

# 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.

## SINUS AUGMENTATION

### Clinical outcomes of sinus floor augmentation for implant placement using autogenous bone or bone substitutes: a systematic review

Nkenke E, Stelzle F *Clin Oral Implant Res* 2009; **20**: 124–133

#### Up to one in four patients have partial loss of graft after sinus augmentation.

This 'narrative review' is based on 21 articles that met the authors' inclusion criteria. It is reported that implant survival 'or complications at the recipient site' are not dependent on if the sinus was augmented by autogenous bone or bone substitutes. The authors cite studies that state 1 in 4 patients suffer from acute sinusitis after sinus floor augmentation, the same proportion experience partial graft loss and total graft loss occurs in up to 2.6% of patients. It is reported that harvesting bone from intraoral sites can be associated with devitalisation of teeth, changes in facial aesthetics, nerve damage and an increased risk of mandibular ramus fracture. Collection of bone from extraoral sites has also been associated with several serious complications.

DOI: 10.1038/sj.bdj.2009.971

## RESIN INFILTRATION

### Closing the gap between oral hygiene and minimally invasive dentistry: a review of the resin infiltration technique of incipient (proximal) enamel lesions

Keilbassa AM, Müller J *et al. Quintessence Int* 2009; **40**: 663–681

#### The efficacy of infiltrating early carious lesions on proximal tooth surfaces with resin has not yet been established.

In this literature review, the authors cite a recent SEM study that showed resin tags only penetrate to a depth of 4.2– 5.5 µm. In another study using subtraction radiography, 43.5% of sealed early proximal lesions had progressed compared with 84.1% of untreated controls (flossing). Other studies were also unconvincing. '7 to 8% of the sealed lesions showed progression, compared to 12% rate in the control group (fluoride varnish)'. Examination of white spot lesions associated with orthodontic treatment has also been used to explore the 'resin infiltration concept'. 'Unsealed teeth had 3.8 times greater number of white spot lesions than did the teeth with sealants'. Although this paper lacks rigorous interrogation of the literature, and the results of the papers the authors have cited are equivocal, the possible efficacy of this technique should not be dismissed.

DOI: 10.1038/sj.bdj.2009.972

## MICROWAVE IRRADIATION OF DENTURES

### Denture disinfection by microwave irradiation: a randomized clinical study

Ribeiro DG, Pavarina AC *et al. J Dent* 2009; **37**: 666–672

#### No micro-organisms were recovered from dentures following 3 minutes of irradiation in a microwave at 650W.

A denture biofilm sample was collected from the left side of the fit surface of full acrylic resin maxillary prostheses in each of 30 subjects. Under sterile water, 15 of these dentures were then irradiated in a microwave for 2 minutes and the rest for 3 minutes. Biofilms from the right side of each of the dentures were then sampled. Conventional microbial cultural methods confirmed the findings of other studies in that micro-organisms could not be recovered from the dentures, 3 minutes after microwave irradiation at 650W. After 2 minutes exposure however, some micro-organisms were cultured. Other studies have shown that the mechanical properties of acrylic resin were not affected detrimentally by this regimen. The authors suggest microwave irradiation of dentures may offer a method of preventing cross infection between the surgery and laboratory.

DOI: 10.1038/sj.bdj.2009.973

## CARISOLV

### Clinical evaluation of a chemomechanical method for caries removal in children and adolescents

Peric T, Markovic D *et al. Acta Odontol Scand* 2009; **67**: 277–283

#### Four from every five young patients preferred the use of Carisolv to that of rotary instrumentation although caries removal took twice as long.

In this prospective controlled trial, caries was removed from teeth in 120 patients aged 3–17 years old, using either Carisolv (chemomechanical) or rotary instrumentation. All patients had received rotary instrumentation 3 to 12 months prior to this study. Outcomes were measured using clinical criteria. Eighty percent of patients preferred Carisolv. In addition, the need for local analgesia was also significantly reduced with Carisolv. 'The mean (SD) time for chemomechanical caries removal was 11.2 (3.3) min and 5.2 (2.8) min for caries removal with rotary instruments (p < 0.001...)'. Seven percent of patients found both methods 'equally unpleasant'. Significantly, the authors share the opinion of others that the 'chemomechanical method is of less interest for small cavities because of the lack of visibility and access'.

DOI: 10.1038/sj.bdj.2009.974