Iatrogenic paraformaldehyde orofacial chemical burn

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DESCRIPTION

A 25-year-old man presented with a 3-day history of orofacial ulceration, soreness and inability to eat after treating his left maxillary permanent second molar from acute pulpitis. Searching his dental record revealed the use of paraformaldehyde pulpal devitalising paste to relieve his pain. He had only infiltration anaesthesia around his maxillary molar and no rubber dam was used during the dental procedure. His dentist admitted manipulation of the devitalising paste by his fingers while applying it to the pulpal cavity of the tooth. The patient appeared dehydrated with extraoral examination demonstrating superficial erosion with crusting about 1 cm in diameter mainly on the left distal third of his lower lip extending to vermilion border, and multiple smaller erosions on upper lip and left mental skin (figure 1). He had also mild left submandibular lymphadenitis. Intraoral examination was difficult due to linear oral ulceration in his mandibular buccal sulcus accompanied with mucosal erythema and soreness (figure 2).

Treatment of lesions initiated with oral antibiotic (amoxicillin 500 mg three times daily), Solcoseryl dental adhesive paste, 0.2% chlorhexidine gluconate mouthwash and ibuprofen 400 mg as needed. Encouragement of increase of oral fluids, soft diet and oral hygiene was advised. Lesions resolved within a week uneventfully.

Paraformaldehyde although it is widely used for devitalising inflamed dental pulp and disinfection

Figure 2 Intraoral view with linear oral ulceration in left mandibular mucobuccal sulcus.

of root canal system, it is a caustic substance which can induce gingival and maxillary bony necrosis. Proper precautions should be implemented when using such material in dental procedures.^{1 2}

Learning points

- ▶ Diagnosis of oral chemical burns is based mainly on history of caustic agent application and confirmed by clinical examination.
- ▶ Paraformaldehyde pulpal devitalising paste can cause serious mucosal and bony necrosis.
- ▶ Proper manipulation of paraformaldehyde pulpal devitalising paste and use of rubber dam is mandatory to prevent complications from contact with mucosa and skin.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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Figure 1 Extraoral view with multiple erosions on lips and mental skin.

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