

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.

PERIODONTAL PLASTIC SURGERY

Systematic review of periodontal plastic surgery in the treatment of multiple recession-type defects

Chambrone L, Lima LA *et al.* *J Can Dent Assoc* 2009; **75**: 203a-203f

Periodontal plastic surgery would appear to be effective.

The aim of periodontal plastic surgery (PPS) is to improve dental aesthetics and/or dental hypersensitivity using root-coverage procedures. This systematic review examined whether or not PPS can cover denuded root surfaces. Six hundred and thirty-two articles were retrieved, 16 were interrogated and four met the inclusion criteria. Among others, the patients had to be followed-up for more than 6 months and the teeth of the patients had to have multiple recession-type defects. A range of surgical methods were reported. Free gingival grafting was used most frequently and regeneration procedures least favoured. Some studies adopted subepithelial connective tissue grafting and one trial only, used the coronally advanced flap in isolation. Regardless of surgical method, all techniques reduced recession, increased clinical attachment level and keratinised tissue. The authors state that there was a high risk of bias in all studies.

DOI: 10.1038/sj.bdj.2009.527

CIGARETTE SMOKING AND IMPLANTS

Cigarette smoking does not increase the risk for early failure of dental implants

Article analysis & evaluation by Tomar SL. *J Evid Base Dent Pract* 2009; **9**: 11-12

To the contrary, there are continuing concerns for smokers who receive dental implants.

At the heart of this paper is a critique of the study published by Sverzut AT, Stabile GA *et al.* *J Oral Maxillofac Surg* 2008; **66**: 1004-1009 that concluded 'tobacco use cannot be considered a risk for early implant failure'. The commentator argues that in the original paper, apart from possible selection bias of those who received the implants, quantification of cigarette smoking and analysing such data may be problematic. In addition, it may not be valid to use Cox proportional regression modeling. This statistical test assumes the relative risk of someone smoking 40 cigarettes per day when compared with smoking 20 cigarettes per day is the same as someone who smokes 20 cigarettes per day compared with a non-smoker. The author concludes that the 'preponderance of evidence...suggests that smoking cessation would improve the short and long-term prognosis of dental implants'.

DOI: 10.1038/sj.bdj.2009.528

ABFRACTION

Abfraction: separating fact from fiction

Michael JA, Townsend GC *et al.* *Aust Dent J* 2009; **54**: 2-8

'abfraction should still be considered to be a theoretical concept...'

Are non-carious cervical lesions (NCCLs) a consequence of abfraction? Examination of ancient skeletal remains have not found such tooth lesions although the teeth show occlusal wear. In support of the process of abfraction, cervical enamel is more brittle than dentine and there is poorly developed scalloping between this and dentine in this region. This has to be weighed against the finding that such lesions can extend into dentine although the mechanical properties of this tissue differ fundamentally from that of enamel. Finite element analysis shows the 'magnitudes of facial and lingual stresses are similar in response to loading'. However, this is not mirrored by the clinical observation that NCCLs are more commonly seen on the buccal than lingual surfaces. The authors assert that irreversible occlusal adjustment should not be used to manage NCCLs although clinical studies have shown associations between 'abfraction lesions', bruxism and wear facets.

DOI: 10.1038/sj.bdj.2009.529

OZONE

Antibacterial effect of ozone on cariogenic bacterial species

Johansson E, Claesson R *et al.* *J Dent* 2009; **37**: 449-453

Ozone has a 'profound capacity' to kill caries-associated micro-organisms *in vitro*.

Ozone is a highly unstable form of oxygen. Ozone therapy may reduce the numbers of caries-associated micro-organisms and may have a particularly role in arresting root surface caries. Suspensions of laboratory strains of *Actinomyces naeslundii*, *Lactobacilli casei* and *Streptococcus mutans*, in either a salt buffer or in saliva, were exposed to ozone gas. At least two thirds of each of the bacterial species were killed after a 10 second exposure and 99% after 60 seconds. In saliva, *S. mutans* and *L. casei* were less efficiently killed but at least 95% could not be recovered after a 60 second exposure (no data given for *A. naeslundii*). In a separate experiment using SDS-PAGE electrophoresis, 'almost no individual protein bands' were observed after a 60 second exposure of saliva to ozone. This would imply that ozone alters salivary proteins.

DOI: 10.1038/sj.bdj.2009.530