Behandlung der Tinea pedis vom interdigitalen Typ: Systematischer Review [Treatment of interdigital tinea pedis: a systematic review]

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CRD summary
The review investigated the efficacy of treatments for interdigital tinea pedis. The authors concluded that allylamines, especially terbinafine, provide superior treatment in comparison with azoles. The conclusion appears reliable.

Authors’ objectives
To evaluate the efficacy of topical therapeutic options for interdigital tinea pedis in Germany, focusing on the mycological and clinical cure rates.

Searching
BIOSIS Previews, MEDLINE (ML66), MEDLINE Alert, EMBASE, PubMed, NLM Gateway, TRIP, WebMedLit, and EbM of the Cochrane Library were searched. The internet searches encompassed the web pages of the Agency for Healthcare Research and Quality and various national and international societies. The search engines Hotbot, Lycos, Excite, Altavista and Infoseek were also utilised. The search terms, but not dates, were reported. Only studies published in English and German were eligible for inclusion.

Study selection
Study designs of evaluations included in the review
Double-blind randomised controlled trials (RCTs) were eligible for inclusion. The comparability of the compared patient collectives had to be ensured.

Specific interventions included in the review
All antimycotic treatments were considered for the review. The included studies used allylamines (naftifine and terbinafine) and azoles (bifonazole, clotrimazole, econazole, miconazole, oxiconazole, sulconazole and tioconazole) in either cream or lotion formulations.

Participants included in the review
Studies on patients with clinically positive suspected interdigital tinea pedis, without fungal infection of the nail or a systemic fungal infection, and with microbiological or microscopic substantiation of the diagnosis were eligible for inclusion.

Outcomes assessed in the review
The review considered the mycological cure rates (native preparation and culture negative), clinical cure rates (abating clinical symptoms), overall cure rates (native preparation and culture negative and complete or near complete decay of the symptoms), side-effects and remission rates.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.
extraction. Where available, the percentages of mycological, clinical and overall cure rates were extracted for each treatment arm.

**Methods of synthesis**

How were the studies combined?
The studies were combined in a narrative review. The main outcomes were tabulated; side-effects and remission rates were presented in the text.

How were differences between studies investigated?
The studies comparing allylamine with placebo, azole with placebo, and allylamine with azole were presented separately. Other differences between the studies were addressed in the narrative synthesis.

**Results of the review**

Forty RCTs (n=5,010) were included in the review.

Azole versus placebo: all studies showed more improvement in the azole group than in the placebo group (15 trials). The mycological cure rates ranged from 60 to 91% (placebo group: 10 to 67%) and the clinical cure rates from 64 to 95% (placebo group: 10 to 63%).

Allylamine versus placebo: all studies showed more improvement in the allylamine group than in the placebo group (12 trials). The mycological cure rates ranged from 62 to 100% (placebo group: 10 to 45%) and the clinical cure rates from 66 to 86% (placebo group: 4 to 44%).

Allylamine versus azole: in 2 out of 5 studies comparing the effects of naftifine with bifonazole or clotrimazole, this allylamine showed a significantly better effect.; 4 of the 8 studies comparing terbinafine with clotrimazole, miconazole, bifonazole or oxiconazole showed an advantage for this allylamine.

The side-effects of azoles were documented for 82 out of 1,556 patients; such side-effects caused 0.8% of the patients to withdraw from the treatment. For allylamines, 116 out of 1,569 patients reported side-effects and 0.8% withdrew. For placebo, 40 out of 854 patients had side-effects and 0.6% withdrew.

High cure rates with terbinafine were detected after 1 week of therapy, whereas the azoles had to be applied for 4 weeks before the effectiveness showed.

**Authors' conclusions**

Allylamines, especially terbinafine, proved superior to azoles. This might be explained by the fungicidal rather than fungistatic treatment mechanism.

**CRD commentary**

The review was based on a clear research question and explicit inclusion criteria. The search was extensive, with emphasis on internet searches. However, the included studies had to be published in English or German, which could have introduced language bias into the review. The authors did not report any measures taken to reduce error and bias in the study selection and data extraction processes. The validity of the studies does not seem to have been assessed, although the studies were of a high evidence level. The results of the included studies were well presented and showed a clear pattern, but the statistical significance of differences between the treatment groups could have been made clearer.

The authors' conclusion appear reliable.

**Implications of the review for practice and research**

Practice: The authors stated that the higher cure rates, lower relapse rates and shorter treatment periods of allylamines compared with azoles might lead to better patient compliance.
Research: The authors did not state any implications for further research.

**Bibliographic details**


**PubMedID**

12964099

**DOI**


**Other publications of related interest**


**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Allylamine /analogs & derivatives /therapeutic use; Antifungal Agents /therapeutic use; Double-Blind Method; Humans; Naphthalenes /therapeutic use; Ointments; Randomized Controlled Trials as Topic; Time Factors; Tinea Pedis /drug therapy; Treatment Outcome

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**Record Status**

This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.