

Occupational contact dermatitis from pyrocatechol in parquet flooring

We describe a case of occupational allergic contact dermatitis due to pyrocatechol.

A 55-year-old man reported a 2-year history of very itchy symmetrical eczema on both hands, which was treated with topical emollients and corticosteroids without consistent resolution (figure 1). Histological examination showed features that confirmed a diagnosis of allergic contact dermatitis. The patient was tested with the SIDAPA (Italian Society of Allergological, Professional and Environmental Dermatology) standard series of patch tests, which were negative.

The personal history of the patient revealed no significant factors except that he had worked continuously laying parquet floors since before the onset of eczema. He cut, cleaned, polished and fit the flooring, which consisted mainly of birch wood.

We decided to carry out a patch test using a special professional series made by F.I.R.M.A. for parquet flooring (usnic acid 1%, wood tar mix 12%, 5% pine oil, turpentine 20%, turpentine peroxides 0.3%, 10% creosote, beeswax 30%, urea formaldehyde resin 10%, phenol formaldehyde resin 5%, delta-3-carene, alpha pinene 15% olive oil, dammar resin 20%, sesquiterpene lactone mix 0.1%, colophony 20%, balsam of Peru 25%, formaldehyde 1% water, 0.5% potassium dichromate, epoxy resin 1%, p tert-butylphenol formaldehyde 1%) (figure 1).

The patient was positive (++) for wood tar mix 12% at days 2 and 4. In order to further investigate the haptens present in wood tar mix, we employed another F.I.R.M.A. professional special series for wood tar mix (phenol 0.5%, m-cresol 2%, creosote 10%, pyrocatechol 2%, a-pinene 15%, S-limonene 2%, sesquiterpene lactone mix 0.1%, diptene 1% acetone). The patient showed a positive (+ +) reaction to pyrocatechol 2% at 48 and 72 h.

The patient was therefore treated with alitretinoin 30 mg/day for 4 months with clinical resolution of the eczematous lesions.¹

Pyrocatechol (1,2-benzenediol) is a water soluble phenol derivative. It occurs widely in nature as an important constituent of living and fossilised plants. It is present in crude beet sugar and water from bituminous shale. Pyrocatechol and its derivatives occur in lignin, wood and other plant materials. It is also an important precursor of adrenalin, while a sulphuric acid ester of pyrocatechol is a normal constituent of human urine. It is also known as an antioxidant and is utilised in industry in the preparation of rubber, plastic, mineral oils, drugs and cosmetics. It has bactericidal and fungicidal properties.^{2 3}

We report this case because occupational dermatitis is difficult to diagnose and has an economic impact, and to highlight the importance of pyrocatechol as an emerging allergen and alitretinoin as a new therapy for chronic eczema.

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Figure 1 Symmetrical eczema on both hands.



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