

Short Communication

Allergic contact dermatitis from tall oil in undiluted soluble oils used as releasing fluids

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Case Reports

We have encountered 2 mould-makers in their mid-50s with work-related contact dermatitis. They had both worked as mould-makers in the pottery industry for over 10 years and were using the same undiluted soluble oil as a releasing agent to facilitate removal of plaster moulds from rubber cases.

One patient had not worn protective gloves during this work and found his symptoms improved once he commenced this practice. The other patient had worn gloves for many years, but had developed dermatitis on his forearms above the level protected by his gloves.

Both patients were patch tested with positive reactions to colophonium (20% pet.) and one of the mould-makers was positive to the oil (10% and 1% aq.), the other mould maker not being tested to the oil. Subsequent communication with the manufacturers confirmed that colophonium derivative in the form of tall oil was present in the oil. The soluble oil is designed to be used as a coolant in the metalworking industry, i.e., emulsified with water at a diluted concentration of 4 to 10%.

Comment

Releasing fluids used in ceramic mould-making have been recognized as a potential source of sensitization (1–3) and soluble oils are commonly used undiluted, hence increasing the risk of sensitization as the various additives in the oil are undiluted. The oil used by our 2 patients contains tall oil at 3 to 4% by weight and commonly cross-reacts with colophonium, tall (the Swedish word for pine) oil rosin being a by-product of pulping pinewood.

References

1. Roberts D L, Messenger A G, Summerly R. Occupational dermatitis due to 1,2- benisothiazolin-3-one in the pottery industry. *Contact Dermatitis* 1981; 7: 145–147.
2. Wilkinson S M, Cartwright P H, English J S C. Allergic contact dermatitis from mercaptobenzothiazole in a releasing fluid. *Contact Dermatitis* 1990; 23: 370.
3. Lear J T, Heagerty A H M, Tan B B, Smith A G, English J S C. Transient re-emergence of oil of turpentine allergy in the pottery industry. *Contact Dermatitis* 1996; 35: 169–172.