

# 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 John R. Radford.

## SCALING – CONTROLLING PAIN

### Influence of intra-pocket anesthesia gel on treatment outcome in periodontal patients: a randomized controlled trial

Derman SH, Lowden CE *et al. J Clin Periodontol* 2014; **41**: 481–488

**Compared with conventional infiltration analgesia using articaine, those who received anaesthetic gel perceived more pain ( $p = 0.000$ ) although 69% of patients favoured the gel.**

Does the use of intra-pocket anaesthesia gel, with associated sub-optimal analgesia, compromise treatment outcomes? In this split-mouth, randomised, single-blind trial carried out with 38 patients, periodontal outcomes (probing pocket depths and clinical attachment level) were measured before debridement and six weeks after treatment. Anaesthesia gel (2.5% lidocaine and 2.5% prilocaine – presumably Oraqix®, but not stated in the paper) was used for one side of the mouth and articaine on the contra-lateral side. For the second appointment one week later, the methods for anaesthesia were switched. Regardless of analgesia, similar favourable periodontal outcomes were achieved. 'Rescue anaesthesia' was carried out for five patients who found the gel ineffective. Issues pertaining to the use of this anaesthetic gel as claimed by the supplier (see FDA Warning Letter/Notice of Violation Letter – <http://www.pharmcast.com/WarningLetters/Yr2011/Jan2011/DENTSPLYO111.htm>) were not discussed.

DOI: 10.1038/sj.bdj.2014.621

## MANDIBULAR ANALGESIA

### Periodontal intraligament injection as alternative to inferior alveolar nerve block—meta-analysis of the literature from 1979 to 2012

Shabazfar N, Daubländer M *et al. Clin Oral Invest* 2014; **18**: 351–358

**Intraligamentary anaesthesia is associated with less cardiovascular disturbances.**

This systematic review compared features associated with intraligamentary and inferior alveolar nerve block analgesia. Seven articles met the authors' criteria (evidence grade Ib-III: grade Ib-evidence from at least one randomised controlled study, grade III: evidence only from case, correlation or comparative studies). As expected, intraligamentary injection results in immediate analgesia whereas there was a latency period of more than 3 minutes for an inferior alveolar block. Again not surprisingly, the duration was longer with an inferior alveolar block (2–4 hours compared with less than 30 minutes for intraligamentary analgesia). Cardiovascular disturbances occurred more frequently with an inferior alveolar block (from 0.5–8.6%). In none of the papers was nerve injury reported, including loss of taste in the anterior two-thirds of the tongue. Reversible damage to the periodontal ligament was reported with intraligamentary injection.

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## CONTINUOUS BACKFILLING?

### Shrinkage of backfill gutta-percha upon cooling

Lottanti S, Tauböck TT *et al. J Endod* 2014; **40**: 721–724

**Can sealers '...compensate for the fast and massive shrinkage upon cooling of the gutta-percha core material during thermoplastic obturation...?'**

This study found, although blindingly obvious, that gutta percha shrinks on cooling. The amount of shrinkage shown by either E&Q (Master) gutta-percha and Obtura® SybronEndo gutta percha when cooled from 75 °C to 37 °C, and was about 2%. B & L BIO-TECK gutta percha shrunk the least. Also reported, were the temperatures when gutta percha(s) were extruded from three different brands of guns, all set at 200 °C. SuperEndo-Beta gun consistently delivered gutta percha at higher temperatures and, depending on the brand of gutta percha, as high as 103.9 °C. When considering therefore the above ca. 2% value for shrinkage, this would be an underestimate with certain combinations of gutta percha and extrusion guns. Thermocouples were used to measure intracanal temperature and needle tip temperature. In view of this shrinkage, the investigators suggest that Schilder's classic incremental down pack and incremental backfill technique (*Dent Clin North Am* 1967; 723–744) may offer 'some advantages over more recent continuous down pack and backfill techniques'.

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## FERRULE?

### Four-year survival of endodontically treated premolars restored with fiber posts

Juloski J, Fadda GM *et al. J Dent Res* 2014; DOI: 10.1177/0022034514527970

**Cox regression analysis showed 'neither the amount of coronal residual structure nor the luting material significantly influenced the failure risk'.**

Does the residual coronal tooth structure (including ferrule design characteristics), influence the longevity of teeth restored with fibre posts? In this prospective clinical trial over a 48-month period, 120 premolar teeth were restored with GC FIBER POST and either GRADIA® CORE or self-adhesive universal cement GCem Automix. Remaining amounts of tooth structure were assessed after crown preparation. When residual tooth structure comprised at least one sound wall in addition to a 1.5 mm ferrule effect, of note only 63.3% of fibre posts were deemed a success during the 4 years of observation. When there was more than 50% of coronal residual structure remaining and the fibre post was restored with GRADIA® CORE, there was a 90% success. However, when the data were analysed statistically, neither the residual tooth structure nor the luting material were shown to influence the risk of failure. Failures were ascribed to periapical lesions and post debonding in the shorter term, with root fractures after 3 and 4 years. Seldom was there post fracture.

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