

Correspondence

Allergic contact dermatitis caused by a moisturizer containing iodopropynyl butylcarbamate

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Iodopropynyl butylcarbamate (IPBC) is a highly effective fungicide, parasiticide and bactericide, widely used as a preservative in the industrial and consumer sectors.¹ It is an uncommon allergen and a mild irritant at concentrations > 0.1%.² We present a case of allergic contact dermatitis caused by a daily moisturizer containing IPBC.

A 28-year-old woman presented with a 12-month history of facial erythema. She had a 20-year history of atopic dermatitis (AD) and allergic rhinitis. Although she had previously been treated with antihistamines and topical steroids at several local clinics, the facial erythema continued in a waxing and waning course. She also had a 1-year history of hand eczema.

Physical examination revealed facial erythematous scaly plaques accompanied by pruritus, mostly on the cheeks and chin (Fig. 1a,b).

Allergic contact dermatitis (ACD) caused by unknown materials was suspected. Patch tests were conducted (Cosmetic Series C-1000; Chemotechnique MB Diagnostics AB, Vellinge, Sweden and TRUE® test; SmartPractice; Phoenix, AZ USA), with the compounds left on the patient's back for 48 h. The reactions were read on days 2, 3 and 7, in accordance with International Contact Dermatitis Research Group (ICDRG) criteria. Multiple positive reactions were observed on days 2, 3 and 7, with + reactions to triclosan, tea-tree oil, chlorphenesin and 1,2-benzisothiazol-3(2H)-1, and ++ reactions to 2,6-di-tert-butyl-4-cresol (BTH) and IPBC 0.2%.

Based on these test results, the patient was advised to check whether any of the products she had used on her skin contained any of these suspected allergens. She had used only one kind of daily moisturizer for > 1 year, which was labelled as hypoallergenic and suitable for patients with AD. Only IPBC correlated with the patch test results for all ingredients of this product, and the concentration of IPBC contained in the moisturizer was confirmed at 0.1%.

A diagnosis of ACD due to IPBC was made. Because the patient had applied the moisturizer with her fingers, this was considered to be the cause of the hand eczema

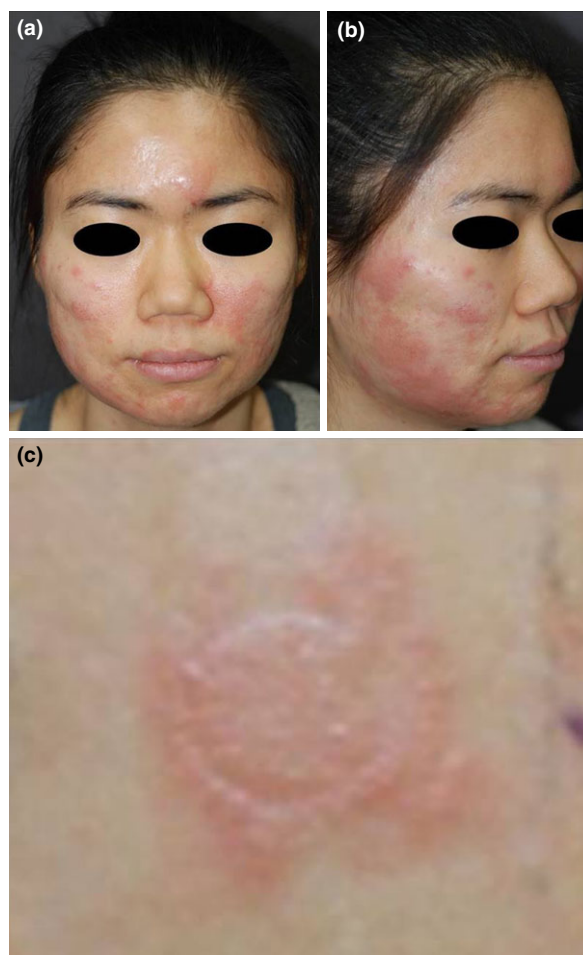


Figure 1 (a,b) Multiple facial erythematous scaly plaques, mostly on the glabella, both cheeks and chin; (c) positive reaction (++) to iodopropynyl butylcarbamate was observed on day 3.

as well. She therefore avoided using this moisturizer, and had no further skin problems during the 1-year follow-up period.

Topical treatments for xerotic and inflamed skin are invariably prescribed to patients with AD, often for long periods, resulting in continuous exposure to chemicals, and leading to a higher prevalence of sensitization to fragrances and other ingredients of emollients. In addition,

the skin barrier abnormalities in AD increase hapten penetration, which possibly provokes contact sensitization.³ Contact sensitization to topical agents must be suspected when AD is not controlled with conventional treatments. Mailhol *et al.*⁴ reported that antiseptics and emollients represent the most common sensitizers, and should be included in the standard diagnostic series of children with AD when ACD is suspected.

Several cases of IPBC-induced contact allergy have been reported in the English literature, with products such as hand cleansers, cosmetic cleansing wipes, moisturizer and shaving foam implicated.⁵ Clinicians should be aware that IPBC may also be an ingredient of moisturizers and is capable of inducing contact dermatitis, therefore a full history of all products used by patients with ACD is required.

H. J. Kwon,¹ J. M. Kim,¹ W. J. Oh,¹ K. Y. Park,¹ M. N. Kim¹ and S. J. Seo¹

¹Department of Dermatology, Chung-Ang University College of Medicine, Chung Ang University Hospital 224-1 Heukseok-dong, Dongjak-ku, Seoul 156-755, South Korea
E-mail: momo920@daum.net

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