

CLINICAL IMAGE

Diagnosis and treatment of moccasin-type/hyperkeratotic tinea pedis

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CASE:

A man in his 70s was referred to infectious diseases for evaluation of a clinically unresponsive fungal infection. Eight months ago, the patient noticed bilateral erythematous papules and patches on both feet with associated desquamation that worsened over time.

His past medical history was non-contributory. Previous treatments included topical ciclopirox, oral fluconazole, oral terbinafine, and a combination of oral terbinafine and topical ciclopirox with no clinical improvement.

Itraconazole had been prescribed by his dermatologist: 200mg twice daily for seven days, three weeks off, followed by a repeat course for seven days. The patient noted some improvement but after discontinuation the skin lesions recurred. At this point, the patient was referred to infectious disease, where itraconazole was reinitiated at 300mg twice daily for 6 weeks with resolution of the lesions.

DISCUSSION:

Tinea pedis is a superficial skin infection of the feet caused by fungi, with dermatophytes being the most common causative organism¹. There are three main subtypes of tinea pedis: interdigital, vesicular, and moccasin-type/hyperkeratotic².

Characteristics of moccasin-type/hyperkeratotic tinea pedis are thickening of the outer layer of skin on the entire sole, scales present around the sulci of

the foot, limited seasonal variation, minimal pruritus, and no vesicles².

To diagnosis tinea pedis, a skin scraping should be evaluated with potassium hydroxide (KOH) for histological fungal features¹. Additionally, a fungal culture with sensitivities can be done to further refine treatment modalities.

Since tinea pedis is a superficial infection, the primary treatment should be a topical antifungal; however, if widespread, chronic, or clinically unresponsive to topicals then oral antifungals should be used^{1,3}. Of the three tinea pedis subtypes, moccasin type/hyperkeratotic tinea pedis is more challenging to cure, as it requires the use of systemic antifungal agents since topical drugs are unable to affect the disease's epicenter^{1,2,4}.

There are five primary systemic antifungal agents: terbinafine, itraconazole, fluconazole, griseofulvin, and ketoconazole³. Our patient saw improvement with itraconazole, a triazole antifungal that inhibits ergosterol synthesis and ultimately fungal growth, and has indications for "visceral, deep-seated, and superficial mycoses," along with onychomycosis⁴.

As providers, we need to be aware of the characteristics and treatment options for moccasin-type/hyperkeratotic tinea pedis since it can often be misdiagnosed and is difficult to cure. Additionally, it is imperative that we educate our patients on completing their medication even if the skin lesions have resolved since this will reduce their risk of recurrence and complications from infection¹.

Notes

Potential conflicts of interest: The author reports no conflicts of interest in this work.

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