

Latex allergy among hairdressers

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Hand eczema is endemic among hairdressers (1–3), making the wearing of latex gloves increasingly popular, though prone to induce Type I and Type IV allergies (4, 5). In January 1994, the Dutch organization of hairdresser's employers (ANKO) and the Center of Occupational Dermatology, Arnhem, started a clinic for hairdressers with hand eczema.

Patients and Methods

In January–April 1994, 58 hairdressers visited the clinic, 41 of them regular users of rubber gloves. This latter group was screened for latex allergy. Chamber scratch tests were performed on the lower or upper arm with Van der Bend square chambers (Van der Bend, Brielle, The Netherlands), secured with Fixomull tape (Beiersdorf, Germany). Reading times were 20 and 40 min, and 2 and 3 days. Materials used were liquid natural latex and solid sheets of natural latex (*Hevea brasiliensis*), wet pieces of patients' latex gloves and an extract of starch powder. Furthermore, all hairdressers were patch tested with a series of 60 allergens, according to the method described earlier (1).

Results

9 of the 41 reacted to latex glove materials (Table 1): 4 showed Type I reactions to liquid and/or solid latex (nos. 2, 5, 6 and 9) and 1 to glove only (no. 8); 2 showed delayed-type reactions to liquid and solid latex at 2 and 3 days (nos. 3 and 7); and 2 reacted to thiuram mix (nos. 1 and 4).

Discussion

Hairdressers are becoming aware of the need for hand protection, especially those with eczema, which may promote latex and thiuram allergies. Recent studies of hand eczema in hairdressers did not investigate latex allergy (1–3, 6–8). We recommend screening hairdressers for latex allergy routinely.

Only 1 (no. 2) of the 4 patients with Type I reactions to liquid latex reacted to their own glove, probably because we used wet glove instead of prepared glove solution (9, 10). Delayed reactions to latex occur mostly in combination with Type I allergies (11), though Elsner reported a solitary Type IV reaction (12). In our study, 2 patients showed positive reactions to latex at D2 and D3, with no immediate-type reactions. In the past 4 years, we have seen 4 other patients with isolated Type IV reactions (13). Prevention of latex allergy is desirable not least because of potentially severe side-effects during operations (4).

In our opinion, vinyl gloves offer at present the best protection for hairdressers (14). Our early impression is that changing to vinyl gloves, together with instructions as to safe working methods, may improve or clear the eczema. We observed good results in patient nos. 5–9.

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Table 1. Type I and Type IV test reactions to latex glove materials

Patient no.	Liquid latex			Solid latex			Glove			Thiuram mix		Ato-py ^{a)}	Other positive reactions ^{b)}	positive reactions
	20/40 min	D2	D3	20/40 min	D2	D3	20/40 min	D2	D3	D2	D3			
1	–	–	–	–	–	–	–	–	–	++	+++	–	PPD; GTG; APS	
2	++++	–	–	++++	–	–	++++	–	–	–	–	+	GTG	
3	–	+	++	–	+	+	–	–	–	–	–	–	PPD; GTG; APS; PTD	
4	NT	NT	NT	NT	NT	NT	NT	NT	NT	++	++	+	Ni; GTG; APS	
5	++	–	–	–	–	–	–	–	–	–	–	–	GTG	
6	++	–	–	–	–	–	–	–	–	–	–	+	PPD; Ni	
7	–	+	+	–	–	+	–	+	+	–	–	–	PPD; GTG; Kathon CG; CDE	
8	–	–	–	–	–	–	++	–	–	–	–	–	PPD; GTG	
9	++	–	–	–	–	–	–	–	–	–	–	–	PPD; GTG	

^{a)} Present, or history of, atopic dermatitis and/or asthma/hay fever.

^{b)} PPP: p-phenylenediamine free base. GTG: glyceryl thioglycolate. APS: ammonium persulfate. Ni: nickel sulfate. PTD: p-toluenediamine. CDE: coconut diethanolamide.

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Allergic contact dermatitis from a wart remover solution

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Case Report

A 29-year-old male engineering worker consulted us for warts on the hands. There was no personal or family history of atopy or contact dermatitis. We prescribed Verunec-3 solution (Same), containing salicylic acid, lactic acid, flexible collodion, urea and glycerin. 10 days later, he presented with a vesiculobullous reaction at the application sites, which cleared after discontinuing the solution and applying boric acid dressings. Patch testing was performed with the GIRDCA standard series, the wart remover solution and its components (Table 1). The wart remover solution and colophony showed strong positive reactions.

Table 1. Patch test results

	D2	D3
Verunec-3 sol. as is	++	+++
colophony 20% pet.	+	+++
salicylic acid 1% pet.	—	—
lactic acid 3% aq.	—	—
ethyl alcohol 70% aq.	—	—
collodion as is	—	—

Comment

Colphony is a complex mixture (90% resin acids, mostly abietic acid, and 10% neutral matter) and is obtained mainly from *Pinus palustris* and *Pinus caribaea*. Colophony is present in flexible collodion (BP), but not in flexible collodion (USP) or in collodion (USP) (Table 2). In 7 previously described cases of allergic contact dermatitis from wart removers, sensitization to colophony was found in 6 (1–4); the last had an allergic reaction to castor oil and lactic acid (5).

Table 2. Collodion preparations

collodion (USP)	pyroxylin 4 g ether 75 ml alcohol 25 ml
flexible collodion (BP)	colophony 2.5 g castor oil 2.5 g collodion to 100 ml
flexible collodion (USP)	camphor 2 g castor oil 3 g collodion (USP) to 100 g