

LETTER

Omalizumab induced lichenoid drug eruption triggered by sun exposure

Dear Editor

Omalizumab is a humanized monoclonal antibody against human immunoglobulin E that is mainly indicated in asthma, allergic rhinitis, chronic spontaneous urticaria and is being increasingly used for other dermatological diseases, including atopic dermatitis, mastocytosis, hyper-IgE syndrome, and bullous pemphigoid.^{1,2} Rare cutaneous side effects, such as itching, skin rash, urticaria, and photosensitivity, have been reported to be associated with omalizumab use.^{3,4}

A 50-year-old woman presented to our clinic with purple colored, itchy lesions on the extensor surface of the right hand, which had started developing 1 month previously. On dermatological examination, erythematous-purple plaques were noted on the extensor surface of the right hand and forearm (Figure 1). No urticaria plaques were seen at the time of eruption. Examinations of the genital area, oral mucosa, scalp, and nails showed normal findings. The patient had been receiving omalizumab therapy for treatment-resistant chronic urticaria, the lesions emerged after the administration of the eighth dose. The patient stated that she did not experience any skin eruptions during the administration of the previous doses and that the lesions emerged after extended exposure to sunlight while gardening. Omalizumab therapy had been started in November of the previous year, and these lesions occurred in June. Histopathology revealed orthokeratosis, hypergranulosis, spongiotic microvesiculation, vacuolar degeneration of the basement membrane zone, and dermal band shaped lymphohistiocytic-eosinophilic infiltration (Figure 2). Based on clinical and histopathological findings, a diagnosis of lichenoid drug eruption was made. As the patient was not using any other medications at the onset of the lesions, omalizumab was considered as the probable culprit drug. Omalizumab therapy was discontinued and application of topical steroid ointment was initiated for the lesions. The patient was advised to avoid sunlight. The eruptions completely disappeared after 1 month without scar formation, and there was only minor postinflammatory hyperpigmentation. As urticaria wheals were not noted at the 1 month follow-up, omalizumab was not reinitiated and oral antihistamines were administered.

In the literature, lichen planus associated with omalizumab was reported in a patient with asthma after the second dose of omalizumab.⁵ Drug eruptions can develop few months after the first administration of the drug.⁴ Our patient was receiving omalizumab for 8 months, with no cutaneous side effects until the administration of the last dose. Moreover, she was not receiving any other medications at the onset of the

eruptions. With cessation of the treatment and use of topical steroids, the eruptions disappeared and did not recur. According to the World Health Organization–Uppsala Monitoring Center criteria, the association between the eruptions and omalizumab use was “probable” in our case.

Photosensitivity is one of the reported rare side effects of omalizumab administration.⁴ In our case, the lesions were triggered after intense sun exposure, which was noteworthy. Drug-induced photosensitivity can result in dyschromia, telangiectasia, pseudoporphyria, photoonycholysis, and lichenoid tissue reactions.⁶ Lichenoid drug reactions show a photodistribution pattern involving the face, hands, and extensor surfaces of the arms.⁷ In our case, the lesions were localized on the right arm and the dorsum of the right hand.

Various drugs, including angiotensin-converting enzyme inhibitors, thiazide diuretics, antimalarials, beta-blockers, and penicillamine, have been shown to be associated with lichenoid drug eruptions.⁸ Activation of CD8 autotoxic T lymphocytes against epidermal cells and, interactions between drugs and immune system mediators, are thought to be involved in the development of lichenoid drug eruptions.⁹ Generally, lichenoid drug eruptions disappear after discontinuation of the drug. In our case, the lesions disappeared after 1 month and no recurrence was observed.

In this article, we reported a case of lichenoid drug eruption related to omalizumab administration which were triggered by sun exposure.



FIGURE 1 Erythematous purple plaques on the right hand dorsum

Written informed consent was obtained from the patient.

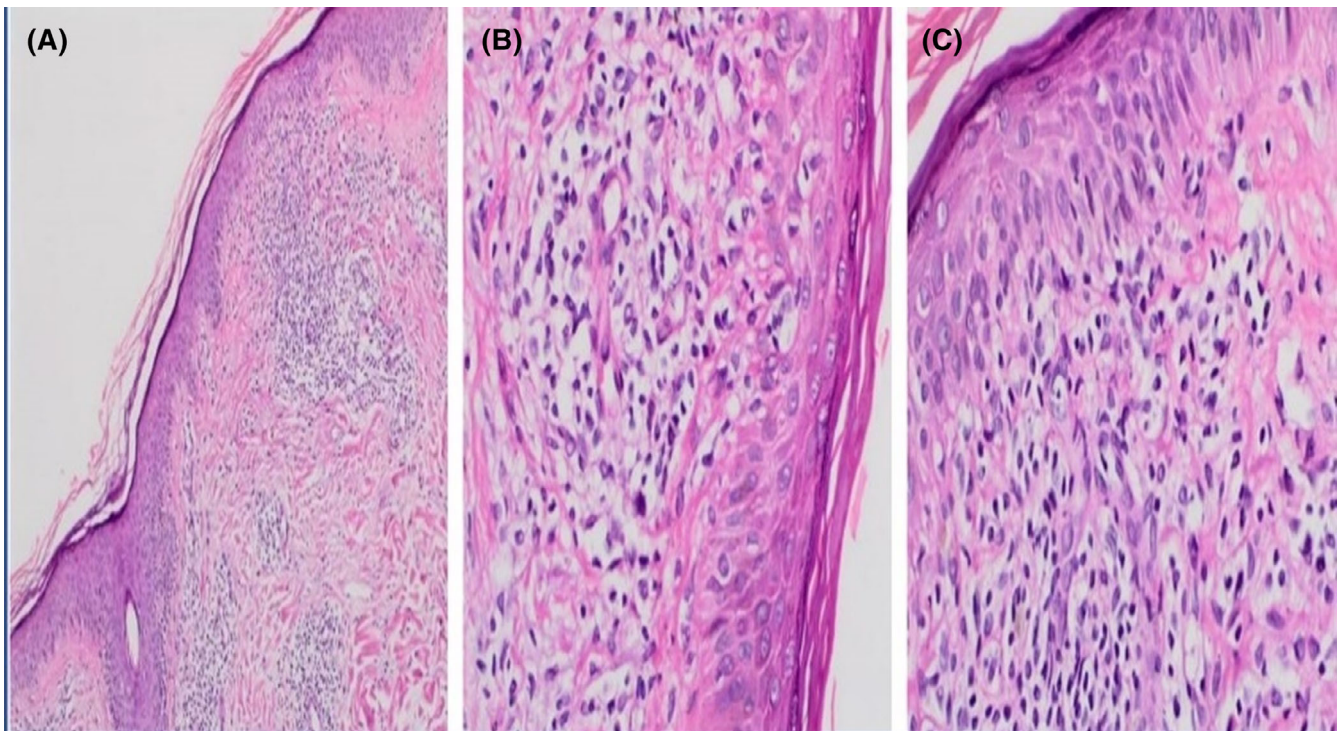


FIGURE 2 A, Focal hyperkeratosis and orthokeratosis. B, Vacuolar degeneration in basal layer, flattening of rete ridges, focal spongiotic vesiculation. C, Lymphocyte infiltration with scarce eosinophils in superficial dermis

A detailed anamnesis and physical examination are essential for the diagnosis. Physicians should be aware of the possibility of photo-triggered eruptions related to omalizumab use especially in summer, and patients should be questioned about photosensitivity symptoms, such as rash, redness, stinging sensation, and itching. Cessation of treatment can be considered in the case of persistent eruptions. For preventing phototriggered-reactions, the use of sunscreen may be beneficial in patients receiving omalizumab.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

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