

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.

POWER BLEACHING

Microhardness change of enamel due to bleaching with in-office bleaching gels of different acidity

Magalhães JG, Marimoto ARK *et al. Acta Odontol Scand* 2012; **70**: 122–126

It is suggested that the pH of the bleaching gel may cause the 'enamel softening'.

The effect of three high concentration hydrogen peroxide gels (each ca. 35% hydrogen peroxide), on changes in Vickers microhardness of enamel, was investigated using a bovine incisor model. The bleaching regimens comprised three applications of the three gel products, each of 10 minute duration, in combination with light sources. Opalescence Xtra (Ultradent, South Jordan, UT) caused significantly more 'hardness loss' compared with Total Bleach (Clean Line, Taubaté, São Paulo, Brazil) and Whiteness HP, (FGM, Joinville, SC, Brazil). The pH of these gels were 4.30, 6.62 and 6.4 respectively, and it is this property that confers product stability. Although the investigators suggest that the pH of these gels cause the 'enamel softening', those bleaching agents whose pH were above the critical level for enamel demineralisation, were also associated with a reduction in enamel microhardness.

DOI: 10.1038/sj.bdj.2012.586

'THE VERY FIRST HOUR'

International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 2. Avulsion of permanent teeth

Andersson L, Andreasen JO *et al. Dent Traumatol* 2012; **28**: 88–96

In the editorial of this issue of the journal, it is conceded that there is only 'some evidence-base' for the management of this dental emergency.

Nevertheless, recommendations are made. If the tooth cannot be replanted immediately, it should be stored in a medium such as saliva or milk, but not water. If there has been a 'dry time' for more than 60 minutes, the prognosis is poor. After replantation, a flexible splint should be applied for up to two weeks and placed buccally to allow endodontic access, should such treatment be indicated. If there is a closed apex, root canal therapy should be carried out. But if there is an open apex, the tooth should be monitored for possible revascularisation. If at follow-up, the tooth is in infraposition implying ankylosis, intervention should be carried out expeditiously so as not to compromise alveolar growth. These guidelines can be accessed at www.dentaltraumaguide.org.

DOI: 10.1038/sj.bdj.2012.588

POWER BLEACHING VS AT-HOME BLEACHING

Clinical evaluation of the effectiveness of different bleaching therapies in vital teeth

do Amaral Gonzaga de Almeida LC, Riehl H *et al. Int J Periodont Restor Dent* 2012; **32**: 303–309

No difference in tooth whitening between in-office bleaching and at-home bleaching.

This study did not find that the use of high concentration bleaching agents (35% hydrogen peroxide) with or without the use of light sources, conferred superior whitening of teeth compared with at-home bleaching with 10% carbamide peroxide. The in-office technique was carried out over three appointments for 90 minutes in total, in combination with lights sources. The at-home regimen consisted of using bleaching trays, for three hours each day, for three weeks. The tooth colour was evaluated by comparison with a VITA shade guide. The shades were recorded once before bleaching and then on four other occasions, the last being six months after bleaching. There was no 'colour rebound' which is considered a particular problem with in-office bleaching.

DOI: 10.1038/sj.bdj.2012.587

TREATMENT 'IS STILL SUPPORTIVE'

Randomized trials for the treatment of burning mouth syndrome: an evidence-based review of the literature

de Moraes M, do Amaral Bezerra BA *et al. J Oral Pathol Med* 2012; **41**: 281–287

Treatment of patients with burning mouth syndrome is problematic possibly because the aetiology and diagnosis is uncertain.

The investigators restricted their search to RCTs that examined the efficacy of different therapeutic regimens that have been used to treat primary or essential/idiopathic burning mouth syndrome (secondary burning mouth syndrome is associated with, for example, oral infections, nutritional deficiencies and drugs). Grey literature was not included in this systematic review. Therapeutic agents that had the most favourable outcomes for idiopathic burning mouth syndrome were 1) alpha-lipoic acid (ALA), an OTC nutritional supplement that is an antioxidant, 2) topical clonazepam and 3) topical and systemic capsaicin. Capsaicin is derived from chilli and can bind to a calcium channel-specific receptor 'contributing to the long-term desensitization of nociceptors.' Combinations of these agents and including psychotherapy, may have enhanced outcomes.

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