

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.

'LOW COST' AND 'PREDICTABLE ESTHETIC'

Tooth fragment reattachment: the natural restoration

Lise DP, Cardoso Vieira LC *et al.* *Oper Dent* 2012; **37**: 584–590

An option, as long as the tooth fragment is not lost!

Despite the use of layering techniques with resin composite, geometrical optics would be violated if a fractured tooth could be restored by this method with no aesthetic compromise. Use of the tooth fragment in order to restore a fractured portion of a tooth was first described almost 50 years ago. Then the bond was sub-optimal. But there has been a continuing issue with the visible luting line. Nevertheless, the fragment has ideal morphology and optical properties. This paper illustrates the treatment of a 13-year-old boy. Under rubber dam, the mesio-cervical fractured fragment was bonded back to the tooth with a filled resin composite. This was carried out some 3 months after the injury, during which time the fragment was held *in situ* by gingival tissues. The contralateral fractured tooth was restored with resin composite.

DOI: 10.1038/sj.bdj.2013.241

BACTERAEMIA – FLOSSING/SCALING

Incidence and magnitude of bacteraemia caused by flossing and by scaling and root planing

Zhang W, Daly CG *et al.* *J Clin Periodontol* 2013; **40**: 41–52

Taken in the round, this study does not challenge the NICE statement that 'everyday oral activity – regular toothbrushing – must represent a much greater risk of IE (infective endocarditis) than a single dental procedure.'

The NICE clinical guideline 64 has rescinded 'the requirement' for antibiotic prophylaxis for the prevention of IE. However, it should be noted that if a person at risk of IE is to receive antimicrobial therapy for a gastrointestinal or genitourinary procedure, then this should cover organisms that cause IE (recommendation number 1.1.6). In this study that recruited 30 patients with chronic periodontitis, there was no difference between the magnitude of total and viridans streptococcal bacteraemias after full-mouth flossing and after single quadrant scaling and root planing. But then it was reported in those with gingival inflammation (but not for other periodontal indices), that bacteraemias were significantly correlated with scaling and root planing but not with flossing.

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SMELL

Molecular vibration-sensing component in human olfaction

Gane S, Georganakis D *et al.* *PLoS ONE* 2013; **8**: e55780

'Swipe card' (vibration theory) or 'lock and key' (shape theory) or a combination of them both?

The vibration theory of olfaction would be supported if a deuterated version of a compound (increasing atomic mass and thereby altering its vibrational modes) smelt different from the same compound without this isotope. Luca Turin, 'The Emperor of Scent' who popularised the vibration theory and who is joint investigator in this study, has reported that a fruit fly was 'able to recognize the presence of deuterium in odorant isotopomer'. Nevertheless, Turin's vibration theory has been embroiled in controversy with some referring it to as 'giddy and overwrought'. This present study found that 'trained' human subjects could distinguish between deuterated and undeuterated musk odorants purified to GC-pure standard. The interaction between smell and taste is discussed in the following paper (*Oral Dis* 2011; **17**: 2–6).

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LUTING ZIRCONIA

The influence of different convergence angles and resin cements on the retention of zirconia copings

Ali AO, Kelly JR *et al.* *J Prosthodont* 2012; **21**: 614–621

No one resin cement tested had superior retentive values.

Convergence angles of preparations for tradition castings should be between 10°–20° in order to maximise resistance to dislodgement and to facilitate seating of the restoration. Yet when it comes to zirconia copings, others investigators found that the marginal and internal adaptation significantly improved as convergence increased from 6° to 20°. This *in vitro* study examined the retentive values for sand-blasted zirconia copings luted with different resin cements. There were no differences in these values achieved with Panavia F 2.0, Rely X Unicem and Clearfil SA. When failure was observed with Panavia F 2.0, generally the cement remained on the abutment tooth in contrast to the mode of failure for the other two materials when cement was located on the coping. In addition, zirconia copings cemented on teeth with 15° convergence had significantly higher retention than if the preparation had 30° convergence.

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