

Short Communications

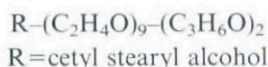
Non-eczematous urticarioid allergic contact dermatitis due to Eumulgin® L in a deodorant

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Key words: Eumulgin® L; non-eczematous contact dermatitis; emulsifiers; cosmetics; repeated open application test; allergic contact dermatitis. © Munksgaard, 1997.

Eumulgin® L (cetyl stearyl alcohol 2(OP) 9(OE)) is a cetyl stearyl alcohol with 2 added molecules of propylene oxide [2 (OP)] and 9 of ethylene oxide [9(OE)]:



Case Report

A 25-year-old woman presented with an intensely itchy erythematous edematous dermatitis on the axillary folds following a few applications of a liquid deodorant. 1 day later, the eruption spread to the flanks (Fig. 1) and persisted for 10 days in spite of systemic and topical corticosteroids. The dermatitis resolved with hyperpigmentation and desquamation.

Patch tests with the GIRDCA standard series, preservatives, fragrance and emulsifiers series, were all negative. In contrast, a repeated open application test (ROAT) with the deodorant, as is, on the volar forearm was positive after only 3 applications. The tested components of the deodorant: allantoin 0.5% aq., betaine chloride 1% aq., hydroxyethylcellulose 70% alc., ethyl alcohol 70% and 95% aq. and fragrance 2% pet. were negative. The other components were separated with extraction techniques. NMR spectrometry revealed that the chemical nature of the emulsifier obtained was Eumulgin® L (cetyl stearylalcohol 2(OP) 9(OE)). A patch test with Eumulgin L 30% pet. revealed a +++ D2/+++ D3 response. To confirm our results regarding the emulsifier, further patch tests with pure Eumulgin® L, kindly supplied by Henkel Laboratories, at various concentrations and in different vehicles, were positive: 1% pet. and 1% aq. gave a + D3 positivity and 10% pet. and 10% aq. gave a ++ D3 positivity. Patch tests in 5 healthy subjects were negative.

Discussion

Emulsifiers are weak and rare sensitizers. The prevalence of sensitization to the 6 most commonly used emulsifiers was found to be 5.3% when cosmetic or medicament dermatitis was suspected (1). Higher sensitization rates are usually observed in patients with chronic leg ulcers, etc. (2). Patients allergic to emulsifiers frequently show posi-

tive reactions to other constituents of topical preparations (1). Eumulgin® L is a non-ionic liquid oil-water emulsifier, used mostly in topical aqueous preparations such as lotions and deodorants.

We could detect no cross-reactivity between Eumulgin® L (cetyl stearyl alcohol 2(OP) 9(OE)) and cetyl stearyl alcohol tested at 20% in our emulsifiers series. A similar result was observed by Hannuksela et al. (3), who observed that positive responses to the emulsifiers Lanette® N (cetyl stearyl alcohol + sodium cetyl stearyl

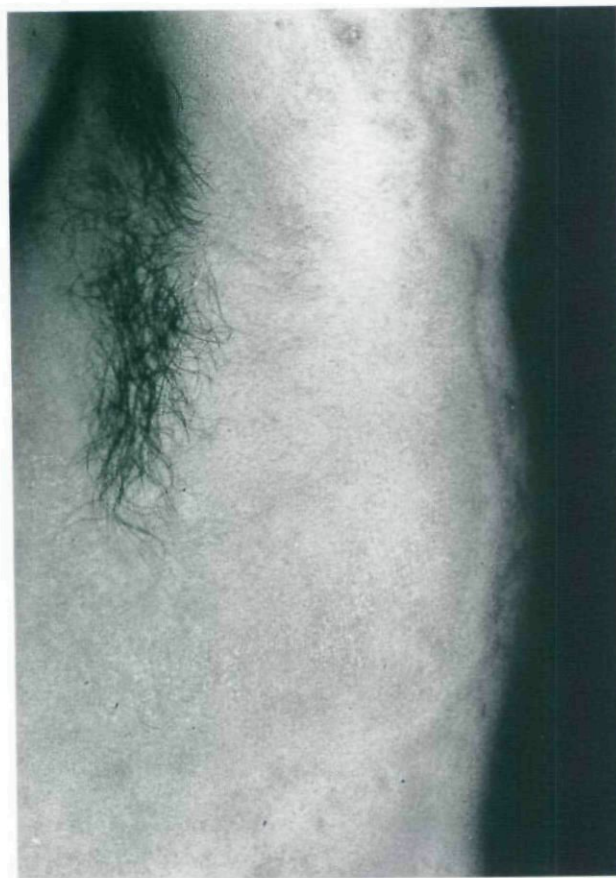


Fig. 1. Noneczematous urticarioid dermatitis involving axilla and thorax after deodorant applications.

sulfate) and Lanette® 16 (cetyl alcohol) were only occasionally associated with a positive patch test to pure cetyl alcohol. Furthermore, Pasche-Koo et al. (2) found that patients allergic to Lanette® N (containing 80% Lanette® O, that is cetyl stearyl alcohol) rarely reacted to Lanette® O. Therefore, the allergenic potential of emulsifiers with a complex molecule (such as Eumulgin® and Lanette® N) seems to be different from that of emulsifiers with a simpler chemical structure.

The widespread persistent non-eczematous urticarioid dermatitis observed in our patient made us prefer a ROAT to a closed patch with the deodorant, as is, the strong positive reaction observed confirming the deodorant as the cause, while avoiding the risk of a possibly dangerous closed patch test. To our knowledge this is the 1st documented case of allergic contact dermatitis from Eumulgin® L.

Acknowledgements

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Contact dermatitis from sodium-cromoglycate-containing eyedrops

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Key words: sodium cromoglycate; cromolyn; ophthalmics; eye drops; soft contact lens; allergic contact dermatitis; allergic contact conjunctivitis; thimerosal; benzalkonium chloride; medicaments; compound allergy; preservatives.
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A 32-year-old woman, the wearer of soft contact lenses for 17 years had, for a long time, used the same lens-cleaning product. For 6 months, she had complained of ocular discomfort, with severe itching and burning sensations, photophobia and conjunctival injection. She had continued to use the same contact lenses and cleaning solution, while being prescribed Cusicrom® eye drops. A few weeks later, a severe, itchy, erythematous edematous periorbital dermatitis appeared, spreading over the cheeks. She had used Cusicrom® from time to time in the past, on the advice of her ophthalmologist.

Patch testing was performed with the GEIDC standard series, a cosmetics series (Chemotechnique), the lens cleaning solution (Boston-Cronoptica®) and the eye drops (Cusicrom-Cusi®). Finn Chambers® on Scanpor® were used. Reactions were read at 2 and 4 days.

Positive patch test results were:

thimerosal	0.1%	+	D4
	pet		
Boston-Cronoptica®	as is	+	D2 and D4
Cusicrom®	as is	++	D2 and D4

Cusicrom® contains 40 mg/ml sodium cromoglycate (cromolyn) in aqueous solution. To confirm suspicion of allergic reaction to this compound, pure sodium cromoglycate was tested at 1% aq. and pet., with negative results.

After a short time, the patient recovered completely from her ocular and skin problems. She continued to use her contact lenses, but never again her cleaning solution or cromolyn therapy. A new patch test study was then performed, with ROAT. A use test with 2 × daily application of Cusicrom®, on the volar surface of the arm, elicited a severe vesicular eczema after 4 days. However, patch tests with the components of the product, tested separately, remained negative at 2 and 4 days. Only sodium cromoglycate 1% with benzalkonium chloride 0.1% pet. was positive.

Components Cusicrom

		D2	D4
sodium cromoglycate	1% pet.	-	-
EDTA	1% pet.	-	-
Tween 80	10% pet.	-	-
benzalkonium chloride	0.1% pet.	-	-
Na cromoglycate 1% pet. + benzalkonium chloride	0.1% pet.	++	++

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