

Sofa dermatitis caused by methylisothiazolinone in a leather-care product

Alix Vandevenne, Katrien Vanden Broecke and An Goossens

Department of Dermatology, University Hospitals KU Leuven, 3000 Leuven, Belgium

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Case Report

A 53-year-old man, known to have had small plaque parapsoriasis since 1990, was referred to us in October 2012 with a recurrent and generalized eczematous dermatitis, which had started to develop in July 2011, initially most prominently on the hands. A skin biopsy had shown dermatitis. Treatment consisted of chlorhexidine

0.5% and triamcinolone acetonide 0.1% in a non-ionic ointment base, but, 1 month later, the dermatitis worsened and a new biopsy was performed, which again showed spongiotic dermatitis. The patient underwent patch testing, which resulted in positive reactions to chromium and colophonium, but these were not considered to be relevant. The lesions cleared following the use of intramuscular corticosteroids. However, in November 2011 and in the spring of 2012, the skin lesions recurred. These were then treated with ultraviolet B therapy and betamethasone dipropionate 0.05%, but with little improvement. In July 2012, the skin lesions became much worse (except on the face), and, when the patient

Correspondence: Professor An Goossens, Contact Allergy Unit, Department of Dermatology, University Hospitals St Raphael – KU Leuven, Kapucijnenvoer 33, B-3000 Leuven, Belgium. Tel: +32 16 33 78 70; Fax: +32 16 33 78 72. E-mail: an.goossens@uzleuven.be

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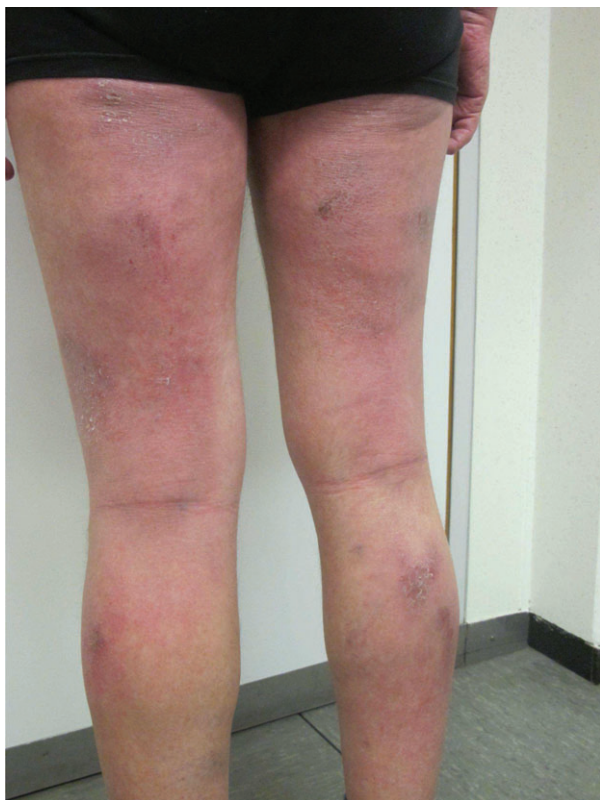


Fig. 1. Leather sofa dermatitis: eczematous lesions on the posterior sides of both legs.

consulted our outpatient clinic in September 2012, he presented with eczema on his scalp and neck, and generalized infected eczematous lesions with lichenification, on both the arms and trunk, but most prominently on the buttocks, the posterior sides of both thighs, and the dorsolateral aspects of the lower legs (Figs. 1 and 2). Treatment with systemic antibiotics and clobetasol propionate 0.05% was initiated, and, in view of the lesion localization, the patient was advised to avoid contact with his leather seat, whereupon his dermatitis regressed.

Patch testing was then performed in October and December 2012 with the baseline series, the ingredients of the topical products used, a piece of the patient's leather seat, benzisothiazolinone, and octylisothiazolinone, with IQ Ultra[®] patch test chambers (Chemotechnique, Vellinge, Sweden) covered with Mefix[®] (Mölnlycke Health Care, Göteborg, Sweden). Readings were performed according to International Contact Dermatitis Research Group guidelines after 2 and 4 days, and showed positive reactions to methylisothiazolinone (MI) 500 ppm (D2, ++; D4, +++), octylisothiazolinone (D2, –; D4,



Fig. 2. Leather sofa dermatitis: eczematous lesion on both thighs.

++), and colophonium (D2, ++; D4, ++). Chromium and the leather sofa piece gave negative results.

The presence of MI was indicated on the labels of the leather-care products that the patient had applied to his sofa [Eres Leather Balm[®] (ERES-SAPOLI, Eke, Belgium) and HG Intensive Detergent for Leather[®] (Sapoli)], in which, according to information obtained from the manufacturer, it was present at concentrations of 40 and 4 ppm, respectively. Both products also contained benzisothiazolinone, at concentrations of 140 and 22 ppm, respectively. Moreover, MI was also found in the patient's shampoo and in a detergent used to clean dishes. Benzisothiazolinone gave a negative patch test result, and the reactions to octylisothiazolinone to colophonium were not relevant for the present dermatitis.

The patient was advised to avoid contact with these allergens, after which he initially remained symptom-free for the first few months; however, after this, eczematous lesions did recur from time to time, despite avoidance of contact with the identified culprits.

Discussion

There is an alarming increase in the prevalence of contact-allergic reactions to MI in cosmetics, paints, and cleansing products (1, 2).

The presence of MI in leather-care products was, in this case, responsible for the severe and recurrent generalized and longstanding eczematous lesions after contact with the leather sofa; the MI-containing shampoo was responsible for the dermatitis on the scalp and partly also on the neck; and the dishwashing liquid was responsible for the dermatitis on the hands.

Despite the chemical similarity of MI and octylisothiazolinone, only a few studies have looked into possible cross-reactions between them (3–5), which might have occurred in the case presented here.

The diagnosis of contact allergy to MI was again missed by testing with methylchloroisothiazoline/MI 100 ppm only, as has been previously reported.

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