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LETTER TO THE EDITOR

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Beyond the Usual Suspects: Single-Center Hypersensitivity Reactions to Purslane, Lettuce, and Thyme

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Dear Editor,

Food-induced hypersensitivity reactions are a significant clinical concern, ranging from mild oral symptoms to life-threatening anaphylaxis (1-3). While classical allergens such as nuts, shellfish, and milk are well-recognized triggers, reactions to less commonly consumed or culturally specific foods have also been described (3-6). However, these atypical allergens may go unrecognized in routine clinical practice, particularly when standard allergy panels yield negative results.

Purslane species, lettuce, and thyme are widely consumed plant-based foods in certain regions but are not typically included in standard allergen panels. Hypersensitivity reactions to these foods are rarely reported and may therefore be underdiagnosed due to their unexpected nature (6-8). Moreover, when reactions do occur, they may be mistakenly attributed to other co-ingested foods or overlooked altogether.

Here, we present three adult patients who developed immediate-type hypersensitivity reactions, including urticaria and anaphylaxis, triggered by ingestion of these uncommon food items. The suspected triggers were evaluated using prick-to-prick testing with fresh, raw food samples, with histamine and saline used as positive and negative controls, respectively; a wheal diameter ≥3 mm above the negative control at 15–20 minutes was considered positive. Oral food challenge was not performed because of patient refusal and the potential risk of severe systemic reactions.

This retrospective evaluation was approved by the Local Ethics Committee (Approval No: 591, Date: 25/7/2025) and was conducted in accordance with the principles of the Declaration of Helsinki. Clinical data were analyzed anonymously.

This letter aims to emphasize the importance of obtaining a detailed dietary history and performing targeted testing in patients with otherwise unexplained allergic reactions.

Case 1: Urticaria and Respiratory Symptoms After Purslane Consumption

An 18-year-old previously healthy woman presented with generalized erythema, pruritus, perineal swelling, and shortness of breath soon after an evening meal containing salad, rice, and meat. She reported a similar but milder reaction two years earlier following consumption of purslane salad, consisting of localized swelling and urticaria without systemic involvement.

She was treated in the emergency department with antihistamines and corticosteroids, with complete resolution of symptoms, and was subsequently referred to our outpatient clinic for evaluation. Laboratory findings revealed a total IgE level of 51 IU/mL and a baseline tryptase level of 1.47 μg/L; routine hematologic and biochemical parameters were within normal limits. Specific IgE to rice was negative. Prick-to-prick testing with fresh purslane was positive, supporting purslane as the likely trigger. Oral

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food challenge was not performed because the patient declined testing.

Case 2: Immediate Hypersensitivity Reaction Associated with Lettuce

A 30-year-old woman presented with a one-month history of pruritus and urticarial eruptions occurring only after consumption of meals containing lettuce. She described oral tingling and mild swelling immediately after ingestion, followed by generalized pruritus and wheals. No systemic manifestations such as respiratory distress, gastrointestinal symptoms, or syncope were reported. She denied recent medication use. Physical examination was unremarkable.

Laboratory investigations, including complete blood count and biochemical analysis, were within normal limits, with a total IgE level of 126 IU/mL. Prick-to-prick testing with fresh lettuce was positive, supporting lettuce as the likely trigger.

Aeroallergen sensitization could not be evaluated because aeroallergen skin testing was not available at the time of assessment. The patient remained symptom-free after elimination of lettuce from her diet.

Case 3: Recurrent Urticaria Exacerbated by Thyme

A 35-year-old woman had a 14-month history of recurrent urticaria, occasionally accompanied by facial and lip swelling. She reported that symptoms consistently worsened after consumption of meals containing thyme, whereas she remained asymptomatic when thyme was not included in the diet. She also described mild pruritus without wheals after eating nuts, without reproducible urticarial reactions. No history of hypotension, respiratory, or gastrointestinal symptoms was noted.

Laboratory evaluation was unremarkable, with a total IgE level of 147 IU/mL. Specific IgE testing was not available at our institution at the time of assessment. Skin prick testing showed sensitization to peanut and cocoa; however, the patient reported regular consumption of these foods without symptoms, suggesting a lack of clinical relevance. Prick-to-prick testing with thyme was positive.

Following elimination of thyme from her diet, a marked reduction in urticaria episodes was observed, suggesting thyme as the most likely trigger.

Food hypersensitivity reactions most commonly involve well-known allergens such as nuts, milk, shellfish, and wheat. However, reactions to less commonly consumed or culturally specific plant-derived foods remain underrecognized and may be overlooked in routine clinical evaluation. Our observations suggest that foods such as purslane, lettuce, and thyme may also act as clinically relevant triggers, even in individuals without known atopy or identifiable co-factors.

Previous reports describing hypersensitivity to these foods are limited and largely consist of isolated case descriptions. Lettuce-associated reactions have occasionally been reported in the context of pollen-food syndrome or urticaria (9), while thyme has more often been linked to occupational respiratory or contact reactions rather than ingestion-related allergy (10). Reports of purslane-induced anaphylaxis are exceedingly rare; available studies include both diagnostically confirmed cases and those based primarily on clinical history. In one study from Sri Lanka, three adults developed anaphylaxis following ingestion of cooked purslane leaves, with the diagnosis confirmed by skin prick testing and immunoblot analyses, which also identified a heat-stable allergen of approximately 97 kDa (7). In contrast, a larger cohort study from the same region reported anaphylaxis in a single patient after purslane ingestion, but the diagnosis in that case was based primarily on clinical history, without confirmatory laboratory testing (11). Collectively, these findings highlight that although purslane-induced anaphylaxis is extremely uncommon, it can cause severe systemic reactions, with some supported by laboratory confirmation and others relying only on patient-reported history.

Reactions to plant-derived foods have been attributed in some reports to cross-reactive allergenic proteins, such as profilins or lipid transfer proteins, which may lead to sensitization across botanically unrelated foods (3).

Prick-to-prick testing with fresh foods proved useful in identifying suspected triggers when commercial extracts were unavailable or routine panels were negative. These cases underscore the importance of careful dietary history and individualized testing in patients presenting with otherwise unexplained urticaria or immediate-type reactions.

This report has several limitations, including the absence of oral food challenge and component-resolved diagnostic testing. Nevertheless, the reproducible clinical

histories, supportive skin testing, and improvement after dietary elimination strengthen the suspected associations.

In conclusion, clinicians should be aware of uncommon dietary triggers, particularly in patients with negative standard allergy evaluations. Targeted prick-to-prick testing with fresh foods may assist in diagnosis and guide effective avoidance strategies.

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Conflict of Interest

The authors have no conflicts of interest to declare.

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