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Allergic Contact Dermatitis Due to Dimethyl Fumarate in Boots

Dermatitis alérgica de contacto por dimetilfumarato en botas

To the Editor:

Over the past 3 years there have been a number of case reports of allergic contact dermatitis due to dimethyl fumarate, particularly in relation to the use of sofas and footwear imported from China. In those cases, it appears that dimethyl fumarate was used as an antifungal agent¹ and was contained in small anti-humidity bags inside the footwear or inside the sofas.

We present the case of a 41-year-old woman with no relevant personal history of allergies or disease, who presented intense pruritus 48 hours after starting to wear new footwear (boots) and who then rapidly developed erythematous edematous lesions with a tendency to vesiculation on the distal part of both feet. The lesions were present on the backs of the toes, the instep, and the lateral surfaces of the feet. The patient also presented similar, though somewhat less edematous, lesions on the inside aspect of the ankles and the backs and lower parts of both legs (Figure 1). After treatment with Peitel ointment and Ebastel tablets and ceasing to use the boots, symptoms disappeared in approximately 2 weeks.

The patient stated that the boots contained small bags that, she had been informed, were used after manufacture to preserve the boots during subsequent shipment to Europe. She sent one of the boots to the Department of Industry and Commerce (Consumer Service) for analysis and the presence of volatile organic compounds, such as benzene, toluene, and dimethyl fumarate, was confirmed.

Skin prick testing was performed using a standard series (29 allergens) of the Spanish Skin Research and Allergy

Group (GEIDAC) and the standard series for footwear (Chemotechnique Diagnostics, Malmoe, Sweden) (28 allergens) with negative results. Skin prick testing was then carried out using dimethyl fumarate, 0.01% in petroleum jelly (Marti Tor, Barcelona, Spain), with a clearly positive result (++) at 48 and 96 hours (Figure 2). Finally, controls were carried out using dimethyl fumarate, 0.01% in petroleum jelly, in 15 healthy patients, with negative results.

Reports were published in 2007 and 2008 of some cases in northern Europe caused by the use of sofas imported from China,^{2,4} demonstrating the relationship with dimethyl fumarate⁵; cases have also recently been published in relation to footwear.^{6,7}

Dimethyl fumarate is an ester of fumaric acid that has been used as oral treatment for psoriasis. It is an irritant and can also cause non-immunologic contact urticaria. It is classified as a moderate contact sensitizer in animal models.⁸ Recent topical tests of esters of fumaric acid have led it to be considered as a potential cause of irritation and sensitization.⁹

In this case, we concluded that the lesions were consistent with an allergic, non-irritant etiology, as only



Figure 1 Eczema involving the toes, instep, ankle, and lower part of the leg.



Figure 2 Skin prick testing positive for dimethyl fumarate after 96 hours.

the patient presented positive results in the contact tests carried out using dimethyl fumarate, whereas the controls were negative. We also ruled out other, more common allergens by using the standard series and the footwear series in the test, with negative results. Although some authors propose dilutions of up to 0.001%, based on our findings and those of other authors, we feel that the use of 0.01% dimethyl fumarate in petroleum jelly is suitable for testing in these cases, provided that sufficient controls are carried out in healthy subjects. The use of this allergen in standard testing for allergic dermatitis related to footwear should also be considered.

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The Spanish Dermatopathology Group— 30 Years On

30 años del Grupo Español de Dermatopatología

To the Editor:

Looking back from today's perspective, it is difficult to imagine our initial group meeting of dermatologists and pathologists on 9 November 1979 leading to the united, well-known, and much expanded group of today with its present impact and prominence.

The spark that ignited the process came in a meeting with Dr. J. Maria de Moragas in the Hospital San Pablo, where he proposed we form a working group on dermatologic pathology similar to the contact group. The idea was promptly put into action and we organized the first scientific meeting at Hospital del Sagrado Corazon, where I was working. The meeting was attended by the other 7 founding members: Doctors Adolfo Aliaga, José Luis Díaz,

Table 1 Secretaries of the Spanish Dermatopathology Group

Years	Secretary
1979-1981	Dr. Pablo Umbert
1981-1983	Dr. Pablo Umbert
1983-1985	Dr. José María de Moragas
1985-1987	Dr. Adolfo Aliaga
1987-1989	Dr. Félix Contreras
1989-1991	Dr. Evaristo Sánchez Yus
1991-1993	Dr. Abelardo Moreno
1993-1995	Dr. Luis Requena
1995-1997	Dr. Luis Requena
1997-1999	Dr. José María Conde Zurita
1999-2001	Dr. María Asunción Barnadas
2001-2003	Dr. José Luis Rodríguez Peralto
2003-2004	Dr. Jordi Peyrí
2005-2007	Dr. Jesús Cuevas
2007-2009	Dr. Luis Puig