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Allergic contact dermatitis from tea tree oil in a wart paint

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Key words: allergic contact dermatitis; tea tree oil; *Melaleuca alternifolia*; wart paint; herbal remedies. © Munksgaard, 1997.

Case Report

A 74-year-old man presented in June 1995 with a 4-month history of blistering dermatitis over the right temple and, on a separate occasion, on the dorsum of the left hand. He had treated 2 seborrhoeic warts in these areas with a wart paint, containing tea tree oil, acquired across the counter of a local health shop. The dermatitis occurred within 24 h of application. He was treated successfully with topical corticosteroids.

Patch testing (Finn Chambers and Scanpor Tape) was performed with the European standard series and tea tree oil at a dilution of 1% aq. Additionally, dipentene, abietic acid, abitol, dibutylphthalate, eucalyptus oil and turpentine peroxides were tested. At 3 days, a papulovesicular reaction at the site of an open test to tea tree oil (+++) and an erythematopapular reaction (++) to tea tree oil 1% aq. were seen. A ++ reaction was also seen to fragrance mix, though no reactions were seen to its individual constituents. 50 controls showed no reaction to tea tree oil at 1% and 5% aq.

Discussion

In 1925, Penfold (1) determined the main constituents of tea tree oil, an essential oil extracted by steam distil-

lation from the leaves and terminal branchlets of *Melaleuca alternifolia* Cheel, a tree indigenous to New South Wales, Australia. Gas chromatography has elucidated the constituents of tea tree oil, which include terpinen-4-ol and 1,8 cineole (2). The oil has been used in a variety of skin conditions, including acne, and has been found to have significant antimicrobial activity (3).

Contact allergy to tea tree oil was first reported in 1991 by Apter (4) and systemic contact dermatitis due to ingestion of the oil has also been described (5). In our case, the main reported culprits in contact allergy to tea tree oil, such as eucalyptus oil and colophony (6), were found to be negative. Allergic contact dermatitis from tea tree oil in a wart paint has not previously been described, and draws our attention to the presence of this substance in a variety of 'over-the-counter' medicaments.

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Side-effects during treatment with SADBE

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Key words: alopecia areata; side-effects of treatment; squaric acid dibutyl ester (SADBE); medicaments. © Munksgaard, 1997.

Squaric acid dibutyl ester (SADBE) is a potent contact sensitizer used in the topical therapy of alopecia areata. It is preferred to dinitrochlorobenzene because it is non-mutagenic (1-3).

Case Reports

Case no. 1

A 28-year-old man presented with refractory alopecia areata. A patch test with SADBE 2% acet. was applied to the left forearm before therapy was begun. After 2 weeks, the patient developed an erythematous patch, with a clear border, at the left forearm at the site of application of the patch test, and a corresponding patch, lighter in colour, on the homolateral bicipital region. The 2nd lesion was located at the point of contact of the patch test following flexion of the arm (Fig.1). The lesions disappeared 1 week later after topical corticosteroid therapy.

Case no. 2

A 35-year-old man was treated for extensive alopecia areata. After application of a patch test with SADBE 2%

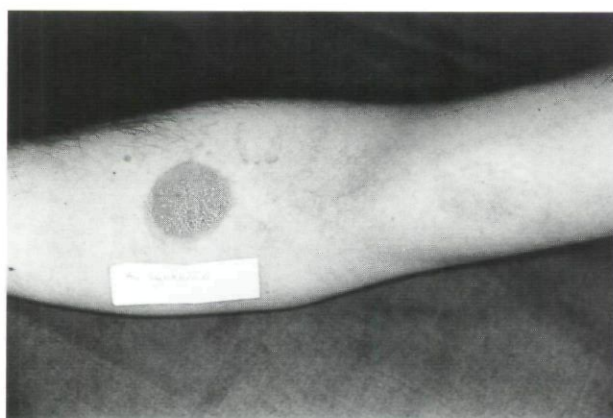


Fig. 1. Patches of dermatitis at the site of SADBE application on the left forearm and in the bicipital region corresponding to flexion (Case no. 1).



Fig. 2. Patch of dermatitis in the occipital region at the site of SADBE application and edema on the face after accidental exposure to SADBE (Case no. 2).

acet. and a subsequent eczematous reaction, he began therapy with 0.05 % SADBE solution 1×a week. 2 weeks later, he accidentally squirted 1ml of the solution onto the face while he was opening the tube. The same night as the

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