

LETTER TO THE EDITOR

Mucosal contact urticaria to sesame seeds

Editor

Allergic reactions to sesame (*Sesamum indicum*) are increasing, particularly in countries where sesame is frequently consumed as part of a cultural practice.¹ Recently, food products containing sesame have extensively increased in the market.^{1,2} As masked or visible allergens, both sesame oil and sesame seeds might cause clinically significant hypersensitivity reactions.¹⁻³

The corresponding author (EE) ingested sesame-coated sticks as part of a five o'clock tea. She suffered from intense swelling of the oral mucosa within 15 min. This was a new onset reaction, as she normally consumed sesame containing foods without any problem beforehand earlier. Personal medical history was unremarkable, except for Graves' disease.

Dermatological examination revealed oedema, erythema and blood-tinged vesicles involving both sides of the buccal mucosa, hard palate and tongue (Fig. 1).

Histopathological examination of a punch biopsy specimen displayed intercellular oedema and massive spongiosis with formation of intraepithelial vesicles (Fig. 2). The lumen of each vesicle enclosed neutrophils, eosinophils, erythrocytes and serum (Fig. 2 inset). Similar cell types dominated the interstitium and perivascular areas in subepithelial tissue.

The reaction faded within 6 h with an oral anti-histaminic and a topical corticosteroid cream. A skin prick-by-prick test with



Figure 1 Raw erythema, oedema and vesiculation of buccal mucosa 15 min after ingestion of sesame sticks. Note remnant sesame seeds on molar teeth.

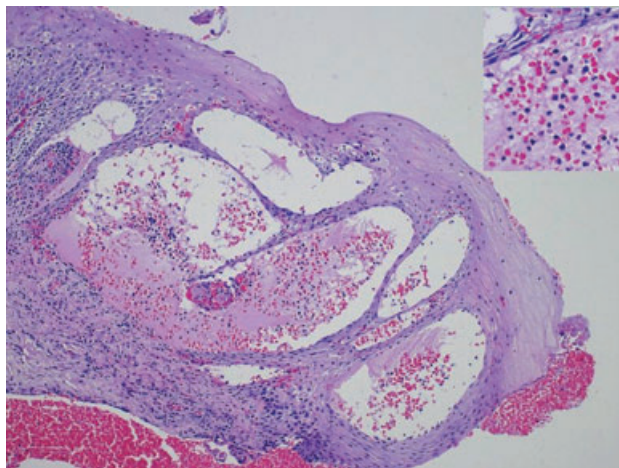


Figure 2 Spongiosis and intense vesiculation of mucosal epithelium (H&E ×100). Inset: Vesicles enfolded neutrophils, eosinophils, erythrocytes and serum (H&E ×400).

sesame seeds yielded positive with a wheal area of 5 mm. An oral provocation test 1 month later resulted in resurgence of similar symptoms and signs. Currently, she is avoiding sesame seeds with no reactions so far.

The prevalence of sesame allergy had rise in the past three decades, owing to ubiquitous use of oil-rich sesame seeds in traditional cooked food, fast-food and market products.¹ Among these are bread, buns, cakes, pastries, bakery products, biscuits, crackers, cereals, muesli bars, dips, salad dressings, tahini, hummus and halvah.¹⁻³ Sesame may also be a constituent in oriental, vegetarian or exotic foods in the Middle East.^{1,3} Sesame oil is a vegetable oil integrated into consumer foods, medical products, pharmaceuticals and cosmetics.¹

Despite the ascending prevalence, there is a paucity of reports on sesame allergy, which supply an arbitrary estimate of prevalence ranging from 0% to 0.79% and those that describe predominant affliction of infants and young children.^{1,4-6} Affliction of adults, as illustrated in this report, has been rarely documented.^{1,7} Both IgE-mediated and non-IgE-mediated reactions have been observed with sesame; the former is more common.^{1,2} Sensitization may take place via both oral and cutaneous routes.⁷ High skin sensitization to sesame within the population contradicts with rarely witnessed allergic reactions.⁸ Sesame allergy may coexist, cross-react and follow a similar course with peanut allergy.^{1,5} Severe and recurrent reactions are expected in an ill-fated patient with sesame allergy.^{1,4,5} An atopic background is noted in most affected patients.^{1,2} The spectrum of clinical findings may comprise contact

urticaria, generalized urticaria, angioedema, food allergy and anaphylaxis.^{1,2,7} A double blind placebo-controlled oral challenge test is considered as the gold standard for diagnosis.¹ Even though investigator's blindness could not be achieved in our case, positivity of skin prick test along with abrupt onset of mucosal signs after oral sesame provocation confirmed the diagnosis.

Contact urticaria refers to wealing, erythema, and pruritus within minutes after cutaneous or mucosal contact with rapidly absorbable agents and clearing completely within 24 h.^{9,10} This reaction may be immunological or non-immunological in origin.¹⁰ Allergic contact urticaria can be verified by demonstration of specific IgE's by serological assays *in vitro* or by eliciting positive responses with skin prick testing *in vivo*.⁹ We were obliged to perform a prick-by-prick test with raw sesame seeds because neither a commercial standardized sesame extract, nor a sesame-specific IgE test was available in our allergy clinic. Nevertheless, elicitation of a positive skin prick-by-prick test proved the reaction to have an immunological basis.

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