

Allergic contact dermatitis caused by amorolfine in a nail lacquer

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Topical drugs containing amorolfine are frequently used for the treatment of mycosis. Many people use amorolfine to empirically treat suspected fungal nail infection with once or twice weekly application. Amorolfine is usually well tolerated; only minor localised adverse events have been reported.

A 45-year-old, non-atopic woman presented with itchy vesicles and blisters containing partly purulent fluid on her right first toe (Figure 1). She reported that she had been applying, for a couple of weeks, a nail lacquer containing amorolfine 5.0% that she had acquired to treat a suspected fungal nail infection. Cessation of this treatment and application of topical clobetasol dipropionate (twice daily) and oral amoxicillin/clavulanic acid (875/125 mg, twice daily for 7 days) led to resolution within 2 weeks. Six weeks later patch tests

with the SIDAPA (Società Italiana di Dermatologia Allergologica Professionale e Ambientale) baseline series (Euromedical, Calolziocorte, Italy) and the nail lacquer “as is” were performed. Patch tests were applied on the back and left in occlusion for 2 days with Al Test (Euromedical) on Scanpor Tape (Norgesplaster, Vennesla, Norway). Readings performed at day (D)2, D4 and D7¹ showed a positive reaction to the nail lacquer. Subsequently, patch tests with all nail lacquer ingredients were performed with positive reaction to amorolfine 1.0% pet. Ten healthy subjects were patch tested with amorolfine 1.0% pet., with negative results.

We report a case of contact allergy to amorolfine contained in a nail lacquer used as an empirical treatment of a suspected fungal nail infection. Allergic contact dermatitis (ACD) caused by amorolfine has been sporadically reported since 1996,²⁻⁵ always related to exposure to cream or nail solution containing this drug. Interestingly, despite its widespread use, no cases seem to have been reported since 2010.⁵

Amorolfine is an antifungal drug with a low allergenic potential. However, amorolfine contained in nail lacquer could have higher allergenicity, enhancing the risk of ACD. In fact, therapeutic nail lacquers contain excipients such as butyl acetate, ethyl acetate and ethanol that evaporate after the application of the product, thereby increasing the concentration of amorolfine in the nail bed and in the perionychium. Moreover, topical antifungal lacquers are commonly provided with nail files to rasp the nail plate before drug application. This procedure may cause disruption of the cutaneous barrier of the perionychium.

ACD caused by exposure to amorolfine contained in antifungal nail lacquers might be under-diagnosed, especially in Italy and other European countries where these products are sold over-the-counter. Moreover, nail disorders such as onycholysis or onychodystrophy are often treated without proper dermatological (or at least medical) diagnosis but empirically with self-acquired topical antifungal products. Among these, amorolfine nail lacquers



FIGURE 1 A, Vesicles and blisters with serous and purulent fluid of the right first toe due to a nail lacquer containing amorolfine 5.0%. B, patch test (++) to amorolfine 1.0% pet. at day 4

are frequently chosen by consumers in view of their once or twice weekly application.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

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