Review: allylamines, azoles, undecenoic acid, and tolnaftate are effective for fungal skin infections of the foot


QUESTION: Are topical treatments effective for fungal infections of the skin and nails of the foot?

Data sources
Studies were identified using Medline (1966 to December 1997), EMBASE/Excerpta Medica (1980 to December 1997), CINAHL (inception to December 1997), Cochrane Controlled Trials Register, Science and Social Science Citation Indexes, CAB-Health, Healthstar, DARE, NHS Economic Evaluation, and EconLit and by scanning bibliographies of relevant and unpublished studies, handsearching journals, and contacting drug companies and experts.

Study selection
Randomised controlled trials were selected if they evaluated topical treatments for mycologically diagnosed fungal infections of the skin and nails of the foot.

Data extraction
Study methodology and quality, participant characteristics, intervention regimens and costs, mycological cure or recurrence, quality of life, and adverse events.

Main results
126 trials were identified and 72 (70 of treatment of skin infections of the foot and 2 of treatment of nail infections of the foot) met the inclusion criteria. Allylamines, azoles, undecenoic acid, and tolnaftate had lower failure to cure rates than placebo for fungal skin infections of the foot (table). Compared with azoles, allylamines had lower failure to cure rates for fungal skin infections (relative risk 88%, 95% CI 78% to 99%). Two trials of topical treatments compared with placebo showed no difference in failure to cure rates for fungal nail infections.

Conclusion
Allylamines, azoles, undecenoic acid, and tolnaftate are more effective than no treatment and allylamines are more effective than azoles for fungal skin infections of the foot.

Comparison of topical treatment regimens for failure to cure fungal skin infections of the foot at 1–8 weeks of follow up*

<table>
<thead>
<tr>
<th>Comparison regimens (weighted event rates)</th>
<th>Number of studies</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allylamines (23%) v placebo (80%)</td>
<td>12</td>
<td>65% (56 to 72)</td>
<td>2 (2 to 3)</td>
</tr>
<tr>
<td>Azoles (23%) v placebo (61%)</td>
<td>17</td>
<td>68% (56 to 76)</td>
<td>3 (3 to 4)</td>
</tr>
<tr>
<td>Undecenoic acid (29%) v placebo (75%)</td>
<td>4</td>
<td>61% (44 to 72)</td>
<td>3 (2 to 4)</td>
</tr>
<tr>
<td>Tolfnaftate (52%) v placebo (70%)</td>
<td>3</td>
<td>26% (4 to 43)</td>
<td>6 (4 to 31)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RRR, NNT, and CI calculated from data provided by the author.