Allergic contact dermatitis from newsprint paper

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Key words: Allergic contact dermatitis – newspaper – colophony.

A 30-year-old man working as a newspaperman developed a severe hand eczema every summer for the last 5 years. The eczema was vesicular and often secondary infected, disappearing during winter when the patient wore gloves. Patch testing with the ICDRG standard series showed a +++ reaction to colophony. Tests with pieces from a fresh newspaper as well as from a two-week old one gave ++ reactions, no difference between printed and unprinted paper being observed.

In the paper pulp industry, one method to determine the rosin content in paper and paper pulp is frequently used (1): pieces of paper are extracted with ethanol or dichloromethane in a reflux condenser for 6 and 4 h, respectively; the extraction fluid is totally evaporated to give a viscous residue.

When testing with ethanol and dichloromethane extracts of both paper pulp from the paper mill delivering the newsprint paper and newsprint paper not yet used in the printing process, +++ reactions were observed. 10 controls were all negative.

Pieces of newsprint paper were left in ethanol for 24 h, but a test with this ethanol extract was negative. This procedure apparently does not give sufficient extraction of rosin.

The patient is now working with his gloves on, even in summer, with only minimal symptoms of the eczema.

Reference

1. Scandinavian Pulp, Paper and Board Testing Committee. *Scan-C* 1962: *7*: 62; *8*: 62.

Contact sensitivity to betamethasone 17-valerate and fluocinolone acetonide

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Key words: Contact hypersensitivity – betamethasone 17-valerate – fluocinolone acetonide – hydrocortisone – dexamethasone – parabens – brilliant green.

Contact sensitivity due to topical corticosteroids was recently reviewed by Dooms Goossens (1). We report 2 cases, one due to betamethasone 17-valerate and the other to fluocinolone acetonide.

Case Reports

Case 1

A 35-year-old man applied Neosporin-H ointment for itching on his scrotum. The next day, he developed swelling of the prepuce for which he applied Betnovate-N ointment. 6 h later, he noticed itching and erythema on the scrotum and penis which worsened during the next 2 days. Betnovate-N was replaced by Flucort ointment. The lesions healed completely during the next 4 days and Flucort was stopped. The next day, he again experienced itching on the scrotum and the penis for which he started applying Betnovate-C ointment. Within 3 h of the application, he noticed increased itching with erythema and vesiculation. He was given saline compresses, 0.5% aqueous brilliant green and Betnovate ointment, oral tetracycline 1 g and acetylsalicylic acid 2 g daily. He again experienced a burning sensation after the applications. The erythema and ulceration increased during the next 6 days; when brilliant green and acetylsalicylic acid were stopped, tetracycline was replaced by oral erythromycin 1 g daily, and prednisolone 15 mg daily orally was added, the Betnovate ointment being continued, but without improvement. The Betnovate was stopped and the lesions resolved in 6 days. 16 days later, patch tests were positive to Betnovate ointment, Betnovate-C ointment, Dexaquin ointment and brilliant green (Table 1). 5 months later, patch tests gave positive reactions with betamethasone 17-valerate 0.12% and 0.05% in propylene glycol but not with

Table 1

Patch test results	Case 1	Case 2
Flucort ointment	−	++
Flucort-H ointment		++
Flucort-N ointment	−	++
Flucort-C ointment		++
Dexaquin ointment	++	
Betnovate ointment	++	++
Betnovate-N ointment		++
Betnovate-C ointment	++	++
Decadron with neomycin cream		−
Ultralan cream		−
Hydrocortisone ointment		+
Betamethasone 17-valerate 0.12% aq		−
Betamethasone 17-valerate 0.12% pg	++	
Betamethasone 17-valerate 0.05% pg	++	
Betamethasone 17-valerate 0.02% pg	−	
Betamethasone 17-valerate 0.01% pg	−	
Betnovate cream base	+	
Betnovate ointment base	+	
Fluocinolone acetonide 0.025% aq		++
Base of Flucort ointment		+
Base of Flucort lotion		+
Propyl paraben 0.1% in PEG		+
Benzyl paraben 0.1% in PEG		+
Methyl paraben 0.1% in PEG		−
Ethyl paraben 0.1% in PEG		−
Brilliant green 1% aq.	++	

pg=propylene glycol
PEG=polyethylene glycol

further dilutions. The bases of the Betnovate ointment and cream also showed positive reactions but were much weaker.

Case 2

A 58-year-old man had itchy lichenified lesions on both his legs for 12 years. He used Flucort-H ointment, but 18 days later, had increased itching and redness. Flucort-H was stopped and he was given

Commercial names	Constituents
Neosporin-H	Polymyxin B sulphate 5000 units, zinc bacitracin 400 units, neomycin sulphate 3400 units and hydrocortisone 10 mg in each gram of ointment
Flucort	Fluocinolone acetonide 0.025% in an ointment base
Flucort-H	Fluocinolone acetonide 0.1% in an ointment base
Dexaquin	Dexamethasone sodium phosphate 0.05% and chinoform 3% in an ointment base
Histapred	Prednisolone 2.5 mg and chlorpheniramine maleate 2 mg per tablet

Histapred 6 tablets daily which cleared the erythema. After 6 months, he again applied Flucort ointment and soon after noted itching, erythema and vesiculation on both legs. Flucort was stopped and he was given prednisolone 20 mg daily orally which led to clearance of the dermatitis during the next 2 days. Patch tests showed positive reactions with the commercial ointments Flucort, Flucort-H, Flucort-N, Flucort-C, Betnovate, Betnovate-N and Betnovate-C. Patch tests 4 months later were positive to fluocinolone acetonide 0.025% in distilled water, with weaker reactions to the bases of Flucort ointment and Flucort lotion, propyl paraben, benzyl paraben and hydrocortisone ointment.

Both patients showed hypersensitivity to multiple agents, as noted by previous workers, but sensitivity to betamethasone 17-valerate in the first patient and to fluocinolone acetonide in the second patient was unquestionable. The second patient reacted to parabens.

Reference

1. Dooms-Groossens A, Vanhoe J, Vanderheyden D, Gevers D, Willems L, Degreef H. Allergic contact dermatitis to corticosteroids. *Contact Dermatitis* 1983: *9:* in press.