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.

SUBSTRATE LIMITATION

Difference in initial dental biofilm accumulation between night and day

Dige I, Schlafer S *et al.* *Acta Odontol Scand* 2012; **70**: 441–447

Do oral bacteria have a natural circadian rhythm?

The popular press reveals that sleep is associated with 'excessive plaque'. This study compared the 'rate of accumulation' of the biofilm at night with the 'rate of accumulation' during the day. The experimental model comprised a glass slab mounted on an intraoral appliance. Such an appliance was worn by each of eight subjects at night, and then during the day. Both the total numbers of bacteria and the biovolume were many fold lower during the night compared with the day. However, in some subjects the numbers of bacteria formed at night exceeded those quantified in others during the day. Although bacteria such as cyanobacteria have been shown to have an active and resting period, these investigators suggest a more plausible explanation for this diminished 'rate of accumulation' at night, was as a consequence of reduced salivary nutrients.

DOI: 10.1038/sj.bdj.2013.24

PERCEIVED SUBOPTIMAL COMPLIANCE

Methods used for prevention of white spot lesion development during orthodontic treatment with fixed appliances

Kerbusch AEG, Kuijpers-Jagtman AM *et al.* *Acta Odontol Scand* 2012; **70**: 564–568

'A completely different approach to avoid buccal WSL (white spot lesions)...could be the use of lingual fixed appliances.'

Studies have reported a prevalence of white spot lesions in ca. 50% of patients who have received fixed appliances. Among other factors, patients who miss dental appointments and those with increased treatment times have more white spot lesions. In this study, a questionnaire was sent to all registered orthodontists in the Netherlands. There was >80% response. Although most orthodontists carried out preventative advice, surprisingly the authors found that only two thirds of these prescribed a fluoride mouth rinse. This was possibly because these orthodontists considered only a proportion of their patients actually used the mouth rinse. In addition, most orthodontists believe that 'repeated oral hygiene instruction' result in little if any oral health gain. High fluoride toothpaste and chlorhexidine varnish were only rarely prescribed.

DOI: 10.1038/sj.bdj.2013.26

THIS STUDY DESIGN COULD NOT CLAIM CAUSALITY

Pellicle and early dental plaque in periodontitis patients before and after surgical pocket elimination

Rüdiger SG, Dahlén G *et al.* *Acta Odontol Scand* 2012; **70**: 615–621

'...a prima facie conclusion may be invalid because of the

confounding effects of uncontrolled variables.' *The Design and Analysis of Research Studies*. Manly BFJ (ed). ISBN: 9780521425803

Plaque and pellicle formation was quantified before and after surgical pocket elimination. The study participants varied in their characteristics, in that they comprised six patients who smoked (10–20 cigarettes per day), two who used snuff and three who did not smoke nor use snuff. Bacteriological culturing techniques were used to examine 4-h supragingival plaque, and analysis of pellicle proteins was performed. In addition, gingival crevicular fluid volumes were quantified using a Periotron 8000, despite it being conceded that smokers produce less gingival crevicular fluid than non-smokers. This in turn, could have effected pellicle formation. Notwithstanding this, it is asserted 'Plasma proteins were found in higher amounts (in pellicle) and bacteria were identified in higher numbers before than after surgery...'

DOI: 10.1038/sj.bdj.2013.25

PRIVATE VS SALARIED DENTISTS

Reasons for replacement of restorations: dentists' perceptions

Palotie U, Vehkalahti MM. *Acta Odontol Scand* 2012; **70**: 485–490

Should it be 'the rule', to enter in the clinical notes the reason for replacing a restoration?

Some indictment, but it has been reported that almost one third of posterior restorations required replacement either at the initial examination or during the subjects' first years of military service (*J Am Dent Assoc* 2009; **140**: 200–209). In this study, almost 60% (n = 339) of Finnish GDPs responded to a questionnaire inviting them to rank in order, the reasons for replacing plastic restorations. Fractures and lost restorations were most commonly cited, and for resin composite restorations, secondary caries. Generally, the gender of the dentist and their year of graduation did not influence the decisions. Nevertheless, private dentists compared with salaried dentists more commonly stated that patient preference, such as dental aesthetics and poor anatomical form, was the reason for replacement.

DOI: 10.1038/sj.bdj.2013.27