

According to personal communication from doctors treating patients with apomorphine, no dermatitis has been observed either among patients or the personnel administering the drug. At a pharmacy in Denmark a few of the employees reacted with rhinitis when they worked with apomorphine. These symptoms disappeared after the use of protective masks with a filter and an effective local ventilator. To our knowledge, these persons were not tested.

Apomorphine is included among alkaloids believed to be skin irritants (Schwartz et al. 1957), but a search of the literature failed to reveal any report of sensitization. Contact dermatitis due to the chemically related morphine has been described (Bonnievie 1939, Jadassohn 1930).

The cause of the patients' reactions with rhinitis and respiratory distress to apomorphine is obscure. Apomorphine, unlike morphine, is not a liberator of histamine. Besides, the negative prick tests did not indicate an immediate type of reaction.

Apomorphine, which acts as a dopamine-receptor stimulating agent, seems to be widely used experimentally in pharmacologic institutions and in pharmaceutical industries. It is therefore possible that allergy to apomorphine is more common than hitherto supposed.

References

- Beil, H. (1976) *The Treatment of Multiple Drug Dependence and Alcoholism with Apomorphine*. Hamburg: Neue Autoren und Autographen Edition.
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Contact urticaria to a corticosteroid cream: polysorbate 60

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An adult male patient noted redness on his forehead when applying 1% hydrocortisone cream. Formulation components included hydrocortisone, sorbic acid, propylene glycol, cholesterol, isopropyl myristate, a vegetable oil derivative (not named), polysorbate 60, polyoxyl stearate, sorbitan monostearate, cetyl alcohol, and glyceryl monostearate.

When we applied 5 mg of the final formulation, urticarial lesions were reproduced within 20 min. This was seen on six occasions during 1 year. This occurred only with hydrocortisone applications to the forehead but not on the arm or back. The most readily observed lesions were those occurring at the anterior hair line. The wheal component was easier to visualize than the flare.

Formulation components were obtained at use concentration from the manufacturer. As with the final formulation, urticaria was noted only with applications to the forehead and not to the back and arm. The responsible chemical was polysorbate 60.

Polysorbate 60 is a mixture of stearate esters of sorbitol and sorbitol anhydrides, consisting predominantly of the mono ester. Other names include Tween 60® (ICI America), Polyoxyethylene (20) sorbitan monostearate, Emsorb 6905® (Emery) and Armotan-20® (Armak).

Contact urticaria to sorbic acid has been documented (Odom & Maibach 1977). The assay of polysorbate 60 allows 1% oleic or free fatty acid content. We do not know if sorbic acid itself is present; this patient did not demonstrate contact urticaria with 5% sorbic acid in petrolatum.

The presence of the wheal and flare on topical application is diagnostic of the contact urticaria syndrome. The involvement was local; there was no evidence of systemic involvement (asthma, anaphylactoid reaction). Neither passive transfer studies nor the Rast test were performed. It is assumed (but not proven) that this is an example of the immediate hypersensitivity type allergy.

Many patients complain of burning and

stinging with topical corticosteroid formulations, especially gels, lotions and creams. It was our impression that these were due to the phenomenon of subjective irritation, such as hydro-alcoholic vehicles. The data of this patient suggest that contact urticaria should also be sought as a possible mechanism when patients complain of burning and stinging with bland topicals.

Allergy to Daktarin gel

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Miconazole nitrate is a potent, synthetic antimicrobial topical agent with a broad spectrum of activity against dermatophytes, yeasts and Gram-positive bacteria.

Commercial preparations vary according to country (Table 1) as do the allergens in cases of dermatitis (Table 2). Two patients are described here, one allergic to miconazole and the other to triethanolamine.

Case 1

A 65-year-old male with a leg dermatitis thought to be mycotic was treated with Daktarin gel. The dermatitis disseminated following application of the gel. Patch tests were positive to Daktarin gel (+++), Daktarin solution (++) and triethanolamine (1% and 3% aq. $N(CH_2CH_2OH)_3$). Patch tests with the other ingredients of Daktarin (1% miconazole, 10% propylene glycol, pure tetracemate, and pure carboxyvinyl resin) were negative.

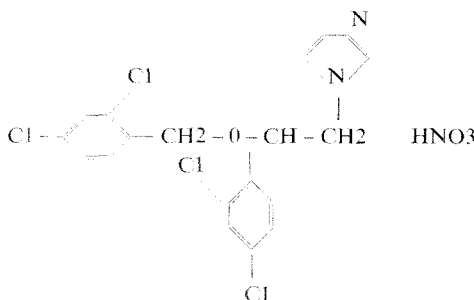
Case 2

A 23-year-old female presented with an acute disseminated dermatitis after treatment with Daktarin gel used over 15 days for ringworm of the left hand. Patch tests showed a weak reaction at 96 h with pruritis, erythema (+++) oedema (+) vesicles ($\pm$). At 72 h the test was weakly positive to miconazole nitrate suspension (1% pet.) while tests to other constituents were negative.

Reference

- Odom, R. & Maibach, H. (1977) Contact urticaria: A different contact dermatitis. Chapter 15, pp. 441-454, in Marzulli, F. & Maibach, H. (eds) *Dermatotoxicology and Pharmacology*, Vol. 4, Advances in Modern Toxicology. New York: John Wiley.

Possible group sensitization associated with the presence of an imidazole nucleus was not tested. Van Ketel tested nebendasole, tinidazole (Fasigyne), mitronidazole (Flagyl) in a subject allergic to miconazole nitrate, with negative results.



Miconazole: 2,4-dichloro-1-((2,4-dichlorobenzyl-oxy) phenetyl) imidazole

Acknowledgement

We thank the Lebrun Laboratories for their scientific collaboration.

References

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