

could indicate a phototoxic reaction.^{4,5} Similarly, it is worth pointing out the risk of developing cutaneous squamous cell carcinoma.⁴ Lastly, it is important to distinguish the eruption from amyopathic paraneoplastic dermatomyositis owing to its better prognosis and different therapeutic management.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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Allergic Contact Dermatitis Due to Methyl Glucose Dioleate in a Balm Cream[☆]



Eczema alérgico de contacto por metil glucosa dioleato contenido en una crema balsamo

To the Editor:

Methyl glucose dioleate (MGD) is a polyethylene glycol used as an emulsifier or surfactant that is considered nonirritant and nonsensitizing on healthy skin.

We report the case of a 12-year-old girl referred to the dermatology clinic with very pruriginous lesions that had first appeared on the axillas and, in just a few days, spread to the arms, trunk, neck, and face. Her parents reported that 3 days previously they had applied a balm cream (Mustela) on the axillas for erythema that had appeared after application of a depilatory cream.

The physical examination revealed erythematous, scaly plaques on both axillas. They affected the skin folds and spread less intensely to the areas described above (Fig. 1).

The lesions disappeared after 10 days with the application of topical corticosteroids.

We performed a use test with both the depilatory cream and the balm cream that the patient had used, by applying

both products twice daily at the same site on the forearm. The only reaction observed was with the balm cream 3 days after application.

We performed patch tests with the standard series of the Spanish Contact Dermatitis and Skin Allergy Research Group



Figure 1 Erythematous, scaly plaques on the axillas.

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Figure 2 Positive patch test readings to methyl glucose dioleate 5% and balm cream as is, taken at 96 hours.

(Grupo Español de Investigación en Dermatitis de Contacto y Alergita Cutánea [GEIDAC]), the *Chemotechnique* cosmetics series, and the balm cream as is. The only positive results were for the balm cream at 96 hours. The study was completed with the ingredients of the cream supplied by the manufacturer and revealed a positive reading only for MGD 5% in petrolatum at 48 hours (+) and 96 hours (++) and the balm cream as is at 96 hours (++) (Fig. 2). Ten control applications with MGD yielded negative results.

MGD has a high molecular weight and is considered unable to penetrate healthy skin. It is obtained from the diester of methyl glucose and oleic acid. It is used as an emulsifier and nonionic surfactant in topical and cosmetic treatments for skin and hair care.^{1,2}

Safety studies show MGD to be a nonirritant, nonsensitizing product on healthy skin, although sporadic cases of allergic contact dermatitis associated with MGD have been reported (2 cases with insect repellent,^{1,2} 1 case with shampoo,³ 1 case after application of a topical antifungal,⁴ 2 cases with topical antibiotics in patients with leg ulcers,^{5,6} and, more recently, a case with balm cream used during breastfeeding).⁷ The widespread use of MGD in cosmetics means that these cases, while anecdotal, are sufficiently relevant to consider the substance capable of occasional sensitization.

In the case we report, allergic contact dermatitis was associated with application of a balm cream, which is generally used to prevent diaper rash and was used on the axillas of a girl who had previously reported irritation after depilation. The product was applied to skin with possible irritant contact dermatitis, which probably facilitated the

appearance of the allergic contact dermatitis observed and thus enabled greater penetration of the components of the balm cream.

In summary, we report a new case of allergic contact dermatitis caused by MGD at a previously unreported site (ie, the axillas) in a girl with irritated skin.

This case highlights the fact that, even though MGD is considered a safe product in healthy skin, it should not be applied when the skin is damaged. Given that very few cases have been reported, further studies are needed on skin inflammation caused by MGD at different concentrations in order to evaluate its ability to sensitize.

Lastly, it is important to perform a use test with the patient's own products in order to diagnose unusual allergens that are not included in routine test series.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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