

CLINICAL VIGNETTE

Allergy to the Sun

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Introduction

Solar urticaria is an intriguing and uncommon manifestation of physical urticaria, characterized by the swift emergence of hives, itching, and erythema upon exposure to sunlight, particularly UVA and UVB radiation.¹ Despite its rarity, its impact on the quality of life of affected individuals can be profound. While the exact pathogenesis of solar urticaria remains elusive, it is believed to involve the cascade of histamine and other mediators released from mast cells and basophils upon exposure to ultraviolet radiation. This case illustrates a patient with solar urticaria with inadequate response to conventional antihistamine treatment, but experienced substantial improvement following the initiation of omalizumab therapy.

Case

A 26-year-old male presented to allergy with a two-year history of recurrent episodes of hives and itching triggered by sunlight exposure. These urticarial reactions would manifest within minutes of sun exposure and would spontaneously resolve within an hour of seeking shade. The patient reported a direct correlation between the severity of his symptoms and the intensity of sunlight. His medical history was unremarkable, with no chronic medications. Physical examination revealed erythematous wheals accompanied by a surrounding flare on sun-exposed regions, involving the face, neck, arms, and legs.

Initial management included high dose cetirizine (from 40 to 60 mg daily), in combination with rigorous sun protection measures. Despite several weeks of adhering to this treatment regimen, the patient's symptoms persisted with minimal improvement. Due to refractory symptoms, therapy with omalizumab was initiated.

Omalizumab, a monoclonal antibody, is specifically designed to target and bind to immunoglobulin E (IgE), thereby blocking its interaction with mast cells and basophils.² This effectively curtails the release of inflammatory mediators. The patient received regular subcutaneous injections of omalizumab 300 mg every four weeks. Following the third injection, the patient reported a pronounced reduction in both the frequency and severity of his hives. He was able to tolerate sun exposure without experiencing urticaria, resulting in a significant improvement in his overall quality of life.

Follow-up

Over the subsequent year, the patient reported consistent marked reduction in urticarial lesions, even during extended periods of sun exposure. Omalizumab was so effective that he did not require antihistamines. There was significant improvement in his quality of life with increased confidence and greater engagement in outdoor activities.

After two years of successful omalizumab therapy, the patient's treatment was interrupted due to changes in insurance coverage. During this hiatus, he restarted cetirizine, but experienced a resurgence of hives even in colder temperatures. Fortunately, after a three-month pause, he was able to resume omalizumab treatment with prompt resolution of his hives.

Discussion

Diagnosing solar urticaria is complicated due to its rarity and diverse clinical presentations. Accurate differentiation from other photosensitivity disorders, like polymorphic light eruption and chronic actinic dermatitis, is pivotal. In cases where traditional antihistamines fall short, it is imperative to explore alternative therapies.³

The utility of omalizumab, commonly employed for allergic asthma and chronic spontaneous urticaria, is illuminated by this case. The efficacy in managing solar urticaria, a condition with limited treatment options, underscores its importance. By addressing the underlying IgE-mediated mechanism, omalizumab substantially improved the patient's symptoms and overall well-being.

In summary, solar urticaria poses a challenge to those affected, impacting their quality of life. This case demonstrates the importance of a comprehensive diagnostic assessment and consideration of innovative therapies, like omalizumab, for refractory cases. This provides insights into a promising treatment with potential to bring relief to patients grappling with this complex condition.

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