

Allergic contact stomatitis caused by camphorquinone in a light cure periodontal dressing

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Periodontal dressings are utilized to protect the surgical site, prevent tooth hypersensitivity, and enhance patient comfort. Besides the obvious benefits, a wide range of

complications, such as erythema, oedema, and allergic reactions, have been reported to be caused by various agents incorporated in periodontal dressings (1). We report a patient who underwent gingival augmentation with connective tissue from the palate; the palatal wound was then protected with Barricaid™ periodontal dressing, and the patient subsequently developed allergic contact stomatitis.

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Conflicts of interest: None declared.



Fig. 1. Lesion 72 h after application of Barricaid™ periodontal dressing.

Case Report

The 30-year-old patient developed pruritus and erythema on the left side of the hard palate in the maxillary first molar tooth 24 h after application of visible light cure periodontal dressing containing urethane dimethacrylate, camphorquinone, and butylated hydroxytoluene (BHT) after a connective tissue graft had been taken from the same site for augmentation of the gingiva in the mandibular anterior region. After 72 h, the lesion started to extend towards the maxillary second premolar and maxillary second molar (Fig. 1). Subsequently, the Barricaid™ periodontal dressing was removed. The patient's previous history showed an oral mucosal reaction to a light cure dental restorative material on one of his teeth that had been applied 1 year ago.

Dermatologists (see Acknowledgements) performed a prick test on the patient's forearm with urethane dimethacrylate, BHT and camphorquinone (Merck, Darmstadt, Germany) in 0.9% saline as vehicle with 0.1% histamine as a positive control and saline as a negative control. A standardized reading (2) after 15 min showed no positive reaction. Patch testing was also conducted, by the use of 8-mm Finn Chambers® (SmartPractice, Phoenix, AZ, USA) on Scanpor® tape (Norgesplaster, Vennesla, Norway), with urethane dimethacrylate (2% pet.; CAS no. 72869-86-4), BHT (2% pet.; CAS no. 128-37-0) and camphorquinone (1% pet.; CAS no. 10373-78-1 for racemic mixture) from Chemotechnique Diagnostics, Vellinge, Sweden. The patch was applied to the patient's upper back and occluded for 2 days. Readings were performed on day (D) 2, D3, and D7, according to European Contact Dermatitis Research Group criteria (3, 4). The readings showed extreme positive reactions (3+) to camphorquinone on D2 and D3, a 1+ reaction on D7, and no reactions to urethane dimethacrylate and BHT. Follow-up 1 year later showed a healthy palatal mucosa. As an alternative to above dressing, the Coe Pak Automix NDS (GC America, Alsip, IL, USA) eugenol-free and camphorquinone-free periodontal dressing could be utilized in the future for surgical purposes.

Discussion

Our case shows that a probable previous sensitization during dental restoration with, at the time, inconspicuous problems may later lead to severe reactions. Clinicians should be suitably trained to ensure appropriate patient screening.

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