

Discussion

Rifocine[®] is widely used as a topical antibiotic, especially in cutaneous bacterial infections (Gram+ and Gram-). Allergy to Rifocine[®] has rarely been described, only 8 cases having been reported: 6 of contact dermatitis from rifamycin (1-4), 1 of contact urticaria from rifamycin (5), and 1 of contact dermatitis from sodium metabisulfite (3).

There are many reports of allergic contact dermatitis to propylene glycol (PG) in a wide variety of topical preparations (6). PG is a dihydric alcohol that is a colorless, viscous, nearly odorless liquid. It is used widely as a vehicle for topical pharmaceuticals, cosmetics and various hand and body lotions. It is also used as a solvent and preservative in foods, varnishes, synthetic resins, automotive brake fluid and antifreeze.

Quoted concentrations of PG for patch testing include 2% to 4% aq. (7). Our patient was first tested with PG 5% pet. (Trolab) without any reaction, while PG 0.5% aq. was subsequently positive.

Acknowledgement

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Allergic contact dermatitis from nonoxynol-12 in a polish

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Case Report

A 45-year-old domestic cleaner presented with a 5-month history of acute severe dermatitis on the face, neck and forearms. It had started on the face with periorbital oedema. She related the rash to her job, as it cleared when she was off work, and in particular to a polish that she used. She gave a past history of atopic eczema. Examination revealed severe dermatitis on the dorsa of the hands, forearms and face.

She was patch tested to a standard series with positive reactions to parabens mix, fragrance mix, carba mix and thiuram mix. She was also patch tested to the polish (1% pet.) and its ingredients, with positive reactions to nonoxynol-12 (nonylphenol ethoxylate) (1, 0.5, 0.1, 0.01% pet.), with strong reactions to all dilutions at 2 (+) and 4 (++) days. Patch tests in 30 controls were negative.

Comment

Nonoxynols are nonionic surfactants that conform to the general formula $C_9H_{19}C_6H_4(OCH_2CH_2)_nOH$. Each nonoxynol is characterized by the number (*n*) of ethylene oxide repeats in the chain. In a rabbit model, nonoxynol-6 has been shown to be irritant, as was the frequent use of a vaginal pessary containing nonoxynol-9 (1). Al-

lergic contact dermatitis due to nonoxynols, usually nonoxynol-9, in topical antiseptics (2, 3) and spermicides (4-6) has been reported, as well as photoallergy (UVB) to nonoxynol-10 (7). Patch tests with fragments of the molecule were negative, implying that the whole molecule is the hapten (3). Cross-reactions between nonoxynols 6, 8, 3, 9, 10, 14 and 18 have been demonstrated (2).

Nonoxynol-6 has caused allergic contact dermatitis in an industrial hand cleanser (8) and in a crack-indicating fluid in the metal industry (9). In the guinea pig maximization test, it was not shown to be an allergen (8). Nonoxynols are used in detergents, liquid soaps, emulsifiers for creams, fabric softeners, photographic paper additives, hair dyes, lubricating oils, spermicides (8) and anti-infective agents (10, 11). Patients sensitized occupationally (9) and to antiseptics (2) have subsequently had exacerbations from nonoxynol-containing domestic detergents. Our patient appears to be the first in whom sensitization has occurred to nonoxynol-12 in a polish.

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Occupational dermatitis from ethylenediamine

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Case Report

A 39-year-old woman presented with an 18-month history of recurrent eczema over the dorsa of the hands, forearms and eyelids. She had worked as a laboratory technician in a pharmaceutical company for 13 years, in the department where aminophylline tablets were manufactured. She noticed improvement of her eruption during holidays, but the dermatosis relapsed on her return to work. Sometimes, she wore protective rubber gloves. She was transferred to another department, where she was no longer exposed to aminophylline, and her skin cleared. She had no personal or family history of atopy or skin disorders, and had never used ethylenediamine-containing medicaments.

After clearance of the lesions, she was patch tested with Finn Chambers on Scanpor (Epitest), with the GPEDC standard series, rubber series and all compon-

ents of the tablets supplied by the pharmaceutical laboratory. The tests were read after 2 and 4 days and were positive to: aminophylline (1% pet. and 1% aq.) and ethylenediamine hydrochloride (1% pet.). Patch tests with theophylline (1% pet.) and all other components were negative (Table 1). 14 control patients were all negative to aminophylline 1% pet.

Discussion

Contact dermatitis from ethylenediamine was first reported among pharmacists handling aminophylline suppositories (1, 2). Sensitivity to ethylenediamine was also occasionally reported in nurses preparing and administering injectable theophylline (3). Aminophylline consists of 2/3 theophylline and 1/3 ethylenediamine, the latter increasing the solubility of the former (4).

Ethylenediamine has since become a common sensitizer, because of its use as a stabilizer in a widely prescribed topical medication (4). Most cases of sensitization now reported are caused by topical medicaments (5-9).

Cases of occupational sensitization are rarely reported, considering its many uses in industry (10-14). Ethylenediamine neutralises oils, is a solvent for albumin, casein and fibrin, stabilises rubber latex, acts as a corrosion inhibitor and controls alkalinity. It is used in the preparation of dyes, inhibitors, rubber accelerators, fungicides, synthetic waxes, resins, insecticides and asphalt-wetting agents (4). Over the last 20 years, non-occupational allergic contact dermatitis to ethylenediamine has been much more frequent than occupational allergic contact dermatitis (15).

Table 1. Patch test results

Patch Test	D2	D4
Standard series	-	-
Rubber series	-	-
Components of the tablet:		
aminophylline 1% pet.	+	++
aminophylline 1% aq.	+	++
ethylenediamine 1% pet.	++	++
theophylline 1% pet.	-	-
Golden Yellow 3051 2% pet.	-	-
cetyl-stearyl alcohol 30% pet.	-	-
magnesium stearate 2% pet.	-	-
povidone 20% pet.	-	-
hydroxyethylcellulose as is	-	-
talcum powder as is	-	-

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