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Resident's Forum

RF-*Trichophyton indotineae*: A New Diagnostic and Therapeutic Challenge

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Q2 In recent years, a new dermatophyte species, *Trichophyton indotineae*, has been identified. This emerging fungal pathogen is highly resistant to terbinafine and represents a significant therapeutic challenge. The first reported cases originated in India in 2018.¹ However, due to migration and globalization, increasing numbers of cases are now being detected across other continents, including North America, Europe, and Oceania.

In Spain, 2 cases have been published to date, both in 2023. The first involved a 17-year-old woman from Bangladesh who presented with a 12-month history of extensive erythematous and scaly plaques. Given the suspicion of dermatophytosis, oral terbinafine 250 mg/day was initiated. Since no improvement was observed 8 weeks into therapy, treatment was switched to itraconazole 200 mg/day. One week into therapy, the patient showed marked improvement, and the lesions resolved completely after 6 months.²

The second case involved a 33-year-old pregnant woman from Morocco at 33 weeks' gestation, who presented with a 6-month history of widespread pruritic cutaneous lesions. An initial course of terbinafine 250 mg/day failed, and treatment was switched to itraconazole 100 mg every 12 h after delivery, achieving complete remission 6 weeks into therapy.³

In both cases, cultures revealed *Trichophyton* spp., and identification of *T. indotineae* was confirmed through DNA sequencing.^{2,3}

T. indotineae is morphologically and genetically similar to *Trichophyton interdigitale* and *Trichophyton mentagrophytes*, both common causes of dermatophyte infections that typically respond well to terbinafine. However, the recent emergence of extensive and recalcitrant *Trichophyton* infections prompted molecular studies, which identified specific

mutations conferring terbinafine resistance, ultimately leading to the recognition of *T. indotineae* as a new species.^{4,5}

Clinically, key features raising suspicion for *T. indotineae* include extensive inflammatory lesions, sometimes arciform, with a double advancing border, and partial or absent response to terbinafine therapy. When lesions are located in peripubic areas, possible transmission through sexual contact has been suggested.⁵

Because *T. indotineae* infections are difficult to diagnose and treat, molecular testing is essential when clinical suspicion arises, as conventional phenotypic methods are unable to differentiate this species. Regarding treatment, antifungal agents other than terbinafine should be considered, with itraconazole recommended as first-line therapy. Fluconazole and griseofulvin may be ineffective, as elevated minimum inhibitory concentrations (MICs) to both have been reported.^{4,5} In cases of itraconazole failure, Gupta et al. propose an algorithm that includes the use of voriconazole or posaconazole.⁵

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