

Allergic contact dermatitis in podiatrists handling resin insoles: A report of two cases

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KEYWORDS: case report, occupational allergy, podiatrists, resin

The risk of developing hand dermatitis is significantly greater among healthcare professionals than in the general population, and the condition predominantly affects nurses, nursing auxiliaries, and cleaners.¹ The combination in healthcare professionals of frequent handwashing and glove wearing may promote irritant contact dermatitis that can evolve into allergic contact dermatitis.² Podiatrists are no exception, but in this occupation, other substances can cause allergies, and in particular resins used in the manufacture of insoles.³ We report two cases of allergic contact dermatitis in podiatrists caused by phenol-formaldehyde and epoxy resin, respectively.

CASE REPORTS

Case 1: A 69-year-old male podiatrist, with no history of atopy, presented with an 8-month history of hyperkeratotic fissured lesions on his fingers, which occurred during his work. He handled glued leather goods such as shoes and metal instruments. Patch tests were performed with IQ Ultra patch test chambers (Chemotechnique Diagnostics, Vellinge, Sweden) occluded for 2 days with Tegaderm film (3M Health Care, Neuss, Germany), and reading was performed on day (D) 2 and D3. We tested with the European (comprehensive) baseline series, rubber additives, metal, (meth)acrylate, and epoxy series on the upper back. Patch tests with *Myroxylon pereirae* 25% pet., methyl dibromo glutaronitrile 0.5% pet., and *p*-tert-butylphenol formaldehyde resin (PTBPR) 1% pet. were positive (+). Healing was achieved with use of topical corticosteroid and alitretinoin therapy.

Case 2: A 31-year-old male podiatrist with a history of atopy, especially allergic rhinitis, presented with a 1-year history of hand dermatitis. He handled metal instruments, cosmetics, and resins. We tested the same series as above, in the first case. Tests were positive on D3 for epoxy resin of the bisphenol F type (DGEBF) 0.25% pet.

(++) and fragrance mix II 14% pet. (+++). The lesions healed completely with the use of protective vinyl gloves and treatment with clobetasol propionate.

DISCUSSION

PTBPR is a pheno-formaldehyde resin used as an adhesive for shoes, belts, or handbags. This formaldehyde resin typically causes contact dermatitis of the feet in contact with insoles of shoes.⁴ In occupational settings, PTBPR can also be used for lacquer resins, masonry, or motor oil additives and can cause severe allergic contact dermatitis of the head and neck.

DGEBF is an epoxy resin used in the manufacture of many materials such as adhesives and coating in civil engineering. This epoxy resin is a ubiquitous allergen well known in the construction trades but less in podiatrists, although it is used frequently in the manufacture of orthopedic insoles.⁵

Although the risk of infection is well known in podiatrists performing pedicures, in particular mycosis, allergic risks are unknown in these populations despite exposure to many allergens in occupational settings (resins, perfumes, preservatives). In conclusion, in podiatrists, it is important not to overlook any part of their activity, in particular the handling of insoles made with chemicals such as resins, which can cause contact dermatitis.

ACKNOWLEDGEMENTS

The authors are grateful to Nikki Sabourin-Gibbs, Rouen University Hospital, for her help in editing the manuscript.

AUTHOR CONTRIBUTIONS

Clémence Gautier: Writing-original draft. **Billal Tedbirt:** Writing-original draft. **Antoine Kuntz:** Validation. **Olivia Bauvin:** Validation. **Florence Tétart:** Supervision; validation.

CONFLICTS OF INTEREST

None to declare.

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How to cite this article: Gautier C, Tedbirt B, Kuntz A, Bauvin O, Tétart F. Allergic contact dermatitis in podiatrists handling resin insoles: A report of two cases. *Contact Dermatitis*. 2020;1–2. <https://doi.org/10.1111/cod.13655>