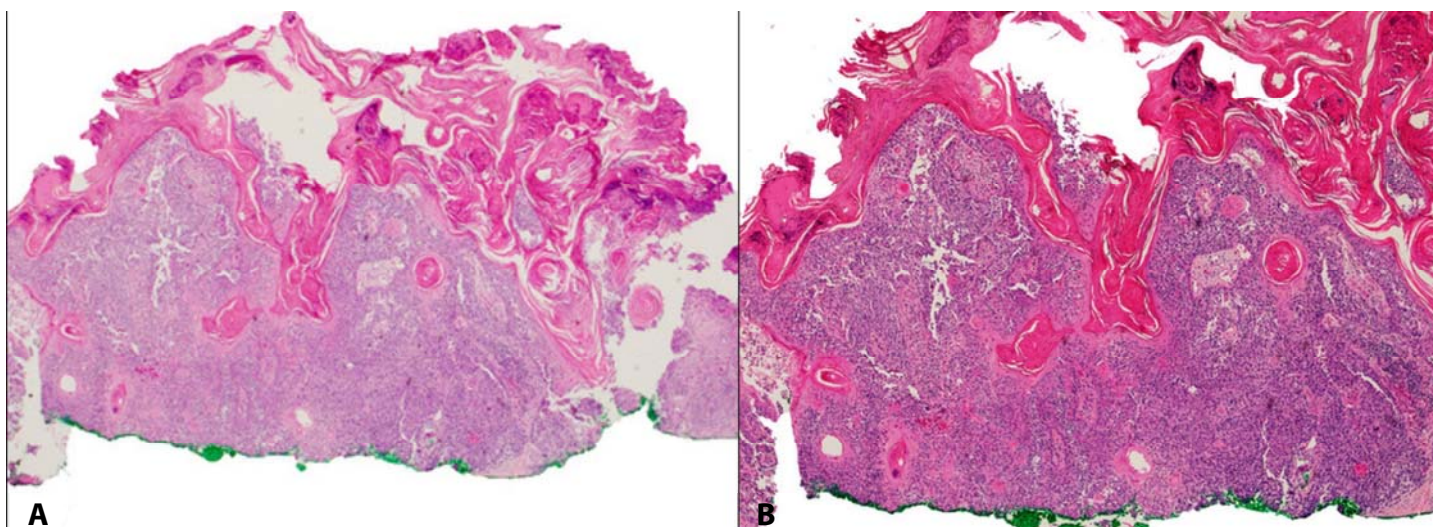
## Case Discussion

Seborrheic keratoses are skin growths typically recognized as benign tumors. However, some studies have reported the possibility of malignant transformation in these tumors. Conditions such as intraepidermal carcinoma and squamous cell carcinoma have been found to arise within seborrheic keratoses [1]. To our knowledge, there are no reported occurrences of melanoma arising from a true seborrheic keratosis. Our case report highlights how verrucous melanoma can be mistaken for an inflamed seborrheic keratosis. Clinicians should remain vigilant if lesions are tender, bleeding, or growing rapidly regardless of a benign appearance.

In 1967, Clark classified malignant melanomas into three types: superficial spreading melanoma, nodular melanoma, and lentigo maligna melanoma [2]. Although Clark recognized that occasionally a

verrucous surface would present on these three types of melanomas, he and his associates concluded that such brown-yellow, irregularly elevated, and warty surfaces indicated only a secondary epidermal change that can occur with any melanoma [2]. Eventually, acral lentiginous melanoma was also recognized as another entity [3]. Since Clark's classifications, there are now multiple recognized variants: the desmoplastic melanoma, the nevoid melanoma, the "minimal-deviation melanoma," melanoma with prominent pigment synthesis, "animal-type melanoma," and the malignant blue nevus [4]. Additionally, other sources have described a "verrucous-keratotic malignant melanoma" [5, 6].

In our patient's case, her verrucous plaque was initially clinically suggestive of a benign seborrheic keratosis (**Figure 1**). However, given the patient's complaint of pain associated with the lesion, we performed a biopsy and this revealed a verrucous-keratotic malignant melanoma. Verrucous malignant melanoma is a rare form of melanoma that both clinically and histologically mimics seborrheic keratosis. They occur more commonly in women and favor the extremities but can be found on any anatomical site [5]. Verrucous melanomas share



**Figure 2. A)** Magnification of the shave biopsy from the left forearm shows features of an invasive melanoma with verrucous features extending to the base and peripheral biopsy edges. Lymphocytes are present and non-brisk. This case demonstrates a combination of squamoproliferative and melanocytic processes and may represent a collision tumor. Given the verrucous nature of this lesion and extensive in-situ component, Breslow depth can be misleading as the epidermal component of this lesion is particularly expansile. Immunohistochemistry stained S100 positive, MART-1 positive, SOX-10 positive, and Ki-67 positive. Breslow depth 1.37mm with no ulceration. H&E, 2x. **B)** On closer examination, verrucous epidermal component can be distinguished from the underlying melanocytic processes. H&E, 4x.

some features with seborrheic keratoses such as monomorphous pigmentation, moderately irregular outline, and verrucous surface. However, to distinguish the two, verrucous melanomas do not generally have a friable consistency, which is unlike that of seborrheic keratosis [3].

Histologically, verrucous melanomas are asymmetric and rather sharply demarcated, with a verrucous surface caused by marked epidermal hyperplasia; this hyperplasia results in a discrepancy between tumor thickness according to Breslow and Clark level [3].

Histopathologic examination of our patient's plaque demonstrated a combination of squamoproliferative and melanocytic processes (**Figure 2**). Furthermore, given the verrucous nature of this lesion and extensive in situ component, Breslow depth may be misleading as the epidermal component of this

lesion is particularly expansile. Given these features, a diagnosis of an invasive melanoma with verrucous features was given. Immunohistochemistry was confirmatory as well; the lesion stained positive for S100 and MART-1, immunologically consistent with a melanocytic origin.

## Conclusion

In summary, we present a rare case of a verrucous keratotic melanoma that mimicked a benign skin tumor clinically. This case highlights the importance of recognizing seemingly benign-appearing features present in both malignant verrucous melanoma and seborrheic keratosis.

## Potential conflicts of interest

The authors declare no conflicts of interests.

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