

Emergency dentistry

Fake fangs fail

Sir, working in the A&E department on Halloween brings with it a myriad of unusual clinical presentations. Our maxillofacial team was referred a 55-year-old gentleman after his vampire costume failed, unable to remove his thermoplastic 'boil-and-bite'-type novelty teeth. A&E staff attempted removal of the fake fangs by recommending the patient hold warm water in his mouth. After unsuccessful attempts at pulling the teeth off, he was referred for management by the maxillofacial team.

With a foundation in dental materials and retention, we were able to recognise that the patient would not tolerate orally 80 °C water required to melt the ethylene-vinyl acetate and polycaprolactone material.¹ Furthermore, similar to the retentive forces of thermoplastic mouthguards, we theorised that the excessive retention was related to thermal shrinkage, engagement of undercuts and surface tension.^{2,3}

With these foundation dental sciences in mind, we pivoted open the labial and palatal aspects of the teeth with simultaneous flat plastics to help guide the material from engaging the embrasures and allow air to break the surface tension. The appliance was successfully removed using this



Fig. 1 Fitting surface of novelty teeth after removal



Fig. 2 Gingival lacerations sustained from novelty teeth

technique; however, the patient had sustained superficial gingival lacerations (Figures 1 and 2). Following supportive management with salt water mouth rinses, he had a complete recovery and discarded his novelty vampire teeth.

Although this seems like a unique Halloween clinical presentation, thermoplastic materials have a number of uses that may result in similarly unlucky situations. Other applications for thermoplastic oral appliances include mouthguards, whitening trays, mandibular advancement splints and custom scuba diving mouthpieces. An understanding of dental materials is useful when considering methods to remove the appliance.

B. Wilson, Dunedin, L. Hemm, Christchurch, New Zealand

References

1. Vunain E, Mishra A K, Krause R W. Ethylene-vinyl acetate (EVA)/polycaprolactone (PCL)-Fe3O4 composites. *J Therm Anal Calorim* 2013; doi: 10.1007/s10973-013-3004-8.
2. Takahashi M, Koide K. Variation in mouthguard thickness according to heating conditions during fabrication Part 2: sheet shape and effect of thermal shrinkage. *Dent Traumatol* 2016; **32**: 185–191.
3. Maeda Y, Yonehata Y, Satoh H. Mouthguard retention: Is design or accuracy of fit more critical? *Quintessence Int* 2009; **40**: 13–18.

<https://doi.org/10.1038/s41415-021-3342-z>

Oral surgery

Vertigo after tooth removal

Sir, a 26-year-old white woman presented with bilateral recurrent pericoronitis in relation to distoangularly impacted lower wisdom teeth. The patient underwent surgical removal of both of these teeth under local anaesthesia, with an interval of four weeks between each tooth. The surgical procedure lasted less than an hour in both sessions from start to finish. At a virtual consultation three days after the second procedure, to remove the lower left wisdom tooth, the patient complained of moderate pain, restricted mouth opening and, surprisingly, nausea. The patient related the symptoms of nausea to taking analgesia on an empty stomach. She was reassured and was advised to maintain good oral hygiene.

Subsequently, the patient then noted new-onset dizziness and worsening nausea, exacerbated with movement and imbalance. She denied any previous history of otological symptoms and

treatment nor any recent history of trauma. She was brought in to the emergency department and admitted for 24 hours, where she was monitored and administered prochlorperazine. Her balance improved and she was discharged with an oral course of antiemetics, which she discontinued due to spontaneous improvement.

Our literature review revealed only four publications which have reported vertigo after isolated dental extractions.^{1,2,3,4} Few other reports have noted post-operative vertigo in patients who have had maxillary surgery and dental implant placements.^{5,6} Some of the factors considered by these authors to be causative include prolonged surgical time, use of rotary tools, application of osteotomes/surgical mallets and presence of comorbidities. In the case described, a surgical drill was used to remove bone. Prolonged mouth opening during dental procedures is a well-known risk factor for temporomandibular disorders which can present with otological symptoms. Finally, we haven't ruled out the possibility of coincidence in presentation of these symptoms, although this does not explain or help the patient's debilitation. We found this case interesting and worth discussing to understand the pathophysiology of this odd relationship.

R. O'Rourke, N. Khan, H. Makar, S. Mumtaz, London, UK

References

1. D'Ascanio L, Salvinelli F, Martinelli M. Benign paroxysmal positional vertigo: an unusual complication of molar teeth extraction. *Br J Oral Maxillofac Surg* 2007; **45**: 176–177.
2. Yilmaz H B, Erdogan R B, Paksoy M, Sanli A. Sudden hearing loss and vertigo after tooth extraction successfully treated with combined therapy including HBO2: a case report. *Undersea Hyperb Med* 2015; **42**: 603–606.
3. Chiarella G, Leopardi G, De Fazio L, Chiarella R, Cassandro E. Benign paroxysmal positional vertigo after dental surgery. *Eur Arch Otorhinolaryngol* 2008; **265**: 119–122.
4. Petrocelli M, Sbordone C, Salzano G *et al*. Benign paroxysmal positional vertigo after oral and maxillofacial surgery: our experience and review of literature. *J Maxillofac Oral Surg* 2020; **19**: 527–531.
5. Perez Garrigues H, Mateos Fernandez M, Penarrocha M. Benign paroxysmal positional vertigo secondary to surgical maneuvers on superior maxilla. *Acta Otorhinolaryngol Esp* 2001; **52**: 343–346.
6. Kaplan D M, Attal U, Kraus M. Bilateral benign paroxysmal positional vertigo following a tooth implantation. *J Laryngol Otol* 2003; **117**: 312–313.

<https://doi.org/10.1038/s41415-021-3343-y>