



Case report

Tinea nigra mimicking acral melanocytic nevi

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ABSTRACT

Tinea nigra is a superficial infection caused by dematiaceous fungi. The clinical skin lesion is characterized by well-circumscribed brown–black macule patches on the palms and soles. In Asia, such pigmentation on these areas can be suggestive of acral lentiginous melanoma, which cause morbidity and mortality. Here, we report a case of a young patient with solitary black macule on the left palm for a year. Potassium hydroxide test was positive for pigmented short hyphae. The lesion subsided following topical antifungal treatment without recurrence. This report aims to provide insights into diagnosis of patients with pigmentations on acral areas.

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Introduction

The focal pigmentations on the palms and soles are suggestive of various conditions, from benign diseases, including junctional melanocytic nevi, to malignant neoplasm, especially acral lentiginous melanoma. Acral lentiginous melanoma is commonly found in African–Americans and Asians and is associated with significant morbidity and mortality [1]. Tinea nigra, typically found in the tropical and subtropical regions, is an uncommon superficial mycosis that presents with focal pigmentations [2] and is diagnosed with a potassium hydroxide (KOH) test. In general, topical treatment is adequate for tinea nigra. Here, we report a case of a young Asian woman with long-standing focal pigmentation on her left palm, which was diagnosed as tinea nigra and successfully treated with a topical antifungal agent.

Case report

A 25-year-old Asian woman visited the dermatologist at an outpatient clinic with a complaint of a single dark spot on her left palm. She was enrolled in a chemical engineering program, which exposed her to irritating agents, leading to hand scrubbing. Subsequently, she developed a hyperpigmented macule on her left palm, which was neither pruritus nor painful. Lesion, a 0.5-cm solitary well-circumscribed brown–black macule on the center of the palm, and pigmentation persisted for a year (Fig. 1). The KOH test was performed as a part of the initial laboratory investigation



Fig. 1. Localized dark macule on the left palm.

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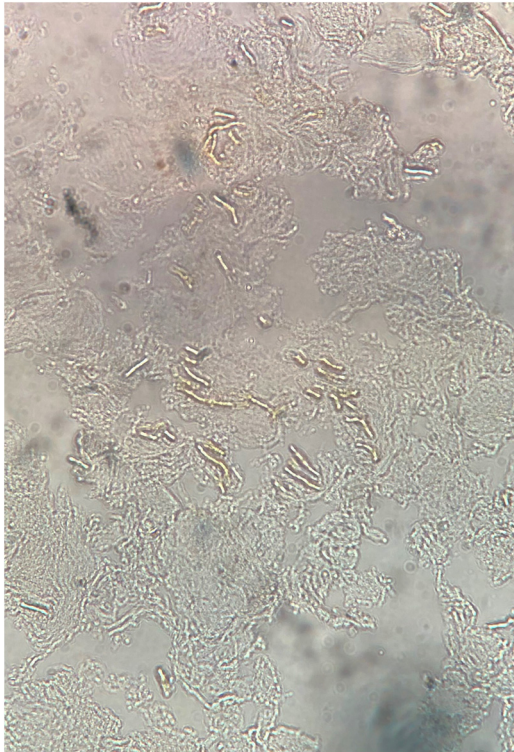


Fig. 2. Potassium hydroxide test revealed numerous pigmented short hyphae.

for the differential diagnosis of tinea nigra from junctional melanocytic nevus and acral lentiginous melanoma. Microscopy at 40x revealed multiple short hyphae surrounded by hyperpigmentation without budding yeast (Fig. 2). Hence, 2% ketoconazole cream (twice daily for two weeks) was prescribed for tinea nigra, and consequently, the dark spot on her palm gradually disappeared.

Discussion

Tinea nigra is a superficial infection of the dematiaceous fungi *Hortaea werneckii*, specifically on the palms and soles [2]. The pathogen was previously denominated as *Phaeoannellomyces werneckii*, *Exophiala werneckii*, and *Cladosporium werneckii* [3]. The other species of dermatomycosis is *Stenella araguata*, which also produces a similar clinical presentation [2]. The prevalence of tinea nigra is slightly higher in the tropical and subtropical regions, and some patients develop the condition after traveling from endemic areas [2].

Clinical manifestations of tinea nigra include a well-circumscribed mottled brown–black macule or patch without scaling on the palms and soles. Tinea nigra is generally an asymptomatic

disease. However, patients are recognized by the prominence of hyperpigmentation. Regardless, tinea nigra is often misdiagnosed as junctional melanocytic nevus and acral lentiginous melanoma as these conditions have similar presentation.

Dermoscopy and microscopic examination with KOH and fungal culture are useful for differentiating tinea nigra from other conditions that share similar characteristics. Dermoscopic examinations show a reticular-like line pattern that does not follow the anatomy of the skin [4]. Moreover, the KOH test shows ramified brownish spores and hyphae.

Tinea nigra can resolve spontaneously without medication. In addition, tinea nigra shows excellent response to topical antifungal and keratolytic drugs (Whitfield ointment, 2% salicylic acid) [2]. The recommended treatment duration is 2–4 weeks to prevent relapse.

Conclusion

Tinea nigra can mimic melanocytic nevi and acral lentiginous melanoma, especially among patients in the tropical regions in Asia. Clinicians need to recognize this infection by performing a microscopic examination, which may facilitate accurate diagnosis and appropriate treatment for patients.

CRedit authorship contribution statement

Thanadon Eksomtramage: Conceptualization, Data curation, Writing - original draft. **Kumpol Aiempnanakit:** Conceptualization, Data curation, Supervision, Writing - review & editing.

Declaration of Competing Interest

There are no conflicts of interest.

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