

Allergic contact dermatitis to Elidel® cream itself?

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Introduction

Calcineurin inhibitors, such as pimecrolimus (Elidel®) and tacrolimus (Protopic®), are relatively new topical drugs that are widely prescribed for atopic dermatitis. We report a patient who developed allergic contact dermatitis from the use of Elidel cream.

Case Report

Under the impression that topical medicaments were worsening her eczema, a 7-year-old atopic girl was referred for patch testing. She was patch tested with the European baseline series, medicament and cosmetics series and her usual preparations. Also included were Elidel cream 1% and Protopic cream 0.1%. Readings were at D2 and D3. The only reaction was to Elidel (++) . The manufacturer of Elidel (Novartis) provided samples of all the individual ingredients of Elidel, as well as placebo (mixture of all excipients). Patch tests with the placebo, individual excipients and pimecrolimus 1 and 2% in pet. and in alcohol showed no reaction (Table 1).

Repeated patch testing with Elidel components confirmed results.

In a repeated open application test (ROAT) with placebo performed on seven consecutive days, Elidel, pimecrolimus 2% pet. and alcohol, only Elidel showed a reaction.

A chromatographic spectral comparison confirmed the composition of the placebo (Dr Gelbcke, Laboratoire de Chimie Pharmaceutique Organique, Université Libre de Bruxelles).

Discussion

Very few cases of pimecrolimus and/or Elidel cream allergic contact dermatitis

Table 1. Results of patch testing and repeat open application test (ROAT)

	D2 reading	D3 reading	ROAT at D7
Protopic 0.1%	—	—	NA
Elidel 1%	++	++	++
Elidel placebo (mixture of all excipients)	—	—	—
Elidel placebo ingredients tested separately			
Citric acid, 1% aq.			
Benzyl alcohol, 1% pet.	—	—	NA
Cetyl alcohol, 20% pet.	—	—	NA
Oleyl alcohol, 30% pet.	—	—	NA
Stearyl alcohol, 20% pet.	—	—	NA
Aqua	—	—	NA
Vegetable oil, 'as is'	—	—	NA
Sodium hydroxide, NA	—	—	NA
Glycerol monostearate, 30% pet.	—	—	NA
Propylene glycol, 10% aq.	—	—	NA
Sodium cetearyl sulfate, 0.25% aq.	—	—	NA
Caprylic/capric triglyceride, 'as is'	—	—	NA
Pimecrolimus, 1% pet.	—	—	NA
Pimecrolimus, 2% pet.	—	—	—
Pimecrolimus, 5% pet.	—	—	NA
Pimecrolimus, 1% alcohol	—	—	—
Pimecrolimus, 2% alcohol	—	—	NA
Pimecrolimus, 5% alcohol	—	—	NA
Pimecrolimus, 1% placebo	—	—	NA

NA, not applicable.

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have been described in the literature (1–5). In 2006, Andersen et al. described a case resulting from oleyl alcohol in Elidel cream. In their case, pimecrolimus even appeared to have an aggravating effect on the cutaneous reaction (1). More recently, Saitta et al. reported allergic contact dermatitis to pimecrolimus itself (4). Other authors have described patients who are allergic to pimecrolimus and tacrolimus, both of which are increasingly being used to treat atopic dermatitis (2, 3).

In our case, repeating patch tests and ROAT showed no contact allergy to any of the Elidel placebo ingredients, but confirmed allergy to Elidel itself. To our knowledge, this is the first report of Elidel contact allergic dermatitis without a specific allergen having been identified. We suggest that interactions among components of the final product created a new allergen. This is believed to be what happens in compound contact allergy, as defined by Calnan (6).

Confirmation of a suspected case of compound contact allergy can be achieved by testing the different components of the final product in various combinations; our patient declined this.

This case illustrates that it can be important to test with finished products as well as with individual chemicals.

Conflicts of interest: The authors have declared no conflicts.

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