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.

IMPLANT SUPPORTED PARTIAL DENTURES

Use of distal implants to support and increase retention of a removable partial denture: a case report

Turkylmaz I. www.cda-adc.ca/jcda/vol-75/issue-9/655.html

Distal implants to support a removable partial denture with a free-end saddle.

Outcomes are less than ideal when removable partial dentures (RPDs) are used to restore Kennedy Class I and II (bilateral and unilateral free-end saddles) edentulous spaces. This is because the support, for the prosthesis, differs between that provided by the teeth, the mucosa and the underlying alveolar ridge. In this case report, the use of two posterior mandibular implants with 'locator attachments' is described in order to restore a Kennedy Class II edentulous space. This approach 'effectively convert (ed)' an RPD that would have been supported by tooth and mucosa to one that was tooth and implant borne. Plastic retentive components, contained within the RPD, were seated on the locators on the implant abutments.

DOI: 10.1038/sj.bdj.2010.226

SINUS LIFT

The effect of piezoelectric use on open sinus lift perforation: a retrospective evaluation of 56 consecutively treated cases from private practices

Toscano NJ, Holtzclaw D *et al. J Periodontol* 2010; **81**: 167-171.

Piezoelectric surgery, when carrying out a lateral window approach to sinus elevation, may minimise soft tissue damage.

The authors cite others who report that the use of high-speed rotating instruments in order to prepare a lateral sinus window, can result in 11% to 56% perforation of the mucosal lining and 'laceration of the intraosseous arterial supply...'. However, the application of piezoelectric surgery may minimise these complications as it 'does not cut soft tissues'. In this retrospective, consecutive case series, 56 lateral sinus window surgical approaches were carried out on 50 patients using piezoelectric surgery. There were no perforations of the mucosa during this aspect of the surgery. In addition, although arterial branches of the posterior superior alveolar artery were identified in over half the procedures, there were no arterial lacerations. The findings of these authors are at variance from another study that reported there was no difference 'between the use of piezoelectric lateral window approach and rotary instrument preparation'.

DOI: 10.1038/sj.bdj.2010.227

INDIRECT COSTS

Economic aspects of mandibular third molar surgery

Liedholm R, Knutsson K *et al. Acta Odont Scand* 2010; **68**: 43-48

Indirect costs, such as the patient's absence from work, exceed those incurred when carrying out the surgical procedure.

The aim of this study was to establish the cost of each of the aspects that make up mandibular third molar surgery. When considering this for society at large, the authors cite others that report the annual estimated cost in the UK is *circa* £30 million for the NHS, and £20 million for the private health-care sector. In this study, the investigators calculated the average cost of performing mandibular third molar surgery for 64 patients in three Swedish oral and maxillofacial specialist clinics. The overall cost per patient was 550€, of which 333€ was incurred by absence from work and travelling costs. The average number of sick-days after this procedure was 1.57, but one patient was absent for 22 days. When considering mandibular third molar surgery, the authors conclude that indirect costs were higher than direct costs.

DOI: 10.1038/sj.bdj.2010.228

ORAL BIOFILM

Can the ecology of the dental biofilm be beneficially altered?

Beighton D. *Adv Dent Res* 2009; **21**: 69-73

Novel approaches to alter beneficially the oral biofilm.

The 'insurance hypothesis' suggests that biodiversity in the plaque biofilm 'provide greater guarantees that some species will maintain functioning even if others fail'. The author describes several strategies in order to modify beneficially this biofilm. Ozone gas has only a minimal effect on oral bacteria grown in biofilms. Photoactivated disinfection however, shows promise. A novel approach is to interfere with the communication system (quorum-sensing) between bacteria. A component of the Com-driven quorum-sensing regulation in viridans streptococci, is the competence-stimulating peptide (CSP). Investigators have suggested that CPS could be a putative target that could be 'developed into "probiotic" antibiotics which could selectively eliminate "pathogens"...while preserving the protective benefits of a healthy normal flora'. Another signalling molecule is the AI-2 molecule and targeting this 'might have a generalized effect on biofilm formation'.

DOI: 10.1038/sj.bdj.2010.229