

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia

Evolution of aesthetic dentistry

Blatz M B, Chiche G, Bahat O, Roblee R, Coachman C, Heymann H O. Evolution of aesthetic dentistry. *J Dent Res* 2010; **98**: 1294–1304.

The future of aesthetic dentistry may involve artificial intelligence and machine learning, leading to automation of aesthetic evaluation, smile design and the treatment-planning processes.

This article gives an overview of the evolution of aesthetic dentistry over the past 100 years from a historical point of view, and highlights advances in the development of dental research and clinical interventions that have contributed to the science and art of aesthetic dentistry. The most noteworthy advancements over the past decade include the establishment of universal aesthetic rules and guidelines based on the assessment of natural aesthetic parameters, anatomy, and physiognomy; the development of tooth whitening and advanced restorative as well as prosthetic materials and techniques, supported by the pioneering discovery of dental adhesion; the significant progress in orthodontics and periodontal as well as oral and maxillofacial surgery; and, most recently, the implementation of digital technologies in the three-dimensional planning and realisation of truly natural, individual, and aesthetic smiles. The authors note that in the future, artificial intelligence and machine learning will likely lead to automation of aesthetic evaluation, smile design and treatment-planning processes.

<https://doi.org/10.1038/s41415-019-1006-z>

Nerve anaesthesia following ortho

Mahmood H, Stern M, Atkins S. Inferior alveolar nerve anaesthesia: A rare complication of orthodontic tooth movement. *J Orthod* 2019; DOI: 10.1177/1465312519879703.

Dentists practising orthodontics should have an awareness of the clinical and radiographic signs that may indicate a high risk of inferior alveolar nerve damage.

Inferior alveolar nerve (IAN) damage is a rare but recognised complication of dental procedures including third molar surgery, implant surgery, endodontic treatment and local anaesthetic. However, it is rarely caused by orthodontic tooth movement. This report highlights a case of temporary IAN anaesthesia to the right mental region, which was likely to have occurred secondary to the orthodontic uprighting of a lingually tilted molar using a high strength arch wire. Immediate deactivation of the appliance and an acute reducing dose of systemic steroids resulted in resolution. According to the author, there have been seven previously described cases of IAN paraesthesia but no cases reporting IAN anaesthesia secondary to orthodontic fixed-appliance treatment. The author emphasises the importance of clinicians having an awareness of the clinical and radiographic signs that may indicate a high-risk case requiring referral for cone beam imaging and careful planning. High-risk patients should also be warned of this complication and its management.

<https://doi.org/10.1038/s41415-019-1009-9>

Disease related to mesio-angular third molars

McArdle L W, Jones J, McDonald F. Characteristics of disease related to mesio-angular mandibular third molar teeth. *Br J Oral Maxillofac Surg* 2019; **57**: 306–311.

Distal cervical caries in the mandibular second molar increased as the patients became older and was the most common reason why mesio-angular third molar teeth were removed.

This study aimed to identify the indications for the removal of mesio-angular mandibular third molars based on age and dental health as measured by the DMFT (decayed, missing, and filled teeth) score, and explored if early intervention should be considered. The study included 319 patients who had 431 mesio-angular mandibular third molars removed. Variables recorded were age, primary indication for removal, and the DMFT score. Indications for removal included distal cervical caries in the mandibular second molar (44%), pericoronitis (32%), and caries and related disease (15%). The frequency of distal cervical caries in the mandibular second molar increased linearly as patients became older and was the most common reason why mesio-angular third molar teeth were removed. This suggests that patients should be advised of the consequences of retaining these types of third molars and offered prophylactic removal of asymptomatic teeth.

<https://doi.org/10.1038/s41415-019-1008-x>

Complications with injectable facial fillers

Beauvais D, Ferneini E M. Complications and litigation associated with injectable facial fillers: A cross-sectional study. *J Oral Maxillofac Surg* 2019; DOI: 10.1016/j.joms.2019.08.003.

The complications associated with injectable facial fillers commonly include swelling, nodule formation and pain. There is a clear need for a thorough informed consent process before their administration.

The US Food and Drug Administration's Manufacturer and User Facility Device Experience database was used to collect reported complications from 2013–2017 for: Artefill, Bellafill, Belotero, Juvederm, Radiesse, Restylane, Sculptra and Kybella. The Thomson Reuters Westlaw Edge database was used to collect the reported jury verdicts/settlements. A total of 2,813 adverse events were analysed. The most common locations for complications were the cheek, lips and nasolabial fold. The commonly reported adverse events were swelling (60%), nodule formation (34%) and pain (23%). Severe complications included intra-arterial injections resulting in necrosis and visual symptoms (eg blurred vision and blindness). Eleven malpractice cases were analysed. The median award in the cases resolved was \$600,000. In ten of the 11 cases, a lack of informed consent had been alleged.

<https://doi.org/10.1038/s41415-019-1007-y>