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.

OCCLUSAL CARIES

Influence of examiner's clinical experience on the reproducibility and accuracy of radiographic examination in detecting occlusal caries

Diniz MB, Rodrigues JA *et al. Clin Oral Invest* 2009; DOI 10.1007/s00784-009-0323-z

Dentists underdiagnose 'in order not to overtreat the disease'.

The aim of this *in vitro* study was to determine if experience and country of training influenced the accuracy of detecting occlusal caries from radiographs. Standardised 'bitewing' radiographs were recorded of 166 third permanent molar teeth. The radiographs were examined by four different groups with 5 subjects in each group. These groups comprised dentists and dental students from Switzerland or Brazil. Their observations were compared to the histological gold standard. Dentists had the highest values for specificity (teeth identified from radiographs as not having caries) and the lowest levels of sensitivity (true cases of disease). An explanation for this is that 'they (dentists) are willing to not detect some caries lesions in order not to overtreat the disease'. Swiss dental students had the 'highest value of sensitivity (0.75) and the lowest value of specificity (0.24)'.

DOI: 10.1038/sj.bdj.2009.904

INFECTION CONTROL

Clinic jackets and coats: Possible vectors of microbial infection?

Molinari J *Dental Economics* 2009; **99**: (7). www.dentaleconomics.com

'...the necessity for long-sleeved, high-neck clinic attire to reduce potential exposure of skin to a patient's blood'.

It has been restated in this on-line US publication, that dental protective clothing 'require sleeves to be long enough to protect the forearms..... (from) splattering and spraying of blood, saliva or potentially infectious material'. These are the recommendations of the *Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard* published almost 20 years ago and the *Centers for Disease Control and Prevention* (2003) infection-control guidelines for dentistry. Such clothing does not have to be fluid impervious. However, it has to be removed when leaving clinical areas and must not be laundered at home. Disposable protective clothing could be used as an alternative. The author does not state that another reason for wearing long-sleeved clothing is that it may minimise sharps injuries.

DOI: 10.1038/sj.bdj.2009.905

PARTIAL CARIES REMOVAL

Microbiological analysis after complete or partial removal of carious dentin in primary teeth: a randomized clinical trial

Lula ECO, Monteiro-Neto V *et al. Caries Res* 2009; **43**: 354–358

Similar numbers of micro-organisms recovered 3–6 months after either partial or complete caries removal.

Partial caries removal may allow 'formation of tertiary dentin and sclerosis of dentinal tubules, thus preventing unnecessary pulp exposure'. 'Deciduous molars with acute carious lesions in the inner half of dentin' were treated, by either partial or total caries removal. After lining with calcium hydroxide, the cavities were restored with resin composite. Microbial culture was performed on bur samples at initial treatment and at re-entry, 3–6 months later. In the final analysis, each treatment regimen was carried out on 16 teeth in 26 patients. Large numbers of *Streptococcus* spp., mutans streptococci, *Lactobacillus* spp. and total microorganisms were recovered immediately after partial caries removal compared with complete caries removal. However at re-entry, the authors reported that 'colonization was similar in the two groups for all microorganisms studied'.

DOI: 10.1038/sj.bdj.2009.906

HYDROFLUORIC ACID

In vivo and *in vitro* irritation testing of low concentrations of hydrofluoric acid

Hjortsjö C, Saxegaard E *et al. Acta Odontol Scand* 2009; **10**: 1–6. DOI: 10.1080/00016350903117118

Exposure of 0.2% HF to soft tissues is damaging although no more so than dentine bonding agents.

Recent *in vitro* studies have suggested that dilute hydrofluoric acid (HF) solutions ($\leq 0.2\%$) can reduce tooth erosion. The aim of this study was to examine the irritant/corrosive effect of 0.05%, 0.1%, 0.2% and 1% HF solutions. The models used were 1) Hen's egg test-chorioallantoic membrane (HET-CAM) and 2) a mouse skin test. In the latter test, if the animals showed any distress, euthanasia was performed. With HET-CAM, 0.05% was slightly irritant and 0.2% and 1% HF were strongly irritant. This was mirrored in the mouse skin test. These findings however, were similar to those observed with 'dental adhesive agents'. In the discussion, it was stated that 10% HF is used for etching ceramic dental restorations and 'at such high strength is highly toxic'.

DOI: 10.1038/sj.bdj.2009.907