

Step-wise treatment of athlete's foot (tinea pedis) using isoconazole combined with a corticosteroid followed by isoconazole alone

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Background

Athlete's foot is predominantly caused by the dermatophytes *Trichophyton rubrum* and *Trichophyton interdigitale*, but the condition commonly presents as a mixed infection that also involves mould fungi and yeast-like fungi of the *Candida* genus.^{1,2} In recent years, the clinical manifestations of athlete's foot have had a tendency towards a torpid progression, with the fungal process rapidly becoming chronic and extensive.²

Topical anti-mycotic agents are known to have marked sensitising and irritant properties and dermatologists quite often observe an aggravating reaction when prescribing purely anti-fungal agents for fungal infections with marked inflammatory manifestations. This frequently encourages doctors to use complex products containing glucocorticosteroids.

In our clinic, we see around 300 cases of tinea pedis per year, of which 63% involve a mixed infection.

Case report

Patient history

A 42-year-old male who had been suffering from athlete's foot on and off for the past 5 years presented to our clinic. He had received treatment with various topical products, including clotrimazole, naftifine and triamcinolone (Candid, Exoderil, Ftorocort). The previous treatments had brought temporary relief but complete disappearance of the inflammatory symptoms had

not been achieved. The patient said that his condition most often occurred during the spring and summer months and at the latest presentation there was a clearly marked inflammatory reaction: erythema, pruritus, desquamation and occasional exudation were observed.

Dermatological findings

The skin reaction was confined to the dorsal surface of the right foot with damage to the skin most apparent on the 1st, 2nd and 5th toes, represented by erythema bright red in colour with a bluish tinge and distinct irregular edges (Fig. 1). In the marginal zone of the site, there were isolated erosions with serous weeping. The patient complained of pruritus which was exacerbated by contact with water.



Figure 1 Tinea pedis before treatment.

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Investigation and diagnosis

Mycelia were detected upon microscopy and mycological culture examination showed growth of *T. rubrum*. A diagnosis of chronic rubromycosis (tinea pedis) of the right foot was established.

Treatment and outcome

In view of the marked inflammatory reaction that was clearly present, the patient was given a 7-day prescription of isoconazole nitrate plus diflucortolone valerate cream (Travocort®; Intendis, Berlin, Germany) followed by 2 weeks with isoconazole cream (Travogen) only; both to be applied twice a day to the affected area.



Figure 2 After 1 week's treatment with isoconazole/diflucortolone cream.



Figure 3 After a further 2 weeks of treatment with isoconazole alone.

This step-wise treatment strategy brought about the following results: after 1 week there was a reduction in erythema and desquamation, the pruritus had disappeared and the erosions had epithelised. After using the combined anti-fungal/corticosteroid cream at the mycotic site, no distinct outlines could be traced (Fig. 2). After 2 weeks using the isoconazole cream, the rash had completely disappeared (Fig. 3). Objective assessment showed that clinical symptoms of mycosis on the skin of the right foot were absent and no mycelia were detected upon microscopy or grown in culture.

Conclusion

Tinea of the foot, the most widespread form of mycosis, represents the greatest threat in the dissemination of fungal diseases throughout the population. The origin of chronic tinea is, in 80% of cases, onychomycosis, which is considerably more complicated to treat. The most important task now in combating dermatophytes, therefore, is the early detection of mycosis of the foot and treatment prior to the development of onychomycosis. It is also particularly important to have effective medicinal products that target the specific clinical features of mycosis of the foot.^{2,3}

This case shows that a prescription of a combination of isoconazole nitrate plus diflucortolone valerate in a cream, followed by further treatment with an anti-fungal cream (e.g. containing isoconazole alone) makes a clinical and laboratory cure possible without the occurrence of erythema and itching side effects associated with the application of fungicidal agents for acute manifestations of mycosis of the foot.

Conflict of interest

Dr Olkhovskaya has received payment for speaking and involvement in clinical studies; Dr Perlamutrov has not declared any conflict of interest.

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