

A CASE OF TINEA NIGRA FROM SOUTH INDIA

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Tinea nigra in the axillary region of a south Indian youth is reported. A KOH mount of the scrapings showed typical fungal elements and the culture yielded *Exophiala werneckii*.

Key words : Tinea nigra, *Exophiala werneckii*.

Tinea nigra is a superficial asymptomatic fungal infection of the stratum corneum characterized by brown to black non-scaly macules.¹ Palms are the most commonly affected sites, though lesions elsewhere on the body have also been described.² The etiologic agent is recognised as *Exophiala werneckii*.¹ It is postulated that other species of dematiaceous fungi such as *Stenella araguata* may also induce a similar clinical picture.¹

Ajello et al³ coined the term phaeohiphomycosis for all mycotic infections wherein the etiologic agents occur in tissues as dematiaceous yeast like cells, pseudohyphae-like elements or hyphae that may be short or elongate, but without the diagnostic sclerotic bodies of chromoblastomycosis. Tinea nigra is considered to be a variety of superficial phaeohiphomycosis, but the term tinea nigra is preferred because of its wide acceptance.⁴

The first authentic description of the condition was given by Cerqueira of Brazil in 1891, but was not reported until 1916 by his son Pinto.⁵ Castellani claimed that he described the condition from Sri Lanka in 1905 and reported the etiologic agent as *Cladosporium mansonii*.⁶ In 1921, Horta described the disease and the fungus and named the latter as *Cladosporium werneckii*.⁵ The causative agent of

tinea nigra in Asian countries was considered to be different and was referred to as *C. mansonii* and the agent in America as *C. werneckii*.¹ In 1970, Von Arx⁷ transferred the causative agents to the genus *Exophiala*. After a critical study of various cultures, McGinnis⁸ opined that *Exophiala werneckii* is the correct name for the agent of tinea nigra whether it is isolated in America or in Asia.

Tinea nigra infections have been reported from Brazil, USA, Panama, Puerto-Rico, Cuba,⁹ Australia,² Canada,¹⁰ South Africa⁵ and United Kingdom.^{11,12} Dasgupta et al¹³ reported the first case of tinea nigra palmaris from India. To the best of our knowledge our case is the second mycologically confirmed case from this subcontinent.

Case Report

The patient, a 22-year-old male, had a brownish, well circumscribed macular lesion, 2.5 cm in diameter, situated on the medial wall of the axillary fossa. There was fine scaling but no signs of inflammation. The patient complained of mild itching. The patient had never been out of the country.

Scrapings from the lesion showed greyish brown septate hyphae with frequent branching and a few budding cells. Two sets of Sabouraud's dextrose agar (SDA) with chloramphenicol and cycloheximide were inoculated and one set incubated at 25°C and the other at 37°C. After 7 days of incubation, the growth of a dematiaceous yeast-like colony was noted in the tubes incubated at 25°C.

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Primary subculture on SDA with or without cycloheximide and chloramphenicol incubated at 25°C was slow-growing. It attained 10 mm in 10 days and 18 mm in 21 days (Fig. 1). The aerial growth was velvety with isolated patches of black yeast-like growth. The colour varied from olivaceous grey, grey olivaceous, iron grey, and fuscous black; reverse was greenish black.

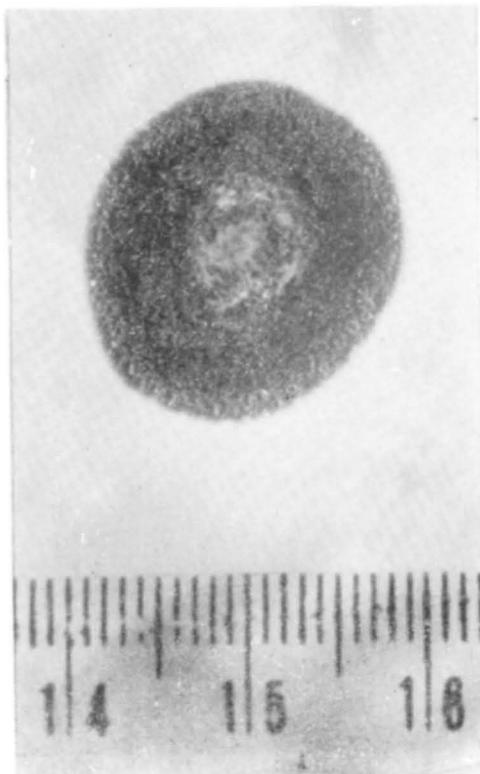


Fig. 1. Colony of *E. werneckii*, 21-day-old, on SDA, at 25° C.

Microscopic examination of the slide cultures (Fig. 2) and slant cultures revealed sparsely septate, dark mycelium, 1.5-4.5 μm in diameter; along with toruloid hyphae, 5 μm in diameter; conidiophores micronematous and macrone-matous, simple, smooth, dark and cylindrical measuring 3.5 \times 1.5-2.5 μm forming annelloconidia in a basipetal succession. The yeast-like growth was composed of yeast-like cells

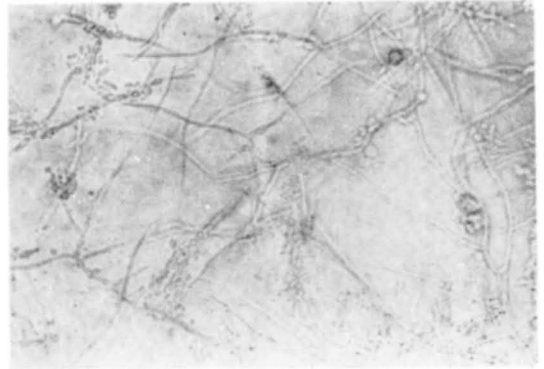


Fig. 2. Slide-culture preparation of *E. werneckii* on SDA, showing yeast-like cells bearing annelloconidia (left hand top), and smooth cylindrical to ellipsoidal annelloconidia (centre).

and yeast-like obclavate conidiophores measuring 4.0-8.0 \times 3.0-4.5 μm . Annelloconidia 1-2 celled, but mostly 1-celled, hyaline, thin walled, smooth, cylindrical to ellipsoidal measuring 2.5-5.5 \times 2.5-3.0 μm , were also present.

Growth at 28°C was good, but there was no growth at 37°C. The isolate was not sensitive to cycloheximide.

Comments

Tinea nigra is considered to be a tropical disease, but reports of its occurrence have come from several countries.^{2 10-12} Majority of the reported cases from Europe are traceable to visits to the American tropics and Carribean islands. Borelli stated that infections are acquired at the sea shore.¹⁴ Our patient is a native college-going youth, who had never been out of the country, but had visited the nearest beaches several times. But there is no definite evidence that he acquired the infection there. In most of the reports, the patients were young females and the condition is said to be asymptomatic without any scaling.¹ In contrast, our patient was a male and complained of mild itching, slight scaling was also noted.

Itching and scaling in the lesions have also been noted by other authors.^{11,13}

Though the etiologic agent has an affinity for the palms, lesions elsewhere on the body have been reported.^{1,2} Many authors are of the opinion that the American variety of tinea nigra is slightly different from the one which is encountered in Asia. In the American variety, the sites preferred are the palms and fingers, interdigital spaces and rarely the soles, but the Asian variety is said to affect the trunk and neck.¹⁴ The typical tinea nigra has to be differentiated from the stains caused by dyes or silver nitrate. Cases have been mistaken for junctional naevi and melanoma.¹² Scrapings from the lesion in a KOH preparation reveal brownish to olivaceous, multiple, branched septate hyphae and budding cells. The terminal portion of the hyphae are usually hyaline. The mycelia differ from the dermatophyte hyphae in that the latter are hyaline and usually are not so branched and do not show the tapering contour of the terminal branches.¹

Tinea nigra responds readily to keratolytic agents. Daily application of Whitfield's ointment clears the condition readily.¹

References

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Note : The subcultures of the isolate have been deposited in the Indian Type Culture Collection of Fungi, New Delhi and American Type Culture Collection, Rockville, Maryland, U. S. A. under accession no. ITCC 3286-84 and ATCC 58301 respectively.
