

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

ORTHODONTICS; AESTHETICS

A cultural comparison of treatment need

Ngom PI, Brown R *et al.* *Eur J Orthod* 2005; **27**: 597-600

African and Caucasian judges had different perceptions of the attractiveness of a variety of black dentitions.

There is contradictory evidence on whether aesthetics are judged differently by different ethnic groups. In a dental school in Senegal, 98 photos were taken of the anterior dentition of subjects with a representative range of malocclusions. Images were projected on a screen for 20 sec., for 45 Caucasian and 41 African lay judges to assess attractiveness on a visual analogue scale. Indices of Orthodontic Treatment Need (IOTN) and Complexity, Outcome and Need (ICON) were recorded for all subjects by a calibrated orthodontist.

Caucasian judges scored attractiveness about 15% lower than Africans, and perceived 89 photographs as less attractive than the African judges. When asked to determine treatment need, both groups of judges reached similar assessments. However, in comparing the IOTN and ICON, the authors consider that the latter index was somewhat better at identifying subjects in need of treatment in this population.

doi:10.1038/sj.bdj.4813373

PERIODONTOLOGY; OBSTETRICS

Is there an association between periodontal disease, prematurity and low birth weight? A population-based study

Lunardelli AN, Peres MA. *J Clin Periodontol* 2005; **32**: 938-946

When maternal health variables were taken into account, there was no association in this Brazilian population.

Some studies purporting to show an association between periodontal disease and adverse pregnancy effects have had methodological limitations, particularly confounding variables. This study examined the matter in a Brazilian maternity hospital during a 5 month period. After exclusions for confounders and refusals, 449 of 496 invited subjects received an interview and periodontal examination within 48 hrs of parturition, from clinicians blinded to the status of their babies.

In unadjusted comparisons, low birth weight (LBW) was associated with low income, smoking during pregnancy, previous LBW babies, and other obstetric variables. It was not associated with periodontal pocketing. Similarly, prematurity was associated with low income, low BMI and some obstetric variables. It was also associated with the presence of a periodontal pocket in at least one site after adjusting for some variables (OR = 2.6; 95% CI: 1.0-6.9).

However, logistic regression analysis including variables relating to maternal health during pregnancy found no significant association. The authors conclude that LBW and prematurity are not associated with maternal periodontal health in this population.

doi:10.1038/sj.bdj.4813374

PERIODONTOLOGY; METABOLIC MEDICINE

Does periodontal treatment improve glycemic control in diabetic patients? A meta-analysis of intervention studies

Janket S-J, Wightman A *et al.* *J Dent Res* 2005; **84**: 1154-1159

Periodontal treatment did not improve the metabolic control of diabetes.

In the current debate over whether periodontal diseases are causally involved in systemic illness, studies have been performed to examine the effect on the latter of treating the former. After excluding 347 studies from an initial search of the literature, this meta-analysis examined 23 potentially appropriate studies reporting data concerning the effect of periodontal treatment on diabetics. After excluding 13 of these, there were 5 intervention studies of type 1 diabetes and 5 of type 2 with data which could be combined. These studies provided data on periodontal treatment effects in a total of 456 diabetic patients.

The combined studies yielded a non-significant 0.38% reduction in HbA1c, a parameter used to monitor metabolic control over several weeks in diabetics, in response to periodontal treatment of various types. When limited to type 2 diabetes, the reduction was still non-significant at 0.71%. The authors discuss the various other types of treatment used, including antimicrobial drugs, and make some recommendations for future studies of this question.

doi:10.1038/sj.bdj.4813375

PERIODONTOLOGY; PASSIVE SMOKING

Association between passive and active smoking evaluated by salivary cotinine and periodontitis

Yamamoto Y, Nishida N *et al.* *J Clin Periodontol* 2005; **32**: 1041-1046

Passive smoking may be related to periodontitis

Over more than 20 yrs, smoking has become well established as the major environmental risk factor for periodontitis. Recent studies have suggested that passive as well as active smoking may be causally involved in periodontitis. In this study, 273 workers in an Osaka factory were examined in respect of smoking exposure (salivary cotinine assessment) and periodontal condition. Passive smoking was defined by a cotinine level of 1-7 ng/ml, and active smoking by 8+ ng/ml.

There were 102 current active smokers with a mean cotinine level of 145 ng/ml, 118 passive smokers with a mean level of 3 ng/ml, and 53 non-smokers with no detectable cotinine. In these 3 groups, respective mean numbers of teeth with probing depth 4+mm were 6.2, 4.5 and 2.3; and with probing attachment level 4+mm, 1.9, 1.6 and 0.9. Significant adjusted odds ratios for the presence of periodontitis were 2.87 in passive smokers and 4.91 in active smokers.

doi:10.1038/sj.bdj.4813376