Bilateral Tinea Nigra Plantaris with Good Response to Isoconazole Cream: A Case Report

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Key Words

Tinea nigra · *Hortaea werneckii* · Mycoses

Abstract

Tinea nigra is a superficial fungal infection caused by *Hortaea werneckii*. It typically affects young individuals as an asymptomatic unilateral macule, from light brown to black on the palms and soles, mainly in tropical and subtropical regions. In 1997, Gupta et al. [Br J Dermatol 1997;137:483–484] described the dermoscopic characteristics of tinea nigra. Topical antifungals with or without keratolytic agents can be used for the treatment. The authors report a case of a 47-year-old man with asymptomatic light brown macules bilaterally on the plantar regions. Dermoscopic examination revealed brownish spicules consistent with the pattern described in the literature. Treatment with isoconazole cream was effective with complete resolution.

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Introduction

Tinea nigra, a rare superficial phaeohyphomycosis, was observed for the first time in Brazil, by Alexandre Cerqueira, in 1891 [1]. Its etiologic agent is nowadays called *Hortaea werneckii* [2] and occurs in regions with tropical and subtropical climate, mainly in areas with high salt concentration. The characteristic lesion is a unilateral and asymptomatic macule, with color varying from brown to black, with well-demarcated limits, and differential di-

agnosis with melanocytic lesions. It is observed in young individuals, affecting palmar and with less frequency plantar regions [3].

Case Report

A 47-year-old man, resident in Rio de Janeiro, musician, previously diagnosed with vitiligo, was referred with dark, asymptomatic spots, bilaterally in the plantar region, about a year ago. He informed partial improvement after abrasion with sandpaper. He denied a temporal relation between contact with beach sand and the appearance of the lesions.

Upon examination, light brown macules with well-defined borders without scaling were noticeable (3 on the right plantar region, with 2.0, 2.5 and 3.0 cm in their largest diameter, and 1 on the left, with 2.5 cm; [fig. 1](#), [fig. 2](#)). The dermoscopic examination of the lesions showed a homogeneous, nonmelanocytic pattern with some brownish spikes ([fig. 3](#)). In addition to these lesions, achromic macules on the back of his hands and on the penis were present, compatible with vitiligo.

The scraped material from the feet lesions was submitted to direct examination, which revealed septate hyphae of brownish coloration ([fig. 4](#)). Sabouraud agar cultivation revealed a wet, filamentous and black colony, typical features of *Hortaea werneckii*, confirming the diagnosis of tinea nigra ([fig. 5](#)). Treatment with isoconazole cream twice a day for 20 days was effective, with complete resolution of the plantar lesions and no recurrence after 6 months of follow-up.

Discussion

Tinea nigra is a fungal infection that only affects the stratum corneum, first observed by the Brazilian Alexandre Cerqueira and later described in 1916 by his son, Antonio Cerqueira, as keratomycosis nigricans palmaris [1].

In 1921, Horta [4] isolated the etiologic agent by naming it *Cladosporium werneckii*. Later, it was renamed *Exophiala werneckii*, *Phaeoannellomyces werneckii* [3] and, currently, *Hortaea werneckii*. There are reports caused by other agents such as *Scopulariopsis brevicaulis*, *Phoma eupyrena* and *Chaetomium globosum* [2] and in Venezuela, the indigenous fungus *Stenella araguata* [5].

The typical clinical picture is characterized by single, unilateral and asymptomatic macules, light brown to black, with sharp borders. It affects the palmoplantar region, particularly the palms and palmar aspect of the fingers, and is more prevalent in women under 20 years [3].

Hortaea werneckii is a dematiaceous fungus found in tropical and subtropical climates. Its presence was confirmed in areas of high salt concentration, with beach sand being a possible source of contamination [2, 3, 6]. The direct mycological examination reveals brown, septate hyphae with thick walls. In culture, black, humid and shiny colonies are found [2, 3].

In 1997, Gupta et al. [7] described the typical dermoscopic aspect of tinea nigra, with pigmented spicules forming a homogeneous, almost reticular aspect. Other authors emphasized that pattern and the use of dermoscopy in the differential diagnosis with melanocytic lesions [8, 9]. The dermoscopic examination of our patient's stains revealed pigmented spicules arranged in a pattern similar to that described in those publications.

Although effective, systemic treatment is not necessary [7]. Keratolytic agents alone and topical antifungal agents, such as imidazole derivatives, terbinafine or ciclopirox, whether or

not associated with keratolytic agents, can be used [10]. Moreover, there are reports of spontaneous healing [6].

We emphasize our patient's atypical presentation, with a bilateral involvement of plantar regions, and the importance of the use of dermoscopy as a low-cost diagnostic tool, reducing the need for invasive procedures. We still emphasize the rapid and complete therapeutic response to topical isoconazole, in accordance with the literature.

Statement of Ethics

The authors have no ethical conflicts to disclose.

Disclosure Statement

The authors declare no conflicts of interest. No funding was obtained for this work.

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Fig. 1. Macules of light brown color on the plantar region of the foot and halux.

Fig. 2. Macule of light brown color in the left plantar region.

Fig. 3. Pigmented spicules forming an almost reticular aspect (dermoscopy, X10).

Fig. 4. Septated hyphae with thick walls and brownish color.

Fig. 5. Humid and black colonies of *Hortaea werneckii*.