A man in his 40s presented with a history of prolonged voriconazole therapy. His dermatologist observed the development of lentigines in his dark-skinned skin while he was receiving treatment. This observation led to the diagnosis of atypical melanocytic nevi. The patient had no history of skin cancer and was not using sunscreen regularly. The lentigines were noted to be increasing in number and size, and the patient was advised to increase his sun protection and to seek medical attention if any atypical changes were observed.

The mechanism for voriconazole-induced photosensitivity and phototoxicity remains unknown. One current hypothesis includes a potentially phototoxic UV-B-absorbing N-oxide metabolite of voriconazole. Alternatively, inhibition of CYP450 with voriconazole therapy is thought to possibly increase serum retinol level, a known photosensitizer.

Malignant skin conditions associated with chronic voriconazole use, including melanoma in situ and squamous cell carcinoma, have been reported in patients with Fitzpatrick skin types III or below and more commonly in individuals with some degree of immune compromise. More recently, the development of lentigines in a dark-skinned patient receiving long-term voriconazole therapy was described. Our patient is similar in the abrupt development of lentigines and photodamage characterized by mild poikiloderma but differs from the prior report owing to the severe melanocytic atypia observed.

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Cutaneous adverse effects of long-term voriconazole therapy are not only burdensome but also lead to morbidity and mortality. Product labeling recommends discontinuation of voriconazole therapy if a squamous cell carcinoma or melanoma develops, which can lead to adverse outcomes if alternative antifungal therapies are limited. In addition, for patients awaiting transplant, the development of a melanoma also could compromise the ability to receive an organ donation.

This report highlights the development of atypical melanocytic lesions in a dark-skinned individual receiving concurrent voriconazole and immunosuppression therapy and reinforces the importance of counseling patients on appropriate sun protection and sun avoidance. These patients, regardless of skin type, require frequent dermatologic follow-up and surveillance with a low threshold for biopsy of atypical lesions.

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Onychocytic Matricoma: A New, Important Nail-Unit Tumor Mistaken for a Foreign Body

Onychocytic matricoma (OCM) is a benign acanthoma of the nail unit that presents with localized thickening of the nail plate and melanonychia. This newly described entity has suggestive clinical features and distinctive histopathologic changes.

Report of a Case | A man in his 40s presented with a history of traumatic injury to the nail unit, after which he noted a dark line under the nail, which he assumed to be a splinter. It persisted for 3 years without any notable change. The patient reported removing portions of it when he would clip the nail back. Physical examination demonstrated a 2-mm-wide black longitudinal streak extending to the distal lunula with localized nail plate thickening on the right second digit (Figure 1A and B). Dermatoscopic findings were consistent with a foreign body under the nail (Figure 1C and D). Nail clippings of...
the nail plate were performed to sample the distal portion of the lesion and demonstrated parakeratosis associated with pigmentation.

A partial central nail plate avulsion was performed, as was a longitudinal excisional biopsy. Histopathologic analysis revealed a benign, pigmented epithelial proliferation of the nail matrix epithelium associated with a longitudinal collection of pigmented cells with retained nuclei below the overlying nail plate (thickened keratogenous zone) (Figure 2). Fontana staining highlighted the melanin-derived pigmentation in the epithelium and nail plate. MART-1 staining did not highlight any melanocytes. Findings of periodic acid–Schiff staining and human papilloma viral immunohistochemical analysis were negative. Based on these histopathologic findings, a diagnosis of a pigmented onychocytic matricoma with keratogenous features was made. The patient underwent definitive excision of the lesion, and at 1-year follow-up, there was no recurrence.

Discussion | We report a case that highlights the recently described and distinct tumor of the nail matrix, OCM. This lesion presents clinically as a localized thickening of the nail plate often with an associated longitudinal melanonychia that might simulate a foreign body, as in this case. Microscopically, it is a benign acanthoma of the nail unit with key characteristics that include endokeratinization and concentrically arranged nests of prekeratogenous and keratogenous cells with variation in the prekeratogenous and keratogenous components depending on the histopathologic subtypes (acanthotic, papillomatous, or keratogenous with retarded maturation). In addition, OCM can be classified by pigmentation (pigmented, melanocytic, or hypopigmented/nonpigmented variants). Our case would be classified as a keratogenous and pigmented OCM, based on the prominent keratogenous zone and pigmentation observed (Figure 2).

Various benign and malignant tumors, including melanoma, as well as lesions caused by the presence of foreign bodies can present as longitudinal melanonychia with a thickened nail plate. Detailed histopathologic analysis is needed to
establish a diagnosis. Among the benign lesions that can present as longitudinal melanonychia, onychopapilloma is a nail-bed tumor characterized by acanthosis in the presence of nail-bed papillomatosis.3 Onychocytic matricoma differs by its location in the nail matrix as opposed to nail bed.

Within the nail matrix, onychomatricomas can present with longitudinal melanonychia and nail plate thickening but have a distinct honeycomb pattern after nail clipping.4,5 Onychocytic matricoma is microscopically distinct as a purely epithelial tumor, lacking the combined fibro-epithelial components found in an onychomatricoma.

The most difficult differentiation may be between subungual seborrheic keratoses and OCM; the presence of prekeratogenous and keratogenous zones and thickened nail plate in OCM may help distinguish these entities.6 However, considering these both on a benign spectrum of nail-unit acanthomas may be the best technique for classification.2

We report herein a case of OCM that clinically presented as a pigmented foreign body to make clinicians aware of this benign matrical tumor and to add a new entity to the differential diagnosis of a foreign body in the nail unit.

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Additional Information: Dr Wanat is now with the Department of Dermatology, University of Iowa, Iowa City.


CORRECTION

Incorrect Information in Clinicopathological Challenge: In the Clinicopathological Challenge entitled “Violaceous Necrotic Plaques on the Leg of an Immunocompromised Patient” published online on November 6, 2013, and also in the January 2014 issue of JAMA Dermatology (2014;150[1]:79-80. doi:10.1001/jamadermatol.2013.5322), incorrect information appeared in the text. The first sentence of the Discussion section should have read as follows: “Cutaneous mucormycosis is caused by fungi of the Mucorales order.” This article was corrected online.

Incorrect Key in Figure: In the Original Investigation entitled “Undertreatment, Treatment Trends, and Treatment Dissatisfaction Among Patients With Psoriasis and Psoriatic Arthritis in the United States: Findings From the National Psoriasis Foundation Surveys, 2003-2011,” published in the October 2013 issue of JAMA Dermatology (2013;149[10]:1180-1185. doi:10.1001/jamadermatol.2013.5264), due to a production error, an incorrect key appeared in Figure 5. On page 1184, the designation for 2007 should be dark blue and the designation for 2008 should be light blue. This article was corrected online.