

Contact allergens in topical corticosteroid vehicles: analysis of product composition

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Patients, especially those with atopic dermatitis, should avoid topical medications containing contact sensitizers, because chronic exposure to them increases the risk of allergic contact dermatitis and exacerbations of the skin condition (1).

Methods

We generated a list of all topical corticosteroids available in Poland in 2015 (2) and described by the manufacturer as being 'for topical use on the skin'. For each product meeting the inclusion criteria, the list of ingredients was extracted from the package insert. Subsequently, the compounds were matched against the European baseline series of 28 contact allergens (3) and possible cross-reactors to these allergens. The study was limited to preparations sold in 2015 (sales data were kindly provided by Sequence HC Partners, Warsaw, Poland, in February 2016).

Results

The study comprised 78 topical corticosteroids, among which 30 (38%) contained at least one allergen. The detailed analysis showed that there were five main allergens: neomycin in 6 (8%) and its cross-reactor gentamicin in 8 (10%) products, parabens in 11 (14%), lanolin alcohols in five (6%), clioquinol in three (4%), and

formaldehyde in one (1%). Patterns of allergen occurrence among different forms of steroids varied significantly. Creams were most likely to contain allergens [14 of 27 creams (52%)], whereas liquids in our sample were allergen-free.

Discussion

Topical corticosteroids, like any other topical medications, may contain contact sensitizers, and may therefore contribute to the development of allergic contact dermatitis. We recently pointed out the increasing problem of the presence of potential contact allergens in cosmetic products and for the atopic skin (4); however, at present, no data are available on the occurrence of the most hazardous ingredients in topical corticosteroid vehicles available in Europe. Although our research comprises only products from the Polish market, one may assume, on the basis of the common EU legislation, that the same phenomenon might be found in all European countries. Allergic contact dermatitis caused by topical corticosteroid ingredients should be considered in patients who do not respond to the topical treatment or have a flare-up after the application of medication (5).

Our analysis showed that there is vast exposure to contact allergens in topical corticosteroids. Research to determine whether there is a real risk of allergic contact dermatitis caused by the components of topical corticosteroid preparations is needed.

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