

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.

SYSTEMIC DISEASES AND ENDODONTIC FAILURE

Impact of diabetes mellitus hypertension and coronary artery disease on tooth extraction after nonsurgical endodontic treatment

Wang C-H, Chueh L-H *et al.* *J Endod* 2011; **37**: 1–5.

Diabetes mellitus and hypertension are independent risk factors for endodontic failures.

This study was carried out in Taiwan. In this country, there is compulsory universal health insurance that includes the funding for root canal therapy. The investigators followed for 2 years, 49,334 randomly selected teeth that had received nonsurgical endodontic treatment. If the tooth was subsequently extracted, associations were sought with diabetes mellitus, hypertension and coronary artery disease. The hazard ratio was used to estimate the effect of the systemic disease on the risk of extraction. At the end of 2 years, 3.2% of the teeth had been extracted. After adjustment for age, gender and tooth type, diabetes mellitus and hypertension were independent risk factors for tooth extraction (hazard ratio = 1.29 and 1.18 respectively, both *p* values <0.05). The authors did not speculate as to the direction of the causal relationships.

DOI: 10.1038/sj.bdj.2011.260

ZIRCONIA – USE IN PATIENTS WITH METAL ALLERGY

Applicability of zirconia dental prostheses for metal allergy patients

Gökçen-Röhlig B, Saruhanoglu A *et al.* *Int J Prosthodont* 2010; **23**: 562–565.

It would appear that zirconia restorations have a role in those patients who have a metal allergy.

Based upon history, examination and epicutaneous tests (from the International Contact Dermatitis Research Group), 14 patients were diagnosed with metal allergy. All these patients had positive reactions to nickel, about 70% to palladium, 60% to cobalt and 50% to gold. The authors reported that none of these patients had teeth restored with amalgam. Metal-containing crowns and fixed prosthetic dentures (FPD) were replaced with all-ceramic zirconia core restorations. Within 3 weeks, all oral and skin signs and symptoms of allergy had resolved and, there was no recurrence at each 2 month recall appointment for 3 years. But again the reader is left perplexed, in that at the end of the Discussion it is stated ‘...all-ceramic FPDs were not solely used in this study.’

DOI: 10.1038/sj.bdj.2011.261

HERPESVIRUSES

Identification of herpesviruses types 1 to 8 and human papillomavirus in acute apical abscesses

Ferreira DC, Paiva SSM *et al.* *J Endod* 2011; **37**: 10–16.

Viruses – a putative role in apical, as well as marginal periodontitis.

Samples from acute apical abscesses were collected, by aspiration, from 24 patients. Tissue from healthy dental pulps was used as a control. Single or nested polymerase chain reaction assays were used to detect herpesviruses types 1 to 8. Of note, the investigators found human herpesvirus-8 (HHV-8) in about 50% (of importance, no patients reported they were HIV positive) and human papillomavirus in 13% of test samples. Neither Epstein-Barr virus nor human cytomegalovirus was detected in any sample. Herpesviruses were found in two of the control samples. In the Discussion, the authors link the association between viruses and apical periodontitis and viruses and marginal periodontitis. They cite a study that suggests ‘HHV-8 in immunocompetent patients may reduce the host defenses...’ and therefore have a role in such conditions.

DOI: 10.1038/sj.bdj.2011.262

ZIRCONIA – CHIPPING OF CERAMIC

Survival of zirconia- and metal-supported fixed dental prostheses: a systematic review

Heintze SD, Rousson V. *Int J Prosthodont* 2010; **23**: 493–502.

There is increased chipping of the ceramic veneers used to restore zirconia core bridges when compared with those on porcelain-fused-to-metal (PFM) bridges.

This systematic review only examined chipping of ceramic and core fracture in fixed bridges with zirconia or metal alloy cores. Such data that is available would suggest, regardless of core material, there are fewer such failures with single unit crowns. The investigators were unable to find any studies that examined chipping and core failure in PFM bridges only. Thirteen studies have reported such failures in zirconia bridges. Only two studies (one published in abstract form only) compared the performance of both core materials (mean observational period = 3 years). These found that zirconia bridges chip more than PFM bridges. No core fracture was reported in PFM bridges and in only 1% of zirconia bridges. The authors suggest prolonged cooling during the last firing cycle may minimise veneer chipping in zirconia prostheses.

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