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**Corticosteroid contact allergy-the importance of late readings and testing with
corticosteroids used by the patients**

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The corticosteroid markers tixocortol pivalate, budesonide, and hydrocortisone-17-butyrate (Hc-17-B), even present in a standard series, are at times insufficient to trace contact allergy to certain corticosteroids (1). In addition, if late patch test readings are not performed consistently, the risk of missing corticosteroid allergy is not negligible (2-3) with sometimes devastating consequences. The following 2 cases are probably not unique.

Case 1

A 49-year-old woman with no personal atopy was not diagnosed with skin disease until she broke her leg at the age of 26 and had to use crutches with metallic handles for 6 months. Since then she has had a hand eczema intermittently, which has been treated with several topical and internal medicaments including corticosteroids. Despite having a hand eczema she started to work as a cleaner in 1996, and in the years to follow deteriorated in her hand dermatitis with spreading of the eczema to the lower arms, which in 2001 led to sick-leave. In 2004 she was referred to us because of long-standing eczema and sick-leave.

At presentation she had a widespread eczematous dermatitis engaging the neck, the dorsal axillary folds, the bends of elbows, the inside of the lower arms, and the right volar hand. Patch testing to our standard series and corticosteroid series was performed on her first visit. Our standard series was supplemented with a textile –dye mix and its separate constituents, our corticosteroid series with the corticosteroids available on the Swedish market, and some potentially cross-reacting corticosteroids. Besides alclometasone-17,21-dipropionate 1.0% dimethyl sulfoxide, – day (D)3, +D7, vehicle –D3, –D7 (present in the corticosteroid series), she reacted to nickel, cobalt, palladium, textile-dye mix, disperse orange 3, mercaptomix, mercaptobenzothiazole, methylchloroisothiazolinone/methylisothiazolinone, and *Myroxylon pereirae*.

Case 2

A 54-year-old woman worked in a restaurant for several years when she started to get a hand dermatitis of unknown origin. She saw her general practitioner and was prescribed the topical corticosteroid Locoid[®] cream, containing 0.1% Hc-17-B (Yamanouchi Pharma AB, Malmö, Sweden), but the disease was not investigated further. She used Locoid[®] cream intermittently for one year. Despite this treatment, her hand eczema became worse, and because she suspected something at work, she was referred to us. She presented with numerous eczematous patches on several fingers (Fig. 1). She was patch tested to our standard series and materials from her work she suspected to be the cause of her dermatitis. At the first patch test reading on D3 the tests were negative, but on D7, the second test reading, she presented with a reaction only to budesonide, 0.01% pet. She was then given a corticosteroid not cross-reacting with budesonide or Hc-17-B (viz. clobetasol propionate) and after one month she was free of eczema and has stayed free since, still working in the restaurant.

Discussion

The inclusion of corticosteroid markers into standard series has been advocated since the 1990s (4-5). However, not all corticosteroid allergy is detected this way (1). The 1st patient reacted to a corticosteroid which is not present in our standard series and which is not detected with the 3 markers of corticosteroid allergy we have in our standard series, viz. tixocortol pivalate, budesonide and Hc-17-B. When informed about her corticosteroid allergy she remembered smarting pain and no improvement of treated eczematous skin after the use of Legederm[®] cream, containing 0.05% alclometasone-17,21-dipropionate (Schering-Plough AB, Stockholm, Sweden) in the 1980s. At the time this had not been investigated further, and her doctor had just changed to another corticosteroid.

Case no. 2 was on the verge of changing her job when we saw her, because she strongly suspected her work to be the cause of her chronic hand eczema. If a second late patch test reading had not been performed, she would have continued using the incriminating

corticosteroid and her dermatitis would in all probability have remained there even if changing jobs. Budesonide cross-reacts with Hc-17-B and is often positive when Hc-17-B is not, even if the patient was primarily sensitized to Hc-17-B, which was the case here. Budesonide has not been present in any topical preparations in Sweden for over 10 years and the patient denied that she had ever used the drug.

Case no. 1 is a good example of the need to patch test not only with the marker molecules of corticosteroid allergy that should be present in any standard series, but also with the corticosteroids used by the patient, either currently or previously. Such corticosteroids should be tested as pure substances in the appropriate vehicle and concentration (6). If positive, an extended corticosteroid series should be patch tested to detect cross-reacting corticosteroids and other contact allergies (7). As in case 1, the corticosteroid series could, of course, be patch tested at once, if the patient has a long-standing eczema and has used numerous corticosteroids.

Furthermore, both cases are examples of the importance of reading corticosteroids not only after 3 or 4 days but also on a late occasion, i.e. after 7 days. In the 1st case the contact allergy to alclometasone-17,21-dipropionate was of past relevance, but the drug could of course have been given to her once again, and in the 2nd case the outcome would have been very unfortunate.

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Legends

Figure 1. Case 2. Numerous eczematous patches on several fingers at presentation.

