

# Allergic contact stomatitis caused by propolis throat candies

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With the widespread use of propolis-containing products, propolis has been found to cause allergic contact stomatitis, although it is not commonly reported in the literature. We report a typical case of allergic contact stomatitis caused by propolis-containing throat candies.

## CASE REPORT

A 41-year-old man presented at our department with pain in his oral mucosa that he had been experiencing for 1 week. The history revealed use of propolis throat candies before the onset of the symptoms. He did not recall any history of allergy.

Intraoral examination revealed extensive erythema and multiple pin-point sized erosions with edema on the buccal mucosa, the dorsum of the tongue, and the palate (Figure 1). Laboratory investigations showed slight eosinophilia of  $0.62 \times 10^9/L$  (normal:  $0.02 \sim 0.52 \times 10^9/L$ ). An initial diagnosis of contact stomatitis was made based on the history, clinical manifestations, and laboratory tests.

Thereafter, the patient was referred to the dermatology department for patch testing. This was performed with the Chinese baseline series (Chemotechnique Diagnostics, Vellinge, Sweden) by application on the upper back, using IQ Ultra chambers (Chemotechnique Diagnostics). After 2 days of exposure, readings were performed on day (D) 2 and D3, according to ICDRG guidelines. The patient showed a strong (++) positive reaction to propolis 10% pet. Therefore, the definite diagnosis of allergic contact stomatitis to propolis throat candies was established. Within one week the patient's signs and symptoms

resolved completely, after cessation of propolis candies and treatment with a topical mouth rinse.

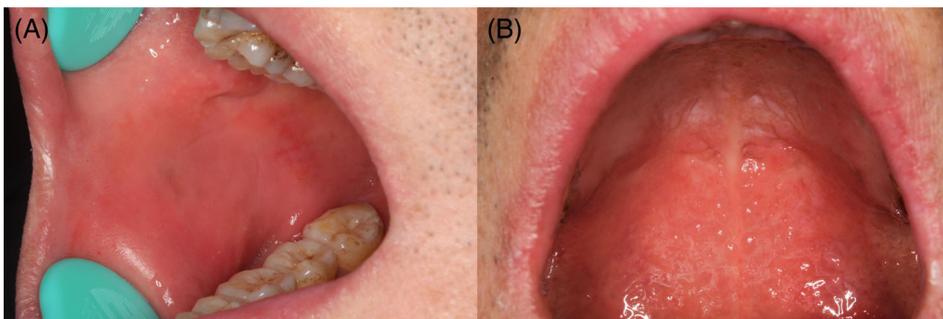
## DISCUSSION

Allergic contact stomatitis is caused by a hypersensitive immune response mediated by antigen-specific T cells. Clinically, it usually appears with erythema, edema, blisters, and erosion of the oral mucosa, accompanied by pain and/or a burning sensation in the mouth. Differential diagnoses include several diseases, such as oral leukoplakia, herpetic stomatitis, erythematous candidosis, and autoimmune bullous diseases. Allergic contact stomatitis has no specific clinical or histopathological features, hence the diagnosis is usually assumed and can be confirmed only by the resolution of symptoms after the suspected sensitizer has been removed.<sup>1,2</sup> In this case, propolis throat candies.

Propolis is a resin substance extracted from honeycombs; its main allergens are 3-methyl-2-butenyl caffeate and phenylethyl caffeate. It is widely used in cosmetics, creams, lipsticks, toothpaste, varnishes, eye drops, mouthwashes, and chewing gum.<sup>3,4</sup> Clinicians should carefully take the history of a patient with suspected allergic contact stomatitis and consider the possibility of propolis as an allergen.

## ACKNOWLEDGEMENTS

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**FIGURE 1** Extensive erythema and edema with multiple erosions on (A) right buccal mucosa and (B) palate

**CONFLICT OF INTEREST**

The authors declare no conflicts of interest.

**AUTHOR CONTRIBUTIONS**

**Wenqing Zhang:** Writing-original draft. **Zhimin Yan:** Writing-review and editing.

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