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Case Letter

Allergic contact dermatitis masquerading as atopic dermatitis

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Dear Editor,

A 50-year-old female patient presented to the clinic for a recent flare in her lifelong atopic dermatitis. As a child, she had been affected primarily on the hands, causing painful erosions and occasionally bleeding. Topical corticosteroids provided only minimal relief. When she was around 40 years of age, the affected area spread to include her legs, causing severe pruritus and erosions. Oral antihistamines, oral prednisone, intramuscular triamcinolone, and omalizumab injections failed to provide sustained improvement. When she was around 50 years old, the dermatitis began to affect her face, resulting in bright erythema and edema of the entire face, leading to visits to the emergency department (Fig. 1).

Biopsy results revealed spongiotic dermatitis with eosinophils with mucin and spongiosis of several hair follicles. Clearance of facial and leg dermatitis was achieved with a 2-week oral prednisone taper starting at 40 mg and topical desoximetasone ointment. Patch testing to the North American Contact Dermatitis Group standard series (Allergeaze: SmartPractice, Calgary, Alberta, Canada; and Chemotechnique Diagnostics, Vellinge, Sweden) and External Agents and Emulsifiers (Allergeaze) revealed 2+ reactions to balsam of peru, methylchloroisothiazolinone/methylisothiazolinone, iodopropynyl butyl carbamate, propolis, and glutaraldehyde. Each of these allergens was relevant to her current personal care product usage. After 2 months of allergen avoidance, the patient exhibited dramatic improvement, with complete clearance of the dermatitis on the face and legs. Three years later, her face remains clear, and she does not use any topical treatments on her face or body.

A diagnosis of allergic contact dermatitis (ACD) may be missed or delayed by several months or years owing to a lack of appropriate clinical suspicion. Individuals diagnosed with atopic dermatitis (AD) during childhood may be at particular risk for delayed ACD diagnosis owing to the overlapping clinical manifestations of ACD and AD (Owen et al., 2018). However, individuals with AD may be more vulnerable to sensitization and the development of ACD compared with the general population (Chen et al., 2016).

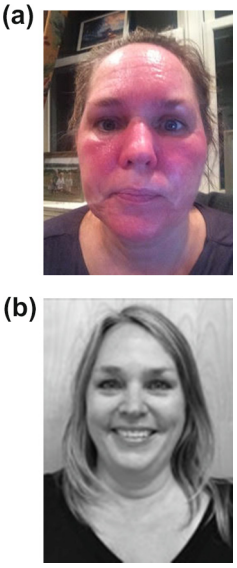

Fig. 1. (A) Patient before patch testing. (B) The same patient after patch testing and avoidance of allergens.

Underlying ACD should be considered in individuals with AD who demonstrate insufficient improvement despite escalation of management. Patients often end up labelled as having "recalcitrant" or "treatment-resistant" AD. Although AD and ACD can appear similar clinically, certain key factors strongly suggest ACD, such as a well-demarcated distribution in contact with exogenous substances, atypical distribution for AD, treatment-resistant occupational hand eczema, adolescent- or adult-onset AD, and severe or widespread dermatitis (Chen et al., 2016). In such cases, patch testing is an essential component of diagnostic testing (Rastogi et al., 2018).

In individuals with comorbid AD and ACD, allergens in the emulsifiers/surfactants and fragrance categories have been major contributors to sensitization (Raffi et al., 2019). Importantly, even if a patient has used the same product for years prior to developing a flare, the product may still trigger adult-onset ACD. Patch testing

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individuals with features suggestive of ACD may reveal a more nuanced picture.

Conflict of Interest

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Study Approval

The author(s) confirm that any aspect of the work covered in this manuscript that has involved human patients has been conducted with the ethical approval of all relevant bodies.

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