

Delayed contact sensitivity on the lips and oral mucosa due to propolis-case report

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ABSTRACT

We report a rare case of a patient who was referred to the Department of Oral medicine in Zagreb, Croatia. The patient was 20 years old, otherwise healthy and not taking any medication. She presented with irregular erosions partially covered with pseudomembranes that involved both lips and retrocomissural mucosa. Discrete erosion was also noticed on her lower lingual gingiva in the area 42. She reported a propolis solution self-medication for treatment of recurrent aphthous ulcers. After ten days of propolis application, lip and oral lesions developed. Patch test to propolis was proven. We highlight the fact that some folk medicine medications, such as propolis, although being known for many decades to be helpful in various conditions, in some individuals might lead to unwanted side-effects due to its antigenic potential. Additionally, every colleague, during the differential diagnosis of the oral lesions must bear in mind unwanted reactions to folk medicine products.

Key words: Oral reaction, propolis.

INTRODUCTION

Propolis is a resinous product collected by honeybees and used in the construction of their nests. It has been used as a folk-medicine for more than 2000 years and has been reported to exert a broad spectrum of biological functions including anti-inflammatory, antibiotic, antioxidant, antifungal and anticancer (1). Chemical composition of propolis depends on vegetation at the site of collection but the main constituents are terpenoids, steroids, flavonoids, phenolic acids and their esters. However, it is also known as the potential allergen. Up to now, more than 180 propolis compounds have been identified and the most powerful sensitizers known are esters of the caffeic acid (phenylethyl caffeate and methylbutenyl caffeate). Additionally, other constituents like free aromatic acids, isoferulates and flavonoids may play a role in propolis allergy (2, 3). Propolis allergy has been well documented throughout the literature and its

frequency varies between 1.2 % as reported by Woehrl et al (4) up to 6.55% as reported by Rieder et al (5). Giusti et al (6) reported that 5.9% of patch tested children showed positive allergic reaction to propolis.

We report an interesting case of delayed contact sensitivity developing on the lips and on the oral mucosa as a result of topical propolis use for the treatment of recurrent aphthous ulceration.

CASE REPORT

A female patient 20 years old was referred to our Department because of the lesions that were present on her lips and oral mucosa for one week. Clinical examination revealed irregular erosions partially covered with pseudomembranes that involved both lips and retrocomissural mucosa (Figure 1 and 2). Discrete erosion was also noticed on her lower lingual gingiva in the area 42. The eruption of lesions was

not accompanied by any systemic symptoms and none of the other parts of the body were involved. Detailed medical history showed no systemic disease and medication intake, except that the patient occasionally suffers from recurrent aphthous ulceration. However, this time she reported self-prescribed topical use of propolis solution for the treatment of recurrent aphthous ulceration three weeks ago. Eruption of the lesions started 10 days after she began to use propolis solution. At our Department, the patient was advised to cease propolis use and was prescribed 0.05% bethamethasone dipropionate in orabase three times a day for the next 14 days. At the review, no lesions could be seen and we performed a patch test with the propolis solution that patient used. The propolis solution was mixed with orabase (Stomadhesive®, ConvaTec Ltd) in its full concentration (first patch) as well as diluted solution (50% of propolis solution, second patch) which were then applied on patient's forearm for the next 48 hours. Furthermore, pure orabase mixed with 0.9% saline (third patch) and patch itself (fourth patch) were also applied to patient's forearm in order to avoid possible misinterpretations of the test results that might have arisen due to orabase or patch glue allergy. After the patches were removed, a strong positive reaction beneath patch with propolis in full concentration was noticed. Other tested areas were all negative, and the diagnosis of delayed contact sensitivity was established.



Fig. 1. Irregular erosions on the upper lip.



Fig. 2. Irregular erosions on the lower lip.

DISCUSSION

Due to its therapeutic benefits propolis is very popular remedy in the folk medicine for the treatment of various oral conditions. Kiderman et al (7) reported beneficiary effect of the propolis treatment in an infant with eosinophilic ulcers. Recently, Feres et al (8) found in vitro that propolis has significant antimicrobial properties in the saliva of patients with periodontal disease. On the other hand, there are few reports its antigenicity on the oral mucosa. Fernandez et al (9) reported two cases of allergic stomatitis accompanied with labial oedema, dysphonia and dyspnoea after topical use of propolis solution and lozenges. Pasolini et al (10) described a patient who developed contact cheilitis due to intake of propolis enriched honey. Hay and Greig (11) reported a case of oral mucositis with ulceration in a patient who used propolis lozenges every day after dinner. This case report emphasizes antigenic potential of propolis and suggests that it should be used carefully as topical agent in the treatment of oral diseases. Also, it highlights the fact that propolis delayed contact sensitivity should be taken into account in the differential diagnosis of the oral lesions.

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