

Short Communication

Type IV hypersensitivity to oral nystatin

RUTH BARRANCO, PILAR TORNERO, MANUEL DE BARRIO, CONSOLACIÓN DE FRUTOS, ANGEL RODRÍGUEZ AND
MARÍA RUBIO

Servicio de Alergia, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo 46, 28007-Madrid,
Spain

Key words: systemic contact dermatitis; nystatin; amphotericin B; macrolides; antibiotics; medicaments; cross-sensitivity. © Munksgaard, 2001.

Case Report

A 24-year-old atopic man, with oral candidiasis, was prescribed oral nystatin. Taking a tablet of nystatin was followed 12 h later by an itchy erythematous micropapular generalized eruption with facial angioedema. The rash was controlled with oral antihistamine. Later on, miconazole was tolerated. A single-blind placebo-controlled oral challenge was carried out. 6 h after nystatin intake (100,000 IU), the patient again developed a similar reaction.

1 month later, after clearing of all lesions, patch tests were carried out, with the following results:

Substance	Concentration and vehicle	D2	D4
nystatin	10% pet.	++	+++
amphotericin B	5% DMSO	+	++
erythromycin	1% pet.	—	—
azithromycin	5% pet.	—	—
clarithromycin	10% DMSO	—	—
spiramycin	10% DMSO	—	—
DMSO		—	—

Control patch tests in 10 atopic and non-atopic patients were performed, with negative results.

Discussion

Nystatin is an antimycotic polyene macrolide derived from *Streptomyces noursei*. It is widely used for both

topical and oral therapy of candidiasis of the skin, mucous membranes and intestinal tract (1). Cutaneous reactions, such as erythema, pruritus and dermatitis, have rarely been described and systemic reactions are even more rare, due to its poor absorption from the gastrointestinal tract. Our case, according to clinical presentation, oral provocation (2) and patch testing (3, 4), was a systemic contact dermatitis mediated by a Type IV hypersensitivity mechanism.

The positivity of the patch test with amphotericin B suggests cross-reactivity with nystatin, but other macrolides were negative. As expected, there was no cross-sensitization between nystatin and miconazole, because of the complete lack of similarity in their chemical structures.

References

1. Reynolds J E F (ed). Antifungal agents. In: *Martindale: the extra pharmacopoeia*, 31st edition. The Pharmaceutical Press, 1996: 413–414.
2. Quirce S, Parr F, Lazaro M, Gomez M I, Cano M S. Generalised dermatitis due to oral nystatin. *Contact Dermatitis* 1991; 25: 197–198.
3. Cooper S M, Reed J, Shaw S. Systemic reaction to nystatin. *Contact Dermatitis* 1999; 41: 345–346.
4. Kuchler A, Hamm H, Weidenthaler-Barth B, Kampgen E, Brocker E B. Acute generalised exanthematous pustulosis following oral nystatin therapy: a report of 3 cases. *Br J Dermatol* 1997; 137: 808–811.