

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.

COMPARING MAGNIFICATION INSTRUMENTS

Magnifying loupes versus surgical microscope in endodontic surgery: a four-year retrospective study

Taschieri S, Weinstein T *et al.* *Aust Endod J* 2011; doi:10.1111/j.1747-4477.2011.00309.x

The authors report that the outcome of periradicular surgery when carried out with the use of an operating microscope was not superior to that performed with loupes.

In the USA, 90% of endodontists use an operating microscope. The aim of this study was to compare the radiographic appearance after periradicular surgery when carried out using either an operating microscope or magnification loupes. The magnification for the operating microscope was $\times 8$ – $\times 20$ and $\times 4.3$ for the magnification loupes (with a headlight). The manufacturer(s) or optical configuration(s) of these instruments were not stated. More patients were treated with the use of the surgical microscope (36 patients, 63 teeth) than those treated with magnification loupes (29 patients, 39 teeth). The method of randomisation was not stated. Regardless of magnification device, after 4 years, over 90% of teeth had 'healed'. The data was not interrogated using survival analysis.

DOI: 10.1038/sj.bdj.2011.906

BLUE-SKY

Silver-polysaccharide nanocomposite antimicrobial coatings for methacrylic thermosets

Travan A, Marsich E *et al.* *Acta Biomaterialia* 2011; 7: 337–346

Preventing the dental biofilm on resin composites.

An overarching aim is to develop an antimicrobial coating for the methacrylic thermoset BisGMA/TEGDMA, yet at the same time one that is not cytotoxic. A candidate material is silver. Among other properties, silver is antimicrobial and can form nanoparticles that have a large surface activity. These investigators have previously reported coating discs of BisGMA/TEGDMA with a polysaccharide film in order to immobilise accessible silver nanoparticles. Using such coated discs, they measured the antimicrobial efficacy against a strain of *Pseudomonas aeruginosa* and *Staphylococcus aureus*. They found that the bacterial strains were 'effectively inactivated' by the nanocomposite coating. The investigators also carried out *in vitro* cytotoxicity against a range of cell lines using the lactate dehydrogenase assay. They showed that coated discs 'did not exert any significant cytotoxicity.'

DOI: 10.1038/sj.bdj.2011.907

COLOUR, CONSISTENCY OR HUMIDITY?

Partial caries removal in primary teeth: association of clinical parameters with microbiological status

Lula ECO, Almeida Jr LJS *et al.* *Caries Res* 2011; 45: 275–280

Dentine that is wet after mild drying, but not colour or consistency, would appear to be the only criterion for *de novo* caries removal.

The enamel of 16 primary teeth with deep caries was penetrated using an high speed drill and then superficial caries only was removed. Samples of carious dentine were taken from the pulpal floor for microbial culture. When the carious dentine demonstrated humidity (wet after mild drying of the cavity for 3 seconds), significantly higher numbers of *Streptococcus mutans* and *Lactobacillus* spp. were recovered. The investigators found no association between the colour or consistency of carious dentine, and the numbers of these caries-associated micro-organisms. After re-entry (stepwise excavation), fewer *S. mutans* and *Lactobacillus* spp. were recovered but there were no associations with clinical criteria. The Hall Technique was not discussed.

DOI: 10.1038/sj.bdj.2011.908

MOUTHRINES AND TOOTH STAINING

A randomised crossover trial to compare the potential of stannous fluoride and essential oil mouth rinses to induce tooth and tongue staining

West NX, Addy M *et al.* *Clin Oral Invest* 2011; doi:10.1007/s00784-011-0560-9

COOL MINT® LISTERINE® mouthrinse is associated with tooth staining.

Are there novel mouthrinses that offer therapeutic benefits but are not associated with tooth staining? The research aim of this single centre, randomised, single-blind, four treatment crossover study was to explore the latter. Tooth and tongue staining (results for tongue staining are not given in this abstract), in 20 healthy participants, were compared after they had used different mouthrinses. A 'forced stain model' was adopted that consisted of mouthrinsing at hourly intervals and then followed by warm black tea, eight times a day for 4 days. The primary outcome measure was a 'whole mouth mean' stain when observed on each incisor, canine and premolar tooth. Two formulations of experimental amine fluoride/stannous fluoride mouthrinses resulted in significantly more tooth staining than the phenolic/essential oil rinse (COOL MINT® LISTERINE®). Nevertheless, all three mouthrinses were associated with more staining than the negative control water rinse.

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