

Severe acute irritant contact dermatitis presenting as exfoliative erythroderma

Maïke Mose, Mette Sommerlund and Uffe Koppelhus

Department of Dermatology, Aarhus University Hospital, DK-8000, Aarhus, Denmark

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Irritant contact dermatitis usually manifests in the skin with inflammation, mild oedema, and scaling. Excessive or repeated exposure to detergents can lead to irritant contact dermatitis (1). We report an unusual manifestation of acute irritant contact dermatitis.

Case Report

A 58-year-old female presented with a widespread exfoliative erythroderma-like eruption, with relatively well-demarcated sparing of the skin on the scalp, face,

hands, legs below knee level, and the area between the shoulder blades (Fig. 1). The patient had no history of dermatological disease and no prior or present exposure to sunlight, infection, or drugs. Biochemical screening was normal, skin cultures were negative, and a biopsy from lesional skin showed changes compatible with dermatitis.

The patient was an avid user of body moisturizer, and close product examination revealed that she, when making her latest purchase, had mistaken the detergent containing rinse-off product, Biotherm (TM) Lait de Douche Shower Milk, for her usual moisturizer, Biotherm (TM) Lait Corporel Body Milk, because of almost identical design of the packaging. The skin symptoms had gradually developed over 1–2 weeks after the patient had started using the rinse-off product as a moisturizer. The patient had continued to apply the shower milk daily, hoping that it would ease the skin symptoms.

Correspondence: Uffe Koppelhus, Department of Dermatology, Aarhus University Hospital, P.P. Ørumsgade 11, DK-8000 Aarhus, Denmark. Tel: +45 78461861; Fax: +45 78461850. E-mail: uffkop@rm.dk

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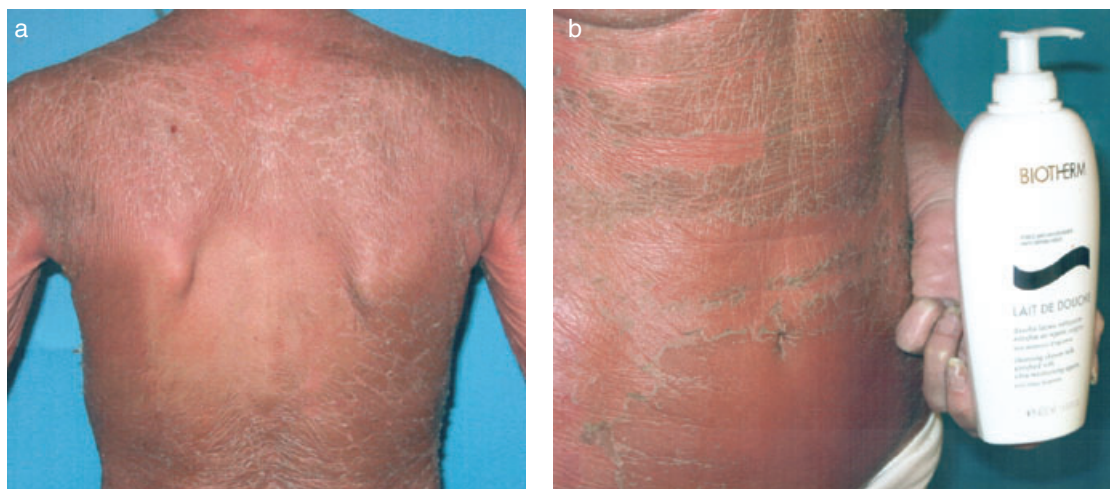


Fig. 1. Almost generalized redness and scaling of the skin, but with noticeable sparing of an area between the shoulders (where the patient was not able to reach when applying the irritant) (a). The suspected product was a soap, Lait de Douche, which had been mistaken by the patient for her usual moisturizer of the same brand (b).

The patient was treated for 7 days with potent topical corticosteroids, moisturizers, and bran baths. At clinical follow-up 3 months later, the skin was normal.

Four months after hospitalization, patch testing was performed with the European baseline series, fragrance series and cosmetic series (obtained from Chemotechnique, Vellinge, Sweden, and Trolab, Reinbek, Germany) and available single allergens from the Biotherm (TM) Lait de Douche Shower Milk product in small Finn Chambers[®] (Epitest Ltd Oy, Tuusula, Finland) on Scanpor[®] tape (AlpharmaAS, Oslo, Norway). Patch test readings were performed on days 3 and 7 according to standard guidelines. No contact allergies were detected (Table 1).

Discussion

The diagnosis of irritant contact dermatitis is based on significant exposure to (known) irritants and a temporal relationship between exposure and the development of dermatitis, together with the exclusion of allergic contact dermatitis by patch testing (2). On the basis of these criteria, we concluded that irritant contact dermatitis was the obvious clinical diagnosis in the case reported here. A few other similar – but less severe – cases have been reported previously (3). Together, the cases emphasize the importance of clear and unambiguous packaging of cosmetic products as required by the European Commission Council Directive 76/768/EEC (3). The case report also stresses the importance of thorough investigation of dermatological patients' own skin care products when they present with unexplained dermatitis-like reactions.

Table 1. Ingredients of Biotherm (TM) Lait de Douche Shower Milk

Ingredients	Patch test	Irritant potential
Aqua	–	Low
Sodium laureth sulfate	–	High
Hexylene glycol	–	Low
Glycerin	–	Low
Glycol distearate	–	Low
Coco-betaine	Negative	Moderate
Cocamide MEA*	Negative	Moderate
Limonene	Negative	Moderate
Orange peel oil (> 90% limonene) [†]	–	Low
Sodium chloride	–	Low
Polysorbate 20	–	Low
Disodium cocoamphodiacetate	–	Low
C10-30 alkyl acrylate crosspolymer	–	Moderate
Sodium benzoate	Negative	–
Phenoxyethanol	Negative	–
Tartaric acid	–	Low
Salicylic acid	Negative	Low
Citrus grandis oil	–	Low
Polyquarternium-7	–	Low
Titanium dioxide	–	Low
Olea Europaea oil	–	Low
Fragrance	Negative	–
Citral	Negative	–
Linalool	Negative	–
Vitreoscilla ferment	–	Low
Citric acid	–	Low

*Cocamide DEA (not MEA) was tested.

[†]Not tested, but the main ingredient (limonene) was tested.

As stated in the text, potential allergens all gave a negative patch test result. The irritant potentials of the ingredients are categorized as either low, moderate, or high. Sodium laureth sulfate is the only ingredient with a high irritant potential.

References

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