

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.

CONFORMATIVE OCCLUSION

Verifying occlusal reduction during tooth preparation

McGill ST, Holmes JR. *Oper Dent* 2012; **37**: 216–217

Modifications to the wax wafer technique.

Problems with present methods used to check if there has been sufficient occlusal reduction to accommodate a full coverage crown include disregarding optical scanning, limited vision and difficulties in identifying those areas of the preparation that require further reduction. This paper describes a modification of the commonly used wax wafer technique. After initial reduction, a functionally generated wax wafer is formed. Areas that require further preparation are identified by measuring the residual thickness of the wax with a graduated periodontal probe, and those thinned areas are marked on the occlusal table with a high speed diamond bur. Another less familiar method is illustrated. This shows a photograph of a plastic loop mounted on a handle (occlusal reduction ring) that is pulled over the preparation when the patient is guided into different excursions. Snagging of the loop indicates the need for occlusal refinement.

DOI: 10.1038/sj.bdj.2012.802

RANDOMISED CONTROL TRIALS

Will mineral trioxide aggregate replace calcium hydroxide in treating pulpal and periodontal healing complications subsequent to dental trauma? A review

Bakland LK, Andreasen JO. *Dent Traumatol* 2012; **28**: 25–32

A note of caution.

In the field of medicine, particularly psychiatry, prescribing patterns are influenced by many factors, some of which are cyclical and even idiosyncratic. Are there parallels here with the use of dental medicaments? Calcium hydroxide was popularised in the 1920s and subsequently became almost a panacea for the treatment of dento-pulpal perturbations. Nevertheless calcium hydroxide 1) is tardy at inducing hard tissues (2–3 months for pulp capping), 2) the quality of the 'bridge' is sub-optimal allowing subsequent bacterial leakage and, 3) calcium hydroxide weakens residual dentine leading 'rather frequently to cervical root fractures'. During the past 20 years, MTA has taken over from calcium hydroxide. However, MTA may also weaken dentine and in addition has a 'staining effect' on it. Its true efficacy can only be established by carrying out RCTs.

DOI: 10.1038/sj.bdj.2012.803

SHAPING A PARADIGM

Review article. Are bruxism and the bite causally related?

Lobbezoo F, Ahlberg J et al. *J Oral Rehabil* 2012; **39**: 489–501

There is an increasing 'acceptance of a multicausal, non-occlusion-oriented aetiology of bruxism.'

The argument that 'bruxing patterns can be set up in an effort to rid the teeth of (...) so-called 'high spots' so that the muscle can go back to a rest position...' is refuted. Notwithstanding this, the authors cite the classic study carried out on non-human primates that induced bruxism after creating occlusal discrepancies. Yet when other investigators carried out similar studies with humans, it was found that the introduction of such artificial occlusal interferences reduced sleep-related bruxism. Provocatively, the authors argue the link between the occlusion and bruxism is perpetuated by dentists in that only they can modify the occlusion. In addition, patients are comfortable with this arrangement as bruxism and its damaging effects, are out of their control. The authors conclude 'there is no evidence whatsoever for a causal relationship between bruxism and the bite.'

DOI: 10.1038/sj.bdj.2012.804

AUDIT

A primary care-based study on the treatment of pulpitis using a corticosteroid/antibiotic dressing

Frost PM. *Endo: endodontic practice today* 2011; **5**: 293–298

'The level of engagement of primary care practitioners with research has been traditionally poor.'

The efficacy of 'any national health care system is strongly correlated with the strength and position of primary care within that system'. This retrospective clinical dental audit was carried out by a general dental practitioner. In this audit, outcomes of teeth with reversible pulpitis, treated by caries removal and placement of a steroid/antibiotic dressing were followed over 12 years. During this observational period, only 6% of teeth required extraction and a further 10% requiring endodontic treatment. What is underpinning this study, would not resonate with some of the opinions of other dental practitioners when asked as to how they perceive research (*Community Dent Oral Epidemiol* 2011; **39**: 97–104). They consider research has 'inappropriate outcomes or was politically driven.'

DOI: 10.1038/sj.bdj.2012.805