

Short Communication

Occupational airborne allergic contact dermatitis from medium-density fibreboard containing phenol-formaldehyde resin-2 (PFR-2)

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Case Report

A 49-year-old carpenter, with no prior history of skin disease, presented with an 8-week history of 2 episodes of an itchy erythematous vesicular rash involving his face and neck. The 1st episode settled with a short course of oral corticosteroids. The eruption recurred when he returned to work but cleared spontaneously within a few days of his staying away. He was patch tested to the European standard series, preservatives, plants, cosmetics and hairdressers series, as well as his own topical medicaments and toiletries. The positive reactions at D2 and D4 were to phenol-formaldehyde resin-2 (PFR-2) (1% pet.) and his medium-density fibreboard (MDF) dust. There were no reactions to formaldehyde (1% aq.), para-tertiary-butylphenol-formaldehyde resin (PTBPF-R) 1% pet., urea-formaldehyde resin (10% pet.) or melamine-formaldehyde resin (7% pet.). He has had no further recurrences of eczema since avoiding MDF at work.

Discussion

PFR-2 contains low-molecular-weight methylol phenols, which are well-documented contact sensitizers (1, 2). Both irritant and allergic contact dermatitis from phenol-formaldehyde resin (PFR) have been well-documented (3, 4). Our patient had an occupational airborne allergic contact dermatitis from MDF containing PFR-2. To our knowledge, this has not been previously re-

ported. There has only been 1 previous case report of airborne allergic contact dermatitis from MDF, and in this case, the allergen was melamine-formaldehyde resin (5).

Data regarding PFR-2 allergic contact dermatitis is limited. In a report of 7 cases of foot dermatitis, 2 patients tested positive to PFR-2, but were negative to PTBPF-R and formaldehyde (6). Interestingly, our patient tested negative to formaldehyde and other formaldehyde resins. This case therefore demonstrates the importance of testing patients to both PTBPF-R and PFR-2 to detect cases of PFR allergy reliably.

References

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