

CONTACT POINT

Occupational systemic allergic dermatitis in a football player sensitized to colophonium

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Colophonium, also known as rosin, is a solid yellowish-transparent pine tree resin. It is used in the production of adhesives, in particular glues, mastics, insulating tapes, adhesive tapes, cosmetics, and products for depilation. Contact allergy to colophonium is relatively common and apparently increasing in frequency.¹ We report an unusual case of systemic occupational allergic dermatitis in a professional football player.

CASE REPORT

A 33-year-old professional football player presented with chronic eczema of the ankles and the dorsa of the feet, and also widespread

eczematous dermatitis involving the trunk, limbs, and buttocks (Figure 1). Topical corticosteroid treatment quickly improved the dermatitis. The patient reported the regular use of plasters to tightly fixate his socks during daily professional training.

Patch tests with the Italian Society of Allergological, Occupational and Environmental Dermatology (SIDAPA) baseline series (Lofarma, Milano, Italy), a piece of the patient's team shirt and the plaster "as is" were performed. Patch test chambers (Van der Bend, Brielle, The Netherlands) were applied under occlusion on the patient's back for 2 days. Readings were performed on day (D) 2 and D3 according to

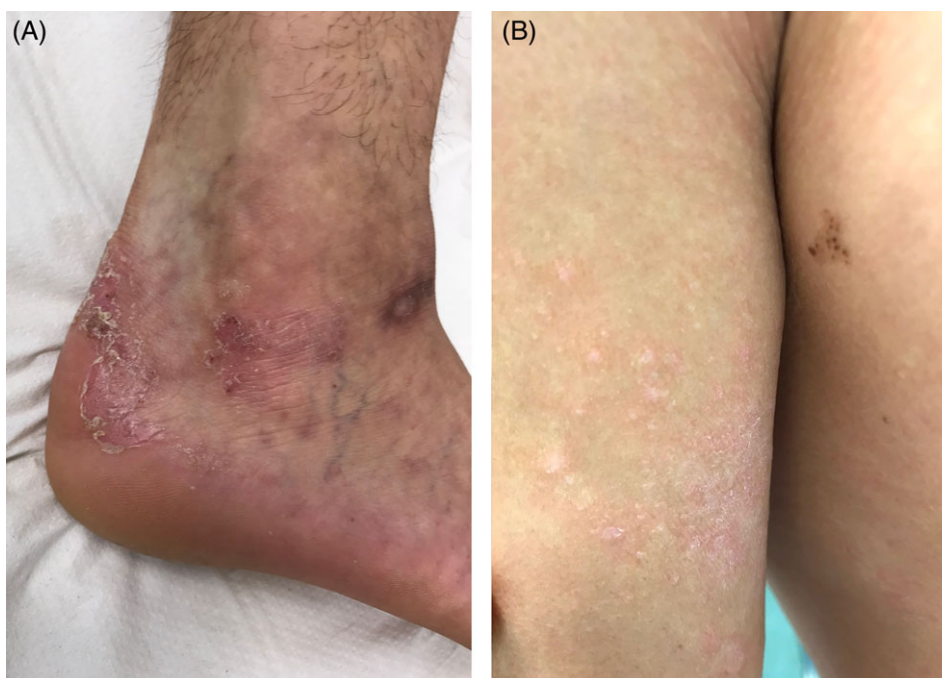


FIGURE 1 (A), Eczema of the ankles. (B), Widespread eczematous patches on the upper limbs and trunk

ESCD guidelines. The patient showed positive reactions to colophonium 20% pet. (+++/+++), nickel sulfate 5% pet. (+++/+++), and his own plaster (++/+++).

Colophonium is a complex natural mixture, and its major components are abietic acid and pimaric acid. These acids oxidize, and allergic patients can react to both of these materials. In light of this, the plaster was cut into small pieces and placed in an Erlenmeyer flask containing petroleum ether solvent, which was shaken for 8 hours. The resulting solution had a milky consistency, because of the presence of glue. This extract was dried under vacuum, and the residue was partially dissolved in acetonitrile. The solution was analysed in positive ion mode with an ESI-MS Ion Trap (LCQ Duo Finnigan, Waltham, Massachusetts), and colophonium adducts of Na⁺ and K⁺ in monomer, dimer and trimer form were detected, in accordance with the patch test results.

Avoiding the use of the plasters led to regression of all skin lesions, and systemic allergic dermatitis caused by transdermal dispersion of colophonium allergen(s) was therefore diagnosed.

DISCUSSION

The precise prevalence of colophonium allergy is difficult to derive from published studies. A European study from 2015 showed that 2% of adolescent patch test patients had already been sensitized.² Literature data show that colophonium caused 4.1% of cases of occupational dermatitis in English patients, most of whom were employed in the furniture industry.³ Moreover, 1.3% of Swedish house painters were found to be patch test-positive for colophonium.⁴ Cases of occupational contact dermatitis of the hands and neck have been described in violinists sensitized to colophonium present in the bow and in violin lacquers.⁵ This is the first case of generalized occupational allergic contact dermatitis caused by colophonium described in a professional football player. Exposure to colophonium may occur in

unexpected professional fields; it may cause an unusual clinical pattern, and chemical analysis may be necessary to identify the responsible allergen.

Conflict of interest

The authors declare no potential conflict of interests.

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