

Irritant contact dermatitis from shower cream applied as a moisturizing cream: a review of three cases*

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Three cases are presented of Danish women applying 'wash off' or 'rinse off' cosmetic products as 'leave on' products. The women mistook cleansing shower creams for being moisturizing creams and did not wash the shower cream off after subsequent use. Their eczema was severe and secondary infection occurred in two of the cases.

It is well known that 'rinse off' cosmetic products are composed differently from 'leave on' products. The shorter application time and the dilution of the products when applied are circumstances permitting higher concentrations of ingredients compared with 'leave on' products (1). The ingredients that are most problematic in this context are the detergents, which can cause irritant reactions if the product is left left for a prolonged time on the skin (2).

Case Stories

Case 1

Following use of Beauty Care Shower Indulging Cream from Dove® (Unilever, 2605 Brøndby, Denmark) as a moisturizing lotion, an 88-year-old woman, who had no prior allergies or skin diseases, developed an erythematous rash primarily affecting her face

* Each author has participated sufficiently to take responsibility for this work.

and legs and secondary infection developed. Patch testing with the European baseline series revealed doubtful reactions to formaldehyde and formaldehyde releasers (quaternium-15, imidazolidinyl urea, diazolidinyl urea) and nickel sulfate. The shower cream and her other cosmetic products were tested for formaldehyde, but none contained it. Biopsy of the skin showed eczematous changes and signs of infection in the epidermis. She avoided the shower cream and was treated with mometasone furoate cream on her body, fusidic acid-hydrocortisone cream on her face and also oral antibiotics.

Case 2

An 85-year-old woman with no prior allergies or skin diseases developed a burning, stinging rash affecting the abdomen (Fig. 1) and lower back; this occurred following 14 days of applying a shower cream from LdB® (Hardford Daily Care, Fritz Schur Consumer Brands, Denmark) as a moisturizing cream. The skin was red, scaling and in certain areas exudation was present. The diagnosis was irritant contact dermatitis and no further tests were performed. Treatment was mometasone furoate cream, moisturizing lotion and discontinuation of the shower cream.

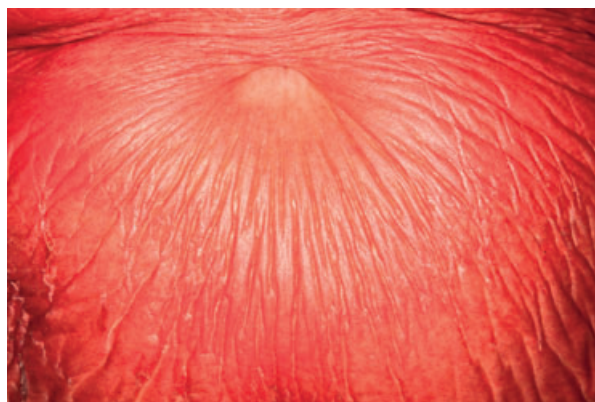


Fig. 1. Irritant contact dermatitis on the abdomen of an 85-year-old woman following use of a cleansing shower cream as a moisturizing lotion.



Fig. 2. Irritant contact dermatitis of the face on a 55-year-old woman following 14 days of applying a cleansing shower cream as a moisturizing cream.

Case 3

A woman of 55 years with no prior history of skin diseases or allergies developed vigorous marked, red scaling of the face (Fig. 2), chest, the flexural aspects of the lower and upper extremities and in the skin folds of the abdomen and groins. She was afebrile but skin swab cultures grew *Staphylococcus aureus* and *Staphylococcus albus*. A biopsy showed eczematous changes. She had applied a shower cream from Nivea® (Beiersdorf, Birmingham B37 7YS, United Kingdom) to her face and body for 2 weeks prior to the eczematous outbreak. She had mistaken it for a moisturizing lotion. She was treated with a betametasone/fusidic acid combination cream, hydrocortisone-17-butyrate cream, a moisturizing lotion, oral antibiotics and avoided the shower cream.

All three patients had clearance of their dermatitis when treated with steroid cream, avoidance of the shower cream and/or antibiotics. The dermatitis resolved for each patient after respectively 3 months, 2 weeks and 2 weeks.

Discussion

In these three cases, a strong irritant reaction caused by a shower cream was the outcome of women not using a cosmetic product as intended because they had not appreciated that the products were to be rinsed off. A number of shower cream products (skin cleansers) on the market can have misleading packaging looking similar to a skin moisturizing cream from the same manufacturer. Additionally, product names can be misinterpreted when containing the word *crème/cream*. Skin cleansers with names such as Cream Oil, Crème Soft in large script and the term shower in small script beneath or above may be misleading. Such products are available for purchase in consumer stores and on the internet. Shower is an English word, which may not be understood by all Danish people especially if they do not speak English.

Clearly understandable labelling that describes the handling use and purpose of the products and leave no room for misconception is required. Article 2 of the Cosmetics Directive 76/768/EEC states: 'a cosmetic product put on the market within the Community must not

cause damage to human health when applied under normal or reasonably foreseeable conditions of use, taking account, in particular, of the product's presentation, its labelling, any instructions for its use and disposal as well as any other indication or information provided by the manufacturer or his authorized agent or by any other person responsible for placing the product on the Community market' (3).

We feel that the presentation of cleansing shower cream products could be improved in order to comply better with this article.

Authorities are aware of the importance of full ingredient labelling of cosmetic products and legislations requires products to contain a declaration label of all ingredients including preservatives, detergents, colours, UV-filters, antioxidants, lipids and of 26 individual fragrances (3). The list of ingredients is continuously growing but no steps have been taken to make it easier for the consumer to interpret the product package, labelling name or handling of the product. No other studies concerning the dilemma of misleading product naming/packaging of cosmetic

products could be found except a photograph of our second case used as 'picture of the month' in a Danish medical journal (4).

The shower creams applied by our three cases all contained detergents, such as sodium C12–13 parath sulfate, cocamidopropyl betaine, cocamide MEA, sodium lauryl sulfate (SLS). All may be extremely irritant if left on the skin and reactions such as we have seen can be expected if detergents are applied undiluted and repeatedly on the skin (5,6). The duration of application is significant for developing an irritant reaction to SLS (7).

It is unfortunate that cosmetic products do not clearly display their function by using names, labelling or product packing which are transparent to everyone. We have seen three such cases in our University department. It is probable that more cases exist, as only the most severe forms of skin disease are referred to our centre.

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