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.

TRIVIAL ROOT RESORPTION IN OLDER PATIENTS

A cone-beam computed tomography study of orthodontic apical root resorption

Yu J-H, Shu K-W *et al. J Dent Sci* 2013; **8:** 74–79

Generally, increased tooth movement is associated with increased root resorption.

Conventional planar films have been used to identify root resorption in the mesio-distal plane only. It may also not be possible to quantify accurately the extent of resorption because of the distortion associated with these two dimensional films. Cone-beam computed tomography (CBCT) can be used to detect resorption in all planes. Nevertheless in this study, despite the investigators using CBCT, only apical resorption was measured. This was quantified for each tooth in the upper anterior sextant of 8 patients in their early twenties, before and 7 months after non-extraction orthodontic treatment. The average amount of root resorption of lateral incisor teeth, central incisor teeth and canine teeth were 0.4 mm, 0.3 mm and 0.2 mm respectively. The investigators also found that greater tooth movement was associated with increased root resorption, although this was not consistent for all patients.

DOI: 10.1038/sj.bdj.2013.762

WHEN TO PREPARE THE POST-SPACE

The effect of immediate and delayed post-space preparation using extended working time root canal sealers on apical leakage

Chen G, Chang YC. *J Dent Sci* 2013; **8:** 31–36

Even when using an extended working time (EWT) sealer, post-spaces can be prepared immediately following root canal obturation.

In this *in-vitro* study, 100 single-canal teeth were instrumented using the K3 Endodontic System. Thirty canals were obturated with Pulp Canal Sealer ('regular' set) and a master cone/vertical compaction of warm gutta-percha. In each of ten teeth, post-spaces were prepared immediately, three days and then seven-days after root filling; 5 mm of apical gutta-percha was left. This experimental protocol was carried out in the other teeth, except the sealers used were Tubli-Seal EWT and Pulp Canal Sealer EWT (all are SybronEndo products). There was no difference in dye leakage 1) regardless of the length of time between canal obturation and post-space preparation, and 2) whether or not a 'regular' or extended working time sealer was used.

DOI: 10.1038/sj.bdj.2013.763

YET ANOTHER SPLINT

Modified mandibular splint therapy for disc displacement with reduction of the temporomandibular joint

Wu J-H, Kao Y-H *et al. J Dent Sci* 2013; **8:** 91–93

Although somewhat arcane, the authors state that this splint has been used successfully for the past ten years.

Symptomatic disc displacement with reduction (DDR) has been managed by the provision of a 1) stabilisation splint (SS), 2) distraction splint (pivot), and 3) anterior repositioning splint (ARS). This paper describes the use of a Kaohsuing Medical University splint to care for those patients with symptomatic DDR. It is a mandibular splint that has characteristics of both a SS and an ARS. The regimen for wearing the splint is harsh. If not complied with, 'an unstable reduced disc (could)...be squeezed out again.' An RCT is cited (*J Oral Maxillofac Surg* 2005; **63:** 1295–1303) that found 'centric splints seem to be more effective than distraction splints' for patients with anterior disc displacement *without* reduction. This paper does little to unravel this mysterious area.

DOI: 10.1038/sj.bdj.2013.764

LOWER FIRST MOLARS – THE FOURTH CANAL

Evaluating root and canal configuration of mandibular first molars with cone beam computed tomography in a Turkish population

Miloglu O, Arslan H *et al. J Dent Sci* 2013; **8:** 80–86

Disregarding radiation hazards, a rectangular shaped access cavity and magnification would negate a recommendation made by these investigators that CBCT may be an 'effective diagnostic modality for identifying...canal configuration'.

This *in vivo* study used CBCT to identify the prevalence of four canals in mandibular first molar teeth. The subjects examined comprised over three hundred patients who attended the Faculty of Dentistry, Atatürk University, Turkey. Ethical approval for this study was not affirmed in this paper. More than a quarter of mandibular first molar teeth had a fourth canal. This proportion is broadly comparable to those reported in other studies. None of the distal canal configurations consisted of one orifice that then separated into two separate canals (Vertucci Type V). Three roots were found in 2.4% of the teeth. This may have implications for periodontal health and exodontia.

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