Dermatology Practical & Conceptual

Abrupt Bullous Cutaneous Eruption After Application of Tacrolimus Ointment and Sun Exposure

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Citation: Spigariolo CB, Barei F, Marzano AV, Ferrucci S. Abrupt Bullous Cutaneous Eruption After Application of Tacrolimus Ointment and Sun Exposure. *Dermatol Pract Concept.* 2023;13(3):e2023164. DOI: https://doi.org/10.5826/dpc.1303a164

Accepted: January 10, 2023; **Published:** July 2023

Funding: This work was supported by Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico of Milan/Italian Ministry of Health (RC2023).

Competing interests: None.

Authorship: All authors have contributed significantly to this publication.

Acknowledgement: The patient in this manuscript have given written informed consent to publication of her case details.

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Case Presentation

A 46-year-old woman complained of an acute bullous dermatitis, which appeared after sun exposure, localized in the areas where she applied tacrolimus 0.03% ointment (for her vitiligo) in the previous days. After about 20 minutes of solar exposure (using sunscreen SPF50+), she felt a burning sensation, followed by the appearance of vesiculobullous lesions on the abdomen, groins and axilla (Figure 1A). No other topical or systemic drugs had been used. She was treated with Prednisone 25 mg/day tapered in 15 days with scarring resolution in eight weeks (Figure 1B)]. After clinical resolution, broadband UV) photopatch testing (PPT) was performed. The patient sunscreen and the Tacrolimus ointment 0.03% used by the patient, together with Chemotechnique-Diagnostics® photopatch series were tested. An erythematous reaction was seen on the UVA-irradiated skin where tacrolimus 0.03% ointment was applied (Figure 1C). Based on medical history, clinical examination and the results of the PPT, we made diagnosis of photosensitive reaction. The patients' medical history (acute onset, clinical bullous aspects and lack of prior sensitization) was better compatible with a hyperacute phototoxic reaction induced by the Tacrolimus ointment 0.03% rather than a photoallergic one [1].

Teaching Point

Even if tacrolimus ointment is widely used, only one case of contact dermatitis was described [2]. To the best of our knowledge, this is the first case of bullous reaction to Tacrolimus ointment after sun exposure.

Figure 1. (A) Erythematous-bullous eruption localized on abdomen, groins and axilla characterized by blisters of 1-6 cm in diameter and serous content. (B) Scarring outcome after 8 weeks. (C) Results of photopatch-testing: an erythematous reaction was seen on UVA-irradiated-skin (left side of the patient's back) where tacrolimus 0.03% ointment was applied, no reactions were present on both irradiated and non-irradiated areas where sunscreen and Chemotechnique Diagnostics® photopatch testing series were applied.

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