

Contact allergy to methyldibromo glutaronitrile presenting as severe scalp seborrhoeic eczema

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Key words: allergic contact dermatitis; methyldibromo glutaronitrile; seborrhoeic eczema; cosmetics; hair products; preservatives. © Munksgaard, 1999.

Euxyl® K400 is a biocide containing 2 active ingredients, phenoxyethanol and methyldibromo glutaronitrile (MDGN), in a 4:1 ratio. Contact allergy to it has been increasing in Europe and the USA since its introduction in the mid-1980s and 1990, respectively (1–4). The allergen in Euxyl® K400 is virtually always MDGN (5–7) and sensitization is most commonly acquired through exposure to cosmetics and moistened toilet tissue. Less common sources include latex paints and emulsions, adhesives, liquid detergents and metalworking fluids.

Case Report

An 18-year-old woman presented with a 6-month history of severe scalp eczema, in association with mild eczema of the axillary, presternal, interscapular and inguinal areas. Morphology and distribution were consistent with seborrhoeic eczema, though the severity of scalp involvement was unusual and conventional therapy had failed to improve this. Patch testing showed positive responses to MDGN (0.3% pet.) (++) and to a hair mousse (+) used daily by the patient. MDGN was also identified as an ingredient in a leave-on hair conditioner that she applied weekly. Elimination of these products resulted in rapid improvement.

Discussion

This case highlights the importance of recognizing the potential for allergic contact dermatitis developing in the setting of endogenous eczema. Contact allergy to MDGN usually presents with facial, hand or perianal dermatitis, though patch testing with suspected products

often gives false-negative reactions due to low allergen concentration (8, 9). Presentation with severe scalp dermatitis, in the setting of seborrhoeic eczema, and the positive patch test to a suspected hair mousse, are unusual findings in this case.

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Sensitization to cocamidopropylbetaine: an 8-year review

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Cocamidopropylbetaine (CAPB) is an amphoteric surfactant commonly used in rinse-off products such as shampoos, shower gels and skin cleansers. In patients being patch tested because of suspected contact derma-

titis, the reported frequency of sensitization to CAPB has ranged from 1.4–7.2% (1–4). Sensitization frequencies among hairdressers with dermatitis have been reported in the range of 3.7–5.0% (1, 5). Dimethylam-

inopropylamine (DMPA) and amidoamine (cocamidopropyl dimethylamine), 2 residues remaining after manufacture, have been suggested as the actual allergen in CAPB (2, 3, 6, 7).

Patients and Methods

CAPB has been added to our standard series since January 1991. From 1991–1994, patch testing was performed with Tegobetaine L7 1% aq. (Goldschmidt), and from 1995 onwards with CAPB 1% aq. (Hermal). The former contains significantly higher levels of reactant and intermediate residues. From January 1991 to September 1998, 10,798 patients with suspected contact dermatitis were patch tested.

Results

29 patients (22 female, 7 male) (0.27% of total) showed a positive reaction to CAPB during this period (Table 1). During 1991–1994, 24 positive responses (0.40%) were noted. From 1995 to September 1998, 5 positive responses (0.11%) were noted. The allergen was regarded as of current or past relevance in 23 (79%) cases. Only 1 of the 29 was a hairdresser. The commonest sites were the face and neck (11 cases), widespread (8 cases) and the hands (5 cases).

During the same period, 184 hairdressers (108 with hand dermatitis) and 2504 patients with eczema of the face and neck or scalp were patch tested, which gives a frequency of sensitization to CAPB in this occupation of 0.54%, and one of 0.44% in patients with head and neck eczema.

Discussion

This study showed a relatively low frequency of sensitization to CAPB throughout the period examined compared with other series (1–4), there being a further decline in the frequency of CAPB allergy after the patch test substance was changed from Tegobetaine L7 to a purer grade. The frequency of CAPB allergy in hairdressers is also much lower than previously reported (1, 5). CAPB may produce irritant false-positive reactions

Table 1. Patch test results with CAPB: 1991–September 1998

Year	1991	1992	1993	1994	1995	1996	1997	1998
CAPB +ve	8	6	5	5	2	1	0	2
total tested	1689	1657	1515	1181	1092	1395	1462	807
% +ve	0.47	0.36	0.33	0.42	0.18	0.07	0.00	0.25

(8). If the actual allergen in CAPB is indeed a residue, CAPB with minimal levels of impurities should be used, for cosmetic manufacture. The declining frequency of CAPB sensitization may reflect the increasing commercial use of higher purity grade CAPB in such products. On the other hand, patch testing with these residues may identify contact allergy that may be missed with purified CAPB, and studies are ongoing to examine this possibility.

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Eyelid dermatitis caused by delayed-type hypersensitivity to natural rubber latex

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Key words: allergic contact dermatitis; eyelid paste; natural rubber latex; cosmetics. © Munksgaard, 1999.

Single-edged eyelids are seen in about 40% of the Japanese population. Application of so-called “eyelid paste”, which causes eyelid skin to be adherent and appear double, has become popular among teenage girls.

Case Report

An 18-year-old non-atopic healthy Japanese woman had a 1-year history of itchy, erythematous, scaly eruptions