

# Foresee Your Next Patient

## Lettuce Allergy and Hand Eczema

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A patient in his 30s was referred to a dermatology practice for patch testing due to recalcitrant hand dermatitis. The rash had been present for approximately 5 years. It had begun on his hands and wrists. The patient described red itchy patches along with intensely itchy blisters on his palms and the sides of his fingers. The rash had at times involved the palms, the dorsal hands, the dorsal fingers, and the forearms.

The patient's occupation was that of a kitchen manager. Although he used vinyl gloves, he had contact with foods including vegetables, flour, and cheese, as well as cleaners and work equipment. He reported a history of childhood eczema and reported a known allergy to certain types of lettuce. He first realized this at age 18 and described flares of hand eczema after touching or eating lettuce.

On physical examination, he had red scaling patches on his dorsal fingers, with deep vesicles and scaling on his palms (**Figure 1**).

He underwent patch testing to the North American Contact Dermatitis Group series of allergens, along with a series of preservative allergens and plant allergens. Patch testing revealed 3+ reactions to sesquiterpene lactone mix and Compositae mix (**Figure 2**), along with reactions to several fragrance allergens and a rubber chemical.

The patient was treated with potent topical corticosteroids, was advised on the use of skin care products that do not contain



Deep vesicles and scaling on the patient's palms.



Patch testing revealed 3+ reactions to sesquiterpene lactone mix and Compositae mix.

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fragrance additives or botanicals related to these allergens, and was educated on avoidance measures.

**Discussion.** This patient was diagnosed with hand dermatitis due to both irritant contact dermatitis and allergic contact dermatitis. Individuals working in the food service industry are at increased risk for both of these conditions.

Contact dermatitis includes 2 major types: irritant contact dermatitis and allergic contact dermatitis. Food service workers are at risk for both types, and hand dermatitis in this occupation is often multifactorial. This is due to irritation from frequent wet work along with frequent exposure to multiple allergens. Regular prolonged exposure of the hands to wet conditions has been demonstrated to produce a significant increase in transepidermal water loss, indicating impaired skin barrier function.<sup>1</sup> In the case of food service workers, individuals frequently work with aqueous materials and may experience prolonged and frequent exposure to water and other liquids that over time can damage the stratum corneum. The frequency and duration of exposure to these liquids determine the severity of the resulting irritant dermatitis.

Even though many in this industry wear personal protective equipment such as gloves, this is often not enough to protect against the damaging effects of wet work. Water and moisture may become trapped underneath the gloves and by occlusion may cause even more harm. In addition, not all gloves are protective against all allergens.

Persons who are allergic to sesquiterpene lactones must use caution with exposure to certain plants and foods. Sesquiterpene lactones are compounds that are naturally found in the plant family Asteraceae (previously known as Compositae).<sup>2</sup> This plant family is also known as the daisy family or sunflower family, and it encompasses many common plants, including chrysanthemums, dandelions, ragweed, and many others. The plant family also includes many food plants, including lettuce, endive, artichoke, chamomile, and others.

Our patient had a history of lettuce allergy, corresponding to his allergy to compounds in the Compositae family. Lettuce is cultivated worldwide and encompasses numerous varieties. In one clinic, a subset of patients who were allergic to Compositae were patch tested specifically for lettuce.<sup>2</sup> Of the 325 patients in the study who were sensitive to Compositae allergens, 77 underwent patch testing specifically for lettuce, and 37 of these patients reacted to lettuce. Of the 37 patients reacting to lettuce, 5 were felt to be occupationally sensitized. These patients worked as a chef, a kitchen assistant, or a café manager, and all had hand involvement.<sup>2</sup>

The first case of lettuce contact allergy was reported in 1932, in a salad maker.<sup>3</sup> Since then, cases have been described in food handlers, gardeners, supermarket managers, and kitchen managers.<sup>4</sup>

While patients allergic to Compositae allergens typically will react to topical exposure, systemic contact dermatitis from ingestion of related foods is well-known and may occur from foods and beverages such as herbal tea. This has also been reported after eating lettuce.<sup>5</sup>

Although lettuce allergy is not common, it may contribute to hand eczema in those who are allergic to sesquiterpene lactones and who are occupationally exposed. ■

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