

Occupational contact dermatitis from propolis

Rainer Henschel, Monika Agathos and Reinhard Breit

Department of Dermatology, Hospital Munich-Schwabing, Munich, Germany

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Case Report

A 59-year-old, nonatopic shoemaker presented with vesicular eczema on the palms and sides of the fingers. He had been working in the shoe industry for 40 years, the first skin lesions appearing some years after he started this occupation. Particularly within the first few years, the patient frequently had contact with beeswax during making shoes by hand. This wax was used especially for the seams of handmade climbing, ski, and heavy working boots, to assure durability of the hemp thread.

Patch testing (Finn Chambers® on Scanpor® both, Epitest, Tuusula, Finland) was performed with the European standard series, and with cosmetics, resins, leather, textile, and rubber series. In addition to several positive reactions to cosmetic allergens, 1,3-diphenylguanidine, and

mercaptobenzothiazole, propolis (10% pet.) also showed a positive erythematopapular reaction (+) at D4. The patient had never worked as a bee-keeper, nor had he, as far as he knew, used any medical or cosmetic products containing propolis.

Discussion

Propolis, a substance with strong adhesive properties, is used by honey bees to seal up crevices in the hives and to embalm dead invaders and other particles within the hive to prevent their microbial decomposition (1). More than 46 constituents have been found in this natural product. The major source of propolis is the resinous exudate of poplar buds collected by the bees. The principal sensitizing agents seem to be 3-methyl-2-butenyl caffeate and phenylethyl caffeate. Besides these, there are probably other moderately sensitizing allergens in propolis (2).

More than 250 cases of allergic contact dermatitis due to propolis have been described. A minority of these occurred in bee-keepers. The increase in such contact dermatitis over the last two decades has been caused by the use of propolis in (bio)-pharmaceutical and (bio)-cosmetic preparations. Besides the sensitization of bee-keepers, only a few other instances of occupational contact dermatitis have been reported: a forest-worker and a farmer, who had contact with poplar trees during cut-

ting branches (3); an artist, who was moulding with beeswax (4); an instrument-maker (5) and a worker in a retail store (6), who probably had contact with varnish containing propolis and beeswax, respectively.

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Address:
Rainer Henschel
Department of Dermatology
Hospital Munich-Schwabing
Koelner Platz 1
80804 Munich
Germany