Topical management of tinea pedis

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Clinical question

How effective are topical treatments for tinea pedis?

Bottom line

Tinea pedis is successfully treated with topical antifungals in 70% to 75% of patients compared with 20% to 30% using placebo. Tea tree oil is likely ineffective. Topical terbinafine might result in an absolute improvement of 2% to 8% more patients cured over other topicals. Most patients were treated for 1 week with terbinafine and 4 to 6 weeks with azoles (like clotrimazole).

Evidence

Results are statistically significant unless indicated.

- Studies comparing with placebo found the following.
  - -Systematic review (67 RCTs) of mycologically diagnosed tinea pedis (and oncychomycosis, not included here), reporting laboratory-confirmed treatment failure at 6 weeks.[1]
    - —Allylamines (eg, terbinafine, naftifine), 9 RCTs (N=876), 1 to 4 (most 4) weeks' treatment: 25% versus 80% placebo; number needed to treat (NNT) of 2.
    - —Azoles (eg, clotrimazole, miconazole), 6 RCTs (N=448), 4 to 6 weeks' treatment: 28% versus 70% placebo; NNT=3.
    - —Tea tree oil, 1 RCT (N=71), 4 weeks' treatment: no difference from placebo.
  - -Systematic review of topical terbinafine versus placebo, 9 RCTs (N=986), 1 to 4 (1 most common) weeks' treatment[2]: clinical cure, 72% terbinafine versus 28% placebo; NNT=3.
    - —Other systematic reviews found similar results.[3-5]
- Direct comparisons found the following.
  - -Allylamines versus azoles.
    - —Systematic review, 8 RCTs (N=1034), 1 to 6 (most 1 to 2) weeks' treatment[3]: mycological cure, 78% allylamines versus 76% azoles; NNT=40.
  - -Topical terbinafine versus other antifungals.
    - — Systematic review, 10 RCTs (N=1341), 1 to 4 (most 1) weeks' treatment[2]: clinical cure, 83% terbinafine versus 75% other antifungals (statistical significance reported inconsistently; if real, NNT=13).
- Adverse events: burning, stinging, and itching sensations were most common (but not quantified).[1]
- Limitations: some RCTs[1] and 1 systematic review[2] were industry funded; clinical cure is less commonly reported than mycological cure.

Context

- Topical antifungals are suggested as first-line agents, reserving oral agents for severe disease (eg, moccasin-type infection), failed topical treatment, and immunocompromised patients.[6]
- Approximate cost (for 30 g)[7-9]:
  - -1% clotrimazole cream, twice daily, $13,
  - -2% miconazole cream, twice daily, $15, and
  - -1% terbinafine cream, twice daily, $30.

Implementation

It is uncertain whether foot hygiene or changing footwear is beneficial; however, placebo arms from RCTs suggest it might help.[4] The Centers for Disease Control and Prevention advise that patients with tinea pedis keep feet dry, clean, and cool; wear sandals, if possible (especially in locker rooms); air out shoes; and wear cotton socks.[10] Patients can discuss over-the-counter options with their pharmacists, such as clotrimazole or miconazole, although these tend to require a longer treatment duration. Nystatin should not be used owing to dermatophyte resistance.[6] Terbinafine cream, twice a day for 7 days, is a reasonable prescription option with a short treatment duration and well supported efficacy.

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Competing interests
None declared

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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Can Fam Physician 2021;67:30. DOI: 10.46747/cfp.670130

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