

Occupational airborne allergic contact dermatitis due to 3-amino-methyl-3,5,5-trimethylcyclohexylamine

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Various hardeners of epoxy resins are known to cause occupational airborne allergic contact dermatitis (1, 2).

Case Report

A 53-year-old man had been employed for 4 years as an impermeable-floor layer. He mixed epoxy components (Araldit GY 289 and Chemamina 93 I 74) with quartz powder for coating the floor. Araldit GY 289 is a standard bisphenol-A-type epoxy resin; Chemamina 93 I 74 is composed of benzyl alcohol and 3-amino-methyl-3,5,5-trimethylcyclohexylamine.

In May 1993, a very itchy, symmetrical, erythematous, edematous eruption of the face began, particularly involving the eyelids and forehead, during work, which healed spontaneously with 2 weeks away from work. 2 months later, the facial eruption recurred, particularly on the eyelids, and spread to the neck and volar forearms. On treatment with oral corticosteroids, the lesions healed in 1 week.

He stopped working for 1 month and, after a vacation, returned to work, 2 months after the last eruption. After 5 days, a similar eruption recurred. Over the following months, he tried 3 more times to return to work and every time the dermatitis relapsed. No working colleagues had similar problems, though in the past, another floor layer had left the job following a similar history.

The patient was patch tested with the GIRDCA stan-

dard series, 3-amino-methyl-3,5,5-trimethylcyclohexylamine and benzyl alcohol (both at 0.1, 1 and 5% pet.), bisphenol A (4,4'-isopropylidenediphenol) 0.5%, and epichlorohydrin 0.1%. Only 3-amino-methyl-3,5,5-trimethylcyclohexylamine was positive: after 3 days, there was erythema from 0.1%, and erythema, oedema and vesicles from 1% and 5%.

Comment

Various types of dermatitis may be caused by epoxy resins, their hardeners and diluents (2, 3). The present case was one of occupational airborne allergic contact dermatitis from 3-amino-methyl-3,5,5-trimethylcyclohexylamine, a hardener of epoxy resins. To the best of our knowledge, there are no previous reports of sensitization to this chemical. 1% pet. is recommended for future patch testing.

References

1. Lodi A, Mancini L L, Pozzi M, Chiarelli G, Crosti C. Occupational airborne allergic contact dermatitis in parquet layers. *Contact Dermatitis* 1993; 29: 281-282.
2. Tosti A, Guerra L, Toni F. Occupational airborne contact dermatitis due to epoxy resin. *Contact Dermatitis* 1988; 19: 220-222.
3. Cronin E. *Contact dermatitis*. Edinburgh: Churchill Livingstone, 1980: 595-614.

Allergy to latex among hospital employees

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Latex is a potential occupational hazard because of IgE-mediated allergy. Though there are still few studies, existing data suggest a prevalence in at-risk health personnel of 3-10% (1).

Materials and Methods

We studied health personnel at Ullevaal University Hospital (4000 employees) during spring 1993. Forms

were distributed to employees through the chief doctors in the various clinical departments. They were asked to participate if they had symptoms of itch and exanthema of hands, connected to the use of gloves in their work.

Participants underwent prick testing with a commercially available latex solution (Allergen Laboratory Copenhagen). Readings were made at 20 min and were scored as 1+, 2+ and 3+ (=same as the histamine response). Specific IgE antibodies to latex were measured by Pharmacia CAP RAST. FEIA.

Results

66 employees, in 10 departments, returned the forms. Calling up for testing gave 46 responders: 3 (6.5%) had prick test responses to latex; 2 doubtful, with a score of 1+; 1 positive, with a score of 3+. RAST to latex was positive only in the latter (2.2%).

Discussion

Immunological skin reactions to rubber gloves vary from immediate antibody-induced reactions to delayed cell-mediated reactions (2). The most common clinical manifestation of Type I hypersensitivity to latex gloves is contact urticaria (3, 4). Other symptoms include conjunctivitis, rhinitis, bronchial asthma and anaphylaxis.

Our study population is selected, making the prevalence estimates biased. Our study indicates equal sensitivity of RAST and prick test with the commercially available extracts used, in contrast to earlier findings of lower sensitivity for RAST (5). The 1 person (dental surgeon) with combined prick test and RAST positivity was alone in having a history of glove-induced urticarial wheals: he also had latex-related asthma.

References

1. Sussman G L. Latex allergy: its importance in clinical practice. *Allergy Proc* 1992; 13: 67-69.
2. Heese A, Von Hintzenstern J, Peters K-P, Koch H U, Hornstein O P. Allergic and irritant reactions to rubber gloves in medical health services. Spectrum, diagnostic approach and therapy. *J Am Acad Dermatol* 1991; 25: 831-839.
3. Turjanmaa K. Incidence of immediate allergy to latex gloves in hospital personnel. *Contact Dermatitis* 1987; 17: 270-275.
4. Fisher A A. Management of allergic contact dermatitis due to rubber gloves in health and hospital personnel. *Cutis* 1991; 47: 301-302.
5. Alenius H, Reunala T, Turjanmaa K, Palosuo T. Detection of IgG4 and IgE antibodies to rubber proteins by immunoblotting in latex allergy. *Allergy Proc* 1992; 13: 75-77.

Mupirocin allergy in the setting of venous ulceration

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Key words: allergic contact dermatitis; mupirocin; topical antibiotics; leg ulcers; medicaments. © Munksgaard, 1995.

Mupirocin is a naturally occurring topical antibiotic, produced from fermentation by *Pseudomonas fluorescens*, and unrelated to any other antibiotic (1). It is particularly effective in skin infection, as it inhibits both staphylococci and streptococci at low concentrations, and has been used to treat pyogenic infections (2), atopic eczema (3) and leg ulcers (4). It appears to have a very low incidence of skin sensitization, with only 1 other report of hypersensitivity to mupirocin ointment (Bactroban®), and this being to polyethylene glycol in the base (5).

Case Report

An 80-year-old man, with a 15-year history of recurring ulceration on both lower legs, was commenced on Bactroban® ointment, for superficial infection in his ulcers. The ulcers and surrounding skin became red, and he complained of increasing pain, after a few weeks of

application. Previous patch testing to the European standard series and cosmetic ingredients and preservatives series (Chemotechnique®) had shown him to be allergic to para-phenylenediamine, formaldehyde, wool alcohols, fragrance mix, parabens, chloramine T, phenylmercuric acetate, sorbic acid, chlorhexidine and benzalkonium chloride, but not to polyethylene glycol (USP) (50% pet.).

He was patch tested with Bactroban® ointment and showed a +++ reaction at 3 days. The manufacturers (SmithKline Beecham Pharmaceuticals) provided calcium mupirocin ointment (free base) at concentrations of 10% (w/w) and 1% (w/w) and a matching placebo ointment of the same base, in which mupirocin free acid was not detected at levels <0.1%, as determined by HPLC. He had a ++ reaction to the calcium mupirocin ointment, at both 1% and 10%, when read at 3 days. There was no reaction to the matching placebo base.