

varies depending on the concentration and the surface area to which it is applied. Concentrations above 80% produce denaturalization and rapid and irreversible coagulation of epidermal proteins, resulting in the formation of a barrier that prevents the chemical from penetrating the deep dermis, whereas when diluted to 50%, it acts as a keratolytic agent and disrupts the sulfur bridges, thus increasing its penetration beyond the dermis and causing greater destruction and systemic absorption.<sup>7</sup>

Complications may include scarring, dyschromia, and eczema herpeticum. High doses are toxic, and it must not, therefore, be applied over large areas, given that it has a marked corrosive action, either due to ingestion, inhalation, or direct contact. Cellular uptake is rapid and passive due to its lipophilic nature and signs of systemic toxicity appear shortly after exposure. Target organs are the liver, kidneys, lungs, and cardiovascular system. When used by qualified experts, however, it does not usually cause complications. Repigmentation of the skin may occur if patients do not protect themselves adequately from the sun.<sup>8</sup>

Although the only treatment currently approved by the US Food and Drugs Administration (FDA) for vitiligo is HMBE, few published cases describing the efficacy of phenol and isolated studies demonstrating its mechanism of action exist. Our patient presented a satisfactory response to the selective application of 88% phenol, with no complications and no relapse; we therefore consider it to be an excellent depigmenting therapeutic option in universal vitiligo with areas of pigmentation that do not respond to HMBE.

## Funding

This study has not received funding of any kind.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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30 July 2019 13 January 2020

<https://doi.org/10.1016/j.adengl.2021.01.018>

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## Allergic Contact Dermatitis Due to Slime<sup>☆</sup>



### Dermatitis alérgica de contacto por *slime*

To the Editor

Slime is a viscoelastic substance used as a toy that has become very popular with children in recent years. Making slime is a common experiment in school camps, play centers, and even at home. It can be made using any of the infinite number of recipes available on internet by mixing everyday

products such as detergent, white glue, shaving foam, and contact lens solution.

A 10-year-old girl with no personal history of atopy consulted after experiencing 2 outbreaks of pruritic erythematous-vesicular papules during the previous year. The papules, which were on the palms and interdigital folds, became scaly (Figs. 1 and 2). The patient was treated with oral and topical corticosteroids, and her lesions resolved completely. Patch testing with the standard series of the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) was positive at 48 and 96 hours for methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) with the True Test kit and for MI 0.2% in water.

Once the results of the test were known, the patient's history was revisited. She reported that the lesions had appeared when making and using slime without gloves (Fig. 3). She prepared the mixture with liquid deter-

<sup>☆</sup> Please cite this article as: Córdoba S, Blanco-Calvo M, Huerta-Vena A, Borbujo J. Dermatitis alérgica de contacto por slime. *Actas Dermosifiliogr*. 2021;112:285–287.



**Figure 1** Erythematous scaly plaques on the palms.



**Figure 2** Similar lesions on the sides and dorsa of the hands.

gent (Ariel), which was found to contain MI. No lesions appeared when the recipe for slime was based on products that did not contain MCI or MI; therefore, the positive results with MCI/MI and MI were considered to be relevant.

Making slime at home is a simple experiment, although it is not risk-free. The borax that was used initially is a potent irritant that can produce chemical burns.<sup>1</sup> Other possible recipes do not include borax, although they do contain numerous substances with a known irritant and sensitizing capacity. Since previous hand dermatitis can become worse and chronic when irritant products are handled, special care is recommended in the case of atopic children.<sup>2</sup>

The detergents, glues, contact lens solution, and shaving foam used to make slime contain fragrances, MCI/MI, and

other preservatives that often produce contact dermatitis of both irritant and allergic origin.<sup>3</sup> MCI/MI is the most common cause of allergic contact dermatitis associated with slime, although the reaction is generally due to the glue used,<sup>4</sup> which may even be suitable for use in schools, and not to the detergent, as in the case we report. Other allergens, such as fragrance mix I, paraben mix, and quaternium-15 have been reported to be relevant.<sup>5</sup>

The present case report shows how changes in consumer habits or new uses for known allergenic or irritant substances could be the cause of new exposures and clinical manifestations, both in children and in adults. With the present case, we wish to highlight the curious source of exposure to MI, which was only identified after meticulous history taking.



**Figure 3** Handling slime (Source: Getty Images).

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<https://doi.org/10.1016/j.adengl.2021.01.009>  
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## Specialized Dermatology Training in Spain: Opinions of 53 Third-Year Dermatology Residents Surveyed in 2019<sup>☆</sup>

**Opinión sobre la formación especializada en dermatología en España. Resultados de una encuesta administrada a 53 médicos internos residentes en dermatología de tercer año en 2019**

*To the Editor:*

Resident training in dermatology is an increasingly demanding process that has evolved over recent years.

<sup>☆</sup> Please cite this article as: Montero-Vilchez T, Molina-Leyva A, Martínez-López A, Buendía-Eisman A, Ortega-Olmo R, Serrano-Ortega S, et al. Opinión sobre la formación especializada en dermatología en España. Resultados de una encuesta administrada a 53 médicos internos residentes en dermatología de tercer año en 2020. *Actas Dermosifiliogr.* 2021;112:287–290.



Medical-surgical dermatology and venereology is a regulated specialty in Spain pursuant to the Law of July 20, 1955 and Royal Decree (RD) 2015 of June 15, 1978.<sup>1,2</sup> Training in this specialty lasts 4 years and is regulated by the Spanish Ministry of Health.<sup>3</sup> Since the beginning of the MIR resident training system, the number of places and demand for them has gradually increased, and this is now the first specialty to fill all its places in the past 5 years (MIR places, 2013–2018). Furthermore, social demand for the services of dermatologists has increased for different reasons, such as the increased cosmetic needs of the population, the increase in potentially avoidable referrals from primary-care physicians, and the expansion of the fields covered by dermatology.<sup>4</sup> To date, no study has been made of opinion regarding specialized training in dermatology at the national level.

A transversal study was carried out by means of a survey carried out in person on February 9, 2019, during the course on cosmetic dermatology for year-3 residents; the survey collected information on aspects relating to teaching, research, and general satisfaction and expectations (Appendix A).