ABSTRACTS

Abstracts on this page have been chosen and edited by Dr Trevor Watts

DENTISTRY; CARDIOLOGY; BEHAVIOURAL SCIENCE

Optimism and life satisfaction as determinants for dental and general health behavior -- oral health habits linked to cardiovascular risk factors

Ylöstalo PV, Ek E *et al.* *J Dent Res* 2003; **82:** 194-199

Unhealthy habits help to explain the link between periodontitis and cardiovascular diseases.

One explanation of the association between periodontitis and cardiovascular disease is that they share common behavioural factors. A birth cohort of 12058 31-yr-old people in Northern Finland was sent a questionnaire on general health and oral health, including optimism and life satisfaction, and 8690 replied. Of these, 6033 were examined to assess cardiovascular risk factors.

Better dental health behaviour related mainly to higher levels of education, optimism and life satisfaction. Better general health behaviour related mainly to the same factors and also higher income level.

Subjects with better dental health habits reported less tooth loss, caries, gingival bleeding and dental pain, and the same associations were seen when general health habits were considered. Better dental health habits were also associated with lower levels of hypertension, serum cholesterol and triglycerides, body mass index and waist circumference, as were better general health habits.

doi:10.1038/sj.bdj.4810436

ENDODONTICS; VIROLOGY

Cytomegalovirus and Epstein-Barr virus active infection in periapical lesions of teeth with intact crowns

Sabeti M, Simon JH *et al.* *J Endodon* 2003; **29:** 321-323

Viruses may cause apical lesions on some teeth with no caries or periodontitis.

This interesting study reports findings from periapical lesions in 5 patients without a history of trauma who had experienced acute dental pain, and been referred to an endodontic practice, where examination revealed no restorations, caries, cracks, craze lines, sinus tracts, fractures, periodontal attachment loss > 2mm or apical radiolucencies, and virtually complete obliteration of pulp chamber and canals.

During treatment, the endodontist was unable to identify canals with a surgical microscope, and apicectomy was performed with retrograde root filling. During the latter procedure, extraradicular tissue was biopsied and subsequently examined by PCR for viral transcripts indicative of active infection.

Human CMV and EBV were identified in all lesions, but no active herpes simplex virus was found. The authors consider that activation of these latent herpes viruses (CMV and EBV) may account for the onset of symptoms, and suggest mechanisms.

doi:10.1038/sj.bdj.4810437

PAEDIATRIC CONSERVATIVE DENTISTRY

The post-amalgam era: a selection of materials and their longevity in the primary and young permanent dentitions

Forss H, Widström E. *Int J Paediatr Dent* 2003; **13:** 158-164

Tooth coloured restorations had a higher failure rate in this study than amalgam in previous studies.

During the 1990s, use of paediatric amalgam restorations declined in Scandinavia. This study reported questionnaire responses from 70% of a random sample of 579 dentists in Finnish health centres. During a specified 3 day period in 1997, 2186 restorations had been placed in 1797 children aged < 17yrs.

Main reasons for restorations were primary caries (80% of primary teeth and 83% of permanent), fracture of tooth or restoration (11% and 7%) and secondary caries (8% and 5%). In 956 restorations in primary teeth, 58% were of resin-modified glass ionomer, 39% conventional glass ionomer and 4% composite; mean ages of respective failed restorations were 2 and 2.8 yrs, with composite failures too few for analysis.

Respective percentages in 1230 permanent tooth restorations were: 20%, 20% and 59%, and their mean failure ages: 2.9, 3.5 and 2.2 yrs. There were no amalgams placed in primary teeth; in permanent teeth they were 1% of restorations.

doi:10.1038/sj.bdj.4810438

ORAL AND MAXILLOFACIAL SURGERY; RADIOLOGY

Influence of radiation therapy on reconstructive flaps after radical resection of head and neck cancer

Wang Z, Qiu W *et al.* *Int J Oral Maxillofac Surg* 2003; **32:** 35-38

Success rate and healing rate were both reduced when reconstruction was performed after radiotherapy (RT) rather than before.

Flap reconstruction (FR) is often undertaken to improve quality of life after removal of advanced head and neck tumours. This study followed 82 patients who received 88 FRs: 14 were after RT, 74 were before. Most tumours (70%) were on the tongue, and 78% of all tumours were squamous cell carcinomata.

Twelve of the 14 flaps receiving preoperative (Pr) RT were successful; one had partial necrosis and one failed; partial necrosis occurred in only one of the 74 flaps where RT was postoperative (Po) ($P = 0.03$). Healing was good in 9 of the PrRT flaps, and in 70 of those with PoRT, and delayed in all others ($P = 0.003$). Survival rates in the 2 groups were not significantly different.

doi:10.1038/sj.bdj.4810439