

Short Communication

Occupational allergic contact dermatitis in carpenters

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There have been few studies of occupational allergic contact dermatitis (ACD) in carpenters (1–4).

Patients and Methods

The records of the Section of Dermatology of the Finnish Institute of Occupational Health (FIOH) for the years 1974–1999 were studied. Criteria for occupational skin disease have been published earlier (5). All patients undergo extensive patch testing, performed according to the guidelines of the ICDRG. Around 100 new cases of occupational skin disease are diagnosed annually (5), 1/2 of which are allergic. Only 1 (the main) causative allergen is registered.

Results and Case Report

25 carpenters with occupational ACD were diagnosed. The causes are given in Table 1, and exemplified in the following case report.

A 54-year-old, non-atopic carpenter had been plying his trade for 30 years, and for 6 years had had dermatitis of the hands, face and neck, with more widespread severe episodes. His main exposures were to woods, in-

cluding obeche, glues and coatings, including epoxy, putties, including di-isocyanates, and paints, including methacrylates. Some patch testing had already been performed by an occupational dermatologist and shown a ++ reaction to standard epoxy resin (DGEBA-ER). He had tried to avoid contact with DGEBA-ER, but had nevertheless experienced 2 severe relapses, as well as respiratory symptoms.

Patch tests were performed, according to the recommendations of ICDRG, with a modified European standard series, series of plastics and glues (6), methacrylates, epoxy resins, di-isocyanates, and obeche wood dust in a drop of water. DGEBA-ER was not re-tested, but brominated ER, containing DGEBA-ER (7), and obeche, elicited patch test reactions. Tests to verify occupational respiratory disease were negative, including prick tests to epoxy and obeche, though specific provocation tests are still to be performed.

Discussion

According to the Finnish Register of Occupational Diseases, the incidence rate of occupational dermatoses in carpenters was 36.6 cases per 100,000 working years, and the respective incidence rate of ACD was 13.2 (3). Carpenters were not among the top 10 occupations with occupational ACD from chromate in Finland, having an incidence of 0.43 cases per 10,000 working years (8). Of occupations with occupational skin disease in the UK, carpenters and joiners ranked 34th, with 7.4 cases per 100,000 workers (9).

Carpenters are included in the construction worker group, and our results are consistent with the causes of ACD among construction workers as a whole (10). Our reported case had a clear history of exposure to 2-component epoxy floor coatings and glues (11), and met with hexavalent chromium in cement (12–15).

Our patient also had occupational ACD from obeche, widely used in Finland for sauna benches, the source of his sensitization. Obeche (*Triplochiton scleroxylon*) has previously caused occupational ACD only rarely (16, 17), but more often asthma and contact urticaria (18,

Table 1. Causes of occupational allergic contact dermatitis in 25 carpenters at the Finnish Institute of Occupational Health, 1974–1999

Patient's main allergen	No. cases
chromate	7
epoxy resin	7
rubber chemicals	2
formaldehyde	2
cobalt	1
colophonium	1
phenol-formaldehyde resin	1
p-tert-butylphenol-formaldehyde resin	1
benzoyl peroxide	1
teak wood	1
jacaranda wood	1
total	25

19). In our 1 case of jacaranda allergy, the wood was probably *Dalbergia nigra* (17, 20, 21).

The prognosis of contact dermatitis is generally unfavorable in the construction industry (22).

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