

CONTACT POINT

Eugenol allergy mimicking recurrent aphthous stomatitis and burning mouth syndrome

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KEYWORDS: aphthous stomatitis, burning mouth syndrome, Eugenol**CASE REPORT**

A 77-year-old woman, nonsmoker, was referred to our contact dermatitis clinic in October 2018 for recurrent oral aphthous stomatitis, associated with burning sensation of the mouth, of 10 months' duration. The patient related the clinical lesions to a dental procedure (dental prosthesis) 3 weeks before onset. The patient did not report a personal or family medical history of interest.

Physical examination showed erythematous macules with diffuse borders, pink background, located in labial and gingival mucosa (Figure 1). Laboratory tests ruled out possible causes of oral aphthous lesions such as iron, folic acid, zinc, and vitamin B1, B2, B6, and B12 deficiency; infections comprising syphilis and HIV; and systemic diseases, such as systemic lupus erythematosus, Behçet disease, or Crohn disease. Histopathological examination showed a lymphocytic inflammatory infiltrate associated with dermal edema and spongiosis. Patch tests with the TRUE Test (Mekos, Hillerød, Denmark) showed positive reactions to *p*-tert-butylphenol formaldehyde resin (PTBPFR) +++ / +++. The Chemotechnique Diagnostics dental series (Vellinge, Sweden) showed positive results for eugenol +++ / +++ according to the criteria of the International Contact Dermatitis Research Group. Allergic contact stomatitis to eugenol contained in the cement used (Temp-Bond) as fixative of the dental prosthesis (Figure S1) was diagnosed. No clinical relevance of the positive reaction to PTBPFR was found. The patient was referred to the dentist. The cement was replaced with Temp-Bond NE (eugenol free). Follow-up at 6 months showed a complete resolution of the lesions, as well as the disappearance of the burning sensation in the mouth.

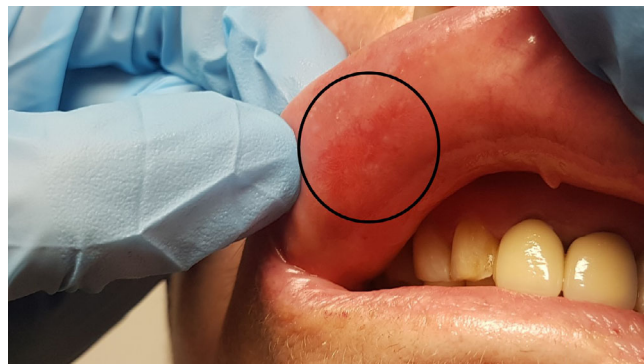


FIGURE 1 Macular erythematous in labial mucosa of cicatricial aspect after oral aphthae resolution

DISCUSSION

Eugenol is used in cosmetics, food, and restorative dental materials. It is a phenolic compound extracted from cloves and cinnamon. In the field of dentistry, eugenol is also used as an anesthetic and antiseptic agent.¹ Eugenol can be an irritant and is a sensitizer. Allergic contact dermatitis to eugenol mainly occurs as hand eczema in dentists or dental assistants.² Few cases of sensitization to eugenol manifesting as allergic contact gingivitis³ or burning mouth syndrome⁴ have been reported.

Temp-Bond Original (KerrHawe, Bioggio, Switzerland) is a zinc oxide-based cement that is auto-polymerizable with eugenol for fixing temporary crowns and bridges or splints, and for testing permanent cement restorations. Temp-Bond NE (KerrHawe, Bioggio, Switzerland) is a temporary cement of zinc oxide without eugenol and is an alternative for patients allergic to eugenol, like our patient. To conclude, we present the first case of recurrent aphthous stomatitis secondary to eugenol allergy. Given that sensitization to eugenol is more frequent

in workers in the field of dentistry, we recommend patch testing in these patients before performing dental procedures involving zinc oxide/eugenol cement, or direct use of the eugenol-free cements, like our patient eventually needed.

CONFLICT OF INTEREST

None to declare.

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REFERENCES

1. Marchese A, Barbieri R, Coppo E, et al. Antimicrobial activity of eugenol and essential oils containing eugenol: a mechanistic viewpoint. *Crit Rev Microbiol*. 2017;43:668-689.
2. Kanerva L, Estlander T, Jolanki R. Dental nurse's occupational allergic contact dermatitis from eugenol used as a restorative dental material with polymethylmetacrylate. *Contact Dermatitis*. 1998;38:339-340.
3. Silvestre JF, Albares M, Blanes M, Pascual JC, Pastor N. Allergic contact gingivitis due to eugenol present in a restorative dental material. *Contact Dermatitis*. 2005;52:341.
4. Bui TNPT, Mose KF, Anersen F. Eugenol allergy mimicking burning mouth syndrome. *Contact Dermatitis*. 2016;80:54-55.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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