

CASE REPORT

Contact Dermatitis by Alcamphor Present in a Flushing Solution

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Abstract. We report a case of allergic contact dermatitis due to alcamphor present in a flushing solution used by a 58-year-old woman. It is the first case described in our Division of Allergy and the second one reported in the literature. Alcamphor is a chemical substance present in many products that may have been underestimated as the causative agent of contact allergic dermatitis as the allergen is not available in the standard patch test batteries.

Key words: alcamphor, menthol, eucalyptus, trementine, methyl salicylate, contact allergic dermatitis.

DERMATITIS DE CONTACTO POR ALCANFOR CONTENIDO EN UN LÍQUIDO RUBEFACIENTE

Resumen. Describimos una dermatitis de contacto alérgica por alcanfor, contenido en un líquido rubefaciente usado por una mujer de 58 años. Es el primer caso descrito en nuestra Unidad de Alergia y el segundo en la literatura. El alcanfor es una sustancia química contenida en numerosos productos y puede que se haya infravalorado como causa etiológica de dermatitis de contacto alérgicas, al no disponer del alérgeno en las baterías preparadas para la detección de dichas dermatitis.

Palabras clave: alcanfor, mentol, eucalipto, trementina, metil salicilato y dermatitis de contacto alérgica.

Introduction

Camphor is obtained from *Cinnamomum camphora* plants. It is used in medicine for its antiseptic and vasodilatory properties, which stimulate blood circulation and improve lipid and glucose levels in patients with type 2 diabetes. It is also used to treat conjunctivitis and diarrhea, and as a sedative. In the United States of America, it is used as an active ingredient in many over-the-counter products, such as nail varnishes, bath oils, moisturizers, and even blushers.

In Spain, this substance is not usually covered by the standard battery of tests used for allergic contact dermatitis, and although it is a component in 60 products dispensed by Spanish pharmacies, it has only been described twice as an allergen. This is the first case that we have treated in our allergy department and only the second described in the literature.

Case Description

We report the case of a 58-year-old woman of Asian origin, who was a homemaker. She had a household accident in January 2005 that left her with a severe contusion of the right arm.

Muscle pain was treated with 20 mg of oral piroxicam administered 3 times daily. After 7 days of treatment, the symptoms had improved. The patient decided to stop the treatment prescribed by her family doctor and initiated a local treatment with a liquid rubefacient of Asian origin.

The patient massaged the product into her skin twice daily. However, she suspended the treatment after a month due to itching at the application site. Erythema and papules appeared within 2 days.

Given a probable diagnosis of allergic contact eczema resulting from the liquid, the patient was treated with topical clobetasol and hydroxyzine chlorohydrate, and the symptoms improved within 12 days.

In our skin allergy department, the patient was tested using the European standard series, the Chemotechnique plant series, the Chemotechnique cosmetic series, and the Grupo Español de Fotobiología photopatch test series. Results for all tests were negative at 48 and 96 hours.

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Table 1. Solution Components and Patch Test Results at 48 and 96 Hours

<i>Chemical substance and dilution</i>	<i>48 h</i>	<i>96 h</i>
2% methyl salicylate OO	-	-
1% menthol VAS	-	-
10% camphor VAS	++	+++
10% gum spirit OO	-	-
1% eucalyptus ALC	-	-

Abbreviations: OO, olive oil; VAS, vaseline; ALC, alcohol.

An appointment for a month later was made in order to conduct skin tests with the components of the liquid rubefacient. Results are shown in the table.

Test results were negative in 20 control volunteers.

Discussion

Only 1 case of sensitivity to camphor (contained in eye drops) has been described in the literature¹; however, that particular patient was also allergic to thiomersal and Euxyl K 400.

Our patient was only sensitive to camphor.

Other countries and cultures—particularly Asian—are becoming increasingly represented among patients in Spain. Some of these patients are familiar with herbal treatments, which they consider to be both effective and innocuous.² On occasion, these products are used concomitantly with products prescribed by general practitioners.

Although similar topical treatments exist in Spain, no cases of sensitivity to camphor have been reported.³

It is also noteworthy that in this case the patient obtained a negative result in the photopatch test of the sunscreen 4-methylbenzylidene camphor, which contains a camphor group in its structure and which has been widely described as an allergen and photoallergen. We can therefore conclude that, despite the camphor ring, there was no cross-reactivity.^{4,6}

In chemical terms, camphor contains varying quantities of terpenes and sesquiterpenes. Nonetheless, the Chemotechnique plant series, which includes these allergens, was negative.⁷

The fact that camphor is not included in routine patch tests in most skin allergy departments may explain why it has not been reported as an allergen. Nonetheless, this possibility should be borne in mind when dealing with a patient who may have allergic contact eczema and who is using one of the many products in the Spanish pharmacopeia that contain camphor.

Conflicts of Interest

The authors declare no conflicts of interest.

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