

spread use, the incidence of allergic contact dermatitis to peppermint oil and its ingredients is relatively low.

Golfer's vasculitis is a distinct entity characterized by self-limiting purpuric rash on the legs after prolonged exercise, walks, hikes, and playing golf.

We report a case of allergic contact dermatitis to peppermint foot spray in the background of golfer's vasculitis.

Case Report

A 59-year-old non-atopic woman presented with a 5-year history of recurrent irritant rash on the lower legs after playing golf in warm weather. She gave a history of applying a peppermint foot spray to the lower legs to cool the irritation she felt while playing golf.

Examination showed a purpuric rash with overlying eczematous changes. A clinical diagnosis of golfer's vasculitis was made; however, a complicating allergic contact dermatitis was also considered. A skin biopsy showed histological features consistent with golfer's vasculitis, but in the absence of primary fibrinoid vasculitis. Patch testing with an extended British Contact Dermatitis Society standard series, medicament series, facial series, fragrance series, plant series, clippings of grass and patient's own cooling peppermint foot spray was performed. The only positive reactions were to amercinol and peppermint foot spray.

Further patch testing with individual ingredients of the foot spray, obtained courtesy of the manufacturers, showed a positive reaction to peppermint fragrance 1:50 2% in pet. (D2+/D4+). There were negative reactions to all the other ingredients including menthol.

Allergic contact dermatitis to peppermint foot spray

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Peppermint oil has been used as a flavouring agent and medicine from ancient times. Considering its wide-

Discussion

Peppermint oil (CAS 8006-90-4) is an essential oil distilled from the fresh overground parts of *Mentha piperita* Linne. It is composed of 50–78% free menthol, 5–20% menthol esters such as menthylacetate, and menthylisovalerate. It also contains D- and L-menthone, L-limonene, α -pinene, acetaldehyde, phellandrene, isovaleraldehyde, acetic acid, cineol, cadinene, amyl alcohol and dimethylsulfide.

Peppermint is regarded as 'the world's oldest medicine', with archeological

evidence placing its use at least as far back as 10 000 years ago. Peppermint oil, like many spices and herbs, is believed to have medicinal properties when consumed. It is the oldest and most popular flavour of mint-flavoured confectionery. Peppermint oil is also used in cosmetic and pharmaceutical products such as toothpastes, mouthwashes, shampoos, soaps, cigarettes and body rubs to impart a minty scent and cooling sensation.

The incidence of allergic contact dermatitis due to peppermint oil or its components is low considering its widespread use. Calnon (1) reported 4 positive patch tests to peppermint oil in 1147 patients attending for routine patch testing in 8 European contact dermatitis clinics. Menthol is not considered to be the main sensitizing agent in peppermint oil. Non-menthol components of peppermint oil have well-recognized sensitizing properties (2). The recommended patch test concentration for peppermint oil is 1–2% in petrolatum.

Contact allergy to peppermint oil has been reported to cause disseminated eczema, hand eczema, perioral eczema, cheilitis, orofacial granulomatosis of lower lip, stomatitis, gingivitis, burning mouth syndrome, recurrent oral ulceration and lichenoid oral reactions (2–4). Allergic contact dermatitis from peppermint and menthol in a local action transcutaneous patch containing flubiprofen has also been reported (5).

We believe that our patient has developed allergic contact dermatitis to the peppermint fragrance in her foot spray as a secondary event to her golfer's vasculitis. Golfer's vasculitis is an erythematous, purpuric rash on the legs in association with playing golf and also after prolonged exercise, walks or hikes (6).

She has now replaced the peppermint foot spray with a pure water spray. Her purpuric rash still occurs after a prolonged round of golf in hot weather, however it is now less irritating and the eczematous changes have gone. This case again stresses the need to patch test with a patient's own products and individual ingredients to identify uncommon allergens.

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