



## Editorials

## The many faces of eczema and its treatments



Atopic dermatitis (AD), contact dermatitis, and irritant dermatitis share many similarities, and are often tied together in a Gordian knot of etiopathogenesis and therapeutic considerations. The pruritus, eczematous morphology, and waxing-waning presentations can be clinically indistinguishable, and as more of the scientific underpinnings are elucidated, connections in their complex pathophysiology continue to be found.<sup>1,2</sup> Differentiating between these entities, especially when more than 1 may be present simultaneously, can be a daunting task. Further complicating this, the primary genetic barrier dysfunction as seen in AD likely facilitates allergic sensitization through the skin, whereas exposure to irritants—even in those with an initially normal skin barrier—can do the same.<sup>3</sup> The resulting vicious cycles can snowball into substantial morbidity for patients and a diagnostic and therapeutic conundrum for practitioners.

Identifying contact allergens and irritants is thus of paramount importance, but it remains somewhat complex and nuanced, requiring specialized patch testing, thorough education, and lifestyle changes for those affected, as Drs. Fonacier and Noor<sup>4</sup> thoughtfully describe in this issue. Although more patch testing is probably warranted, it is hampered by cost, inconvenience, and inaccessibility for many patients. Moreover, even if the allergens can be identified, they can be extremely difficult to avoid. As Dr. Pacheco<sup>5</sup> describes in this issue, contact dermatitis stands as the quintessential occupational dermatosis, with estimated annual costs of evaluation and treatment in excess of \$1 billion US.<sup>5</sup> In this article, several patient cases are described that beautifully illustrate the challenges of identifying and avoiding allergens in an occupational setting, especially when exposure to an offending agent is required by a particular job.<sup>5</sup>

Irritant dermatitis and contact dermatitis can both complicate and exacerbate underlying AD, and sometimes the very treatments that are prescribed can backfire: Drs. Brar and Leung<sup>6</sup> address the important problem of corticosteroid allergy and allergy to excipients of other topical products used to treat the skin. Simultaneously helping and hurting, contact allergy to treatments is probably often overlooked, and it may be the root cause of severe, refractory dermatitis in some patients. Most troubling, although perhaps not surprising, the most important risk factors for developing contact allergy to corticosteroids appear to be chronic

inflammatory dermatoses, long disease duration, and intermittent topical corticosteroid use—risk factors that precisely describe almost all patients with AD.<sup>7</sup>

The tremendous burden of disease from these 3 dermatitides warrants better understanding of their pathogenesis and treatment. A recent review by Brunner et al<sup>2</sup> nicely synthesizes several disparate but deeply interconnected areas involved, including the immunology, the microbiota, and the skin barrier interactions, as well as reaffirming that AD is a systemic disease, not simply limited to the skin. This is borne out with the finding that patients colonized with *Staphylococcus aureus* have more severe AD, greater type 2 immune deviation, increased allergen sensitization, more pronounced barrier disruption, and greater systemic immune activation than those without.<sup>8</sup>

This multifaceted understanding is in turn leading to better and more targeted therapies. Boguniewicz et al<sup>9</sup> have recently updated and streamlined the therapeutic approach to this complicated condition, in light of new discoveries and new treatment options. They nicely review an approach that encompasses good basic skin care with moisturization and gentle cleansing, avoidance of triggers, and acute therapy with topical corticosteroids, but they also describe maintenance therapy to help prevent flares. Uniquely, they include a “yardstick” diagram that has definitive options for stepping up therapy in those who are not responding that is of immense practical value to clinicians.<sup>9</sup> This clarity is a testament to improved understanding and a refined approach that intimates precision medicine. With hope, the immense leaps in understanding these diseases will lead to the ability to better categorize subtypes and delineate targeted therapies that will offer safe and effective relief to the millions of sufferers.

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**Disclosures:** Dr. Lio has served as a consultant and speaker for Regeneron and Sanofi Genzyme, Pfizer, and Pierre Fabre. He has been an advisor for Johnson and Johnson, Galderma, La Roche Posay/L'Oreal, Abbvie, and LEO Pharmaceuticals. He has been an investigator for AO Biome, and has received unrestricted grant funding from the Atopic Dermatitis Foundation.

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