

CONTACT POINTS

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Nail dystrophy and fingertip dermatitis as a manifestation of methyl methacrylate allergic contact dermatitis in a cow hoof trimmer

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Emily J. McGrath¹, Amrit Darvay² and Christopher R. Lovell²

¹Royal Devon & Exeter Hospital, Barrack Road, Exeter, EX2 5DW, ²Royal United Hospital, Bath, BA1 3NG, United Kingdom

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Methacrylates are known sensitizers classically causing contact dermatitis among dental workers and orthopaedic surgeons. The current case describes a striking fingertip pattern of contact dermatitis causing nail dystrophy in a cow hoof 'trimmer'.

Case Report

A 48-year-old cow hoof trimmer presented with an eczematous reaction on his fingertips and associated nail dystrophy. His work involved the trimming and repair of damaged cows' hooves, fixing a wooden clog to the hooves using an adhesive based on methyl methacrylate (Cow Clog™). He wore gloves during hoof trimming but found that the messy adhesive usually came into contact with his hands. The state of his hands and fingernails had worsened over the previous year, but he noticed an improvement in his skin when not using the hoof adhesive. On examination, he had an eruption limited to the fingertips of both hands, which were scaly, fissured, and erythematous, and associated with marked nail dystrophy on the first and fourth fingernails of both hands (Fig. 1). Patch testing, using Finn Chambers® (Epitest Oy, Tuusula, Finland), was performed to the British Contact Dermatitis



Fig. 1. Appearance of fingertips at presentation.

Society-recommended baseline series, together with a (meth)acrylate series. Allergens were supplied by Trolab, Langen, Germany and Chemotechnique, Vellinge, Sweden. Reactions at D2 and D4 were ++ to hydroxyethyl methacrylate 2% pet. and + to methyl methacrylate 2% pet. We advised the avoidance of compounds containing methacrylates, and he found a substitute adhesive based on cyanoacrylates, which led to a dramatic improvement in his condition.

Discussion

Methyl methacrylate, a monomer of acrylic resin, has a wide range of uses in medicine, dentistry, and industry. It is a well-known sensitizer, and contact allergy has been particularly commonly reported in the setting of acrylates used in false fingernails (1) and in dental workers (2). Aside from the setting of fingernail enhancements, nail dystrophy is an uncommon presentation of contact dermatitis and one that may lead to a delay in diagnosis until an occupational history is taken to show the likely cause.

Hydroxyethyl dimethacrylate produced the strongest patch test reaction in our patient. This allergen has previously been noted as a good screening allergen, being positive in all nine patients in a recent series of patients with adhesive allergies (3); it

was also the most frequently positive allergen among dentists and dental nurses in a Finnish study (4).

The National Association of Cattle Foot Trimmers has a comprehensive website (www.nacft.co.uk), but there is no mention of the complications that may arise from the use of such methacrylate adhesives in their profession.

References

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Address:

Emily J. McGrath
Royal Devon & Exeter Hospital
Barrack Road
Exeter
EX2 5DW
United Kingdom
Tel: 01392 402613
Fax: 01392 402067
e-mail: ejsefton@doctors.org.uk