

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.

ESTABLISHING THE WORKING LENGTH

Accuracy of working length determination using 3 electronic apex locators and direct digital radiography

Gonçalves Real, Davidowicz H *et al.* *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2011; **111**: e44–e49

Elements Diagnostic and Root ZX electronic apex locators, and direct digital radiography (Schick system) performed better than Just II electronic apex locator.

Apex locators aim to overcome limitations associated with conventional radiography such as image distortion, superimposition of anatomical structures and the inability to locate the cementum/dentine junction within the canal. Digital imaging affords rapid processing, image manipulation and a platform to share information with the patient. This *in vitro* study was carried out on 20 extracted premolar teeth. Measurements obtained with the electronic apex locators and digital radiography were compared with direct measurements of the length of the teeth. Elements Diagnostic (Sybron Endo) and Root ZX (J. Morita Corporation) electronic apex locators, and direct digital radiography (Schick system) gave valid measurements whereas those obtained from Just II (Kotobashi) electronic apex locator were significantly different ($p = 0.02$, with only 73.0% acceptable).

DOI: 10.1038/sj.bdj.2011.741

SLEEP-DISORDERED BREATHING

Risk factors for sleep-disordered breathing: the role of craniofacial structure

Pahkala R, Puustinen R *et al.* *Acta Odontol Scand* 2011; **69**: 137–143

In those with sleep-disordered breathing, there were deviations in craniofacial morphology but in only those of normal weight.

Intriguingly, Asians with sleep-disordered breathing (SDB), have a lower body mass index compared with Caucasians with a similar condition. With this backdrop, the aim of this study was to look for associations between body weight and craniofacial morphology in 125 consecutive adult patients from Finland with a 'suspicion of SDB'. The investigators reported that if the patients were of normal weight, there was a 'high prevalence of profile convexity and mandibular retrognathia'. In contrast, craniofacial abnormalities were rarely the causative factor in those who were overweight. The authors suggest that mandibular advancement devices and orthodontic treatment have roles in the management of normal-weight patients with mild SDB.

DOI: 10.1038/sj.bdj.2011.742

MUSCLE TEMPERATURE

Effect of occlusal splint treatment on the temperature of different muscles in patients with TMD

Barão VAR, Garcia Gallo AK *et al.* *J Prosthodont Res* 2011; **55**: 19–23

The provision of an occlusal splint in those with TMD is associated with changes in muscle temperature.

Intense muscle activity results in vasoconstriction, an accumulation of metabolites with associated pain, and a reduction in muscle temperature. Using facial thermography, other studies have shown temperature changes on the skin of faces in those with temporomandibular joint dysfunction(s) (TMD). The aim of this study was to ascertain if the use of a hard stabilisation splint for those with TMD ($n = 30$), worn every night for 15 days, was associated with changes in temperatures of selected oro-facial muscles. Diagnosis of TMD was made using the Research Diagnostic Criteria questionnaire and a physical examination. The temperature of the skin overlying these oro-facial muscles was measured twice before and twice after splint therapy. After wearing the splint, there was a significant increase in temperature of all muscles examined (repeated-measures ANOVA, using nested data).

DOI: 10.1038/sj.bdj.2011.743

REDUCING THE RISK

Bisphosphonate osteonecrosis of the jaw – a literature review of UK policies versus international policies on bisphosphonates, risk factors and prevention

Patel V, McLeod NMH *et al.* *Br J Oral Maxillofac Surg* 2011; **49**: 251–257

As BONJ is potentially catastrophic, 'any measures (such as prophylactic antibiotics before dento-alveolar surgery) which may be beneficial should be considered.'

Incidences of bisphosphonate-related osteonecrosis of the jaw (BONJ) can be as high as '10% in specific groups such as patients with myeloma who are prescribed bisphosphonates intravenously.' Generally those with BONJ have been taking these drugs longer than 12 months. For those who are taking bisphosphonates and require extractions, although there is little evidence as to the use of drug holidays (3–6 month duration), 'evidence is emerging that such a drug-free period might be useful'. Nevertheless, coronectomy and endodontic treatment of the retained roots is preferable. Again, there is no evidence for the use of prophylactic antimicrobial therapy before exodontia, but an absence of evidence does not mean that such an approach is not prudent.

DOI: 10.1038/sj.bdj.2011.744