

<table>
<thead>
<tr>
<th>Patient</th>
<th>Sex</th>
<th>Duration of HIV/years</th>
<th>CD4×10^3/l</th>
<th>Duration of warts/years</th>
<th>Warts treated</th>
<th>Treatment cycles</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>8</td>
<td>0.008</td>
<td>2.5</td>
<td>1</td>
<td>3</td>
<td>Partial</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>6</td>
<td>0.32</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>All complete</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>7</td>
<td>0.25</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2 Partial</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>8</td>
<td>0.35</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1 Partial +1 complete</td>
</tr>
</tbody>
</table>

to its cytotoxic or virucidal properties. Potential side-effects include pain, local swelling and possibly Raynaud's phenomenon (5). Systemic and long-term toxicity is unlikely in view of the extremely low doses of bleomycin used. The procedure is potentially hazardous to perform and considerable care must be taken to avoid needle-stick injury and blood spillage. In selected patients this procedure may provide excellent cosmetic results, with a high level of patient satisfaction.

REFERENCES


Accepted June 29, 1995.

Manu Shah1, Maurice Murphy2, James D. Price3 and Charles J.N. Lacey4  
1Department of Dermatology, Royal Hallamshire Hospital, Glossop Road, Sheffield S10 2JF, and 2Department of Genito-urinary Medicine, The General Infirmary, Leeds, UK.

---

Lateral Edge Nail Involvement Indicates Poor Prognosis for Treating Onychomycosis with the New Systemic Antifungals

Sir,

The new systemic antifungal drugs quickly reach the nail plate via rapid diffusion across the nail bed (1-3). This is possible as the nail plate and nail bed are tightly bound.

In 5 out of the 18 patients who did not respond to, or relapsed on, oral itraconazole or terbinafine we found involvement of the lateral edge of the nail plate.

Looking at the normal histology of this nail region (Figs. 1, 2), we became convinced that there is poor penetration of the antifungal agent into the lateral edge of the nail via the

---

Fig. 1. Transverse section of the distal phalanx, showing absence of adherence of the nail plate to the lateral nail groove (courtesy G. Rodriguez, Colombia).

Acta Derm Venereol (Stockh) 76

Fig. 2. Lateral edge of the nail, showing poor adherence to the lateral nail groove (courtesy G. Rodriguez, Colombia).
lateral nail groove, since they do not adhere to subungual tissue. Diffusion of the drug into the lateral nail area probably results mainly from take-up of an antifungal within the newly formed nail, via the matrix. To test our hypothesis, we took 400 mg itraconazole daily for 1 week. On the 8th day we cut 56 mg of the distal margin and 23 mg of the lateral edges of the fingernails to be sent to Janssen Research Foundation. The concentration of itraconazole in the distal margin was 1.013 ng/g but only 0.677 ng/g in the lateral edges. This difference supports our premise.

Consequently, the physician may want to supplement systemic therapy with surgical partial nail avulsion or keratinolysis (urea avulsion) when the lateral edge of the nail plate is mycotic, or to consider combination therapy with one of the new transungual drug delivery systems.

REFERENCES


Discoloration of the Nail Plate Due to the Misuse of Amorrolfine 5% Nail Lacquer

Sir,

Amorrolfine is a broad-spectrum antifungal drug, inhibiting biosynthesis of ergosterol. It is available as a nail lacquer at a concentration of 5%. The penetration of amorrolfine through human nail is 20–100 mg/cm² (1,2). The vehicles contain triacetin, butyl acetate, methylene chloride and methylnethacrylate polymer. A bluish discoloration of the nail plate (3), or a yellow-brown discoloration of the distal portion of the nail plate (4), has been reported after the use of nail hardeners.

We herein present cases of chromonychia due to the daily use of amorrolfine 5% nail lacquer.

CASE REPORTS

Case 1

A 25-year-old female patient presented with a 1-week history of bluish discoloration of the nail plate of two fingernails, on her left hand. Two months previously, due to a positive nail culture with *Trichophyton rubrum* involvement, amorrolfine 5% nail lacquer had been prescribed once weekly. By mistake, the patient was using the lacquer on a daily basis, and 60 days later, she noticed a bluish colour on her nail plates (Fig. 1). Discontinuation of the nail lacquer led to resolution of the nail plate discoloration, after 2 months.

Case 2

A 58-year-old female patient with *T. rubrum* on her fingernails was treated with the amorrolfine 5% nail lacquer. The patient, by mistake, was using the medication on a daily basis, and 75 days later, she noticed a yellow-brown discoloration of the nail plate (Fig. 2). Two months after discontinuation of the nail lacquer, the chromonychia had disappeared.

Fig. 1. Bluish nail plate discoloration of the first patient.

Case 3

An 18-year-old male patient with *T. rubrum* on the toenails was treated by us, with amorrolfine 5% nail lacquer. Two months later, we found out that by mistake the patient was using the lacquer on a daily basis. No discoloration of the nail plate was noticed.

DISCUSSION

Two of the patients suffered from onychomycosis of the fingernails and these were the ones who developed the nail plate discoloration. The third patient did not develop chro-