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

ORTHODONTICS

Maxillary third molar position in Class II malocclusions: the effect of treatment with and without maxillary premolar extractions

Janson G, Putrick LM *et al.* *Eur J Orthod* 2006; **28**: 573-579

There were more functioning third molars (M3s) in subjects treated with premolar extractions.

Some studies suggest that orthodontic extractions in Class II malocclusions may reduce the prevalence of M3 impaction. This study compared records from 28 patients without extractions (E0) of mean age 19.0 yrs, treatment time of 2.6 yrs and follow-up of 6.5 yrs, with 27 patients with 2 maxillary premolar extractions (E2; 19.9, 2.6 and 5.9 yrs).

Despite a slight bias against a difference in that the E0 group had more half-unit Class II cases (14 v. 7; $P = 0.06$), there were significantly more unerupted M3s in this group (44 v. 30; $P = 0.01$). M3 angulation also appeared significantly more favourable for function in E2 ($P < 0.05$) when assessed by a number of radiographic measurements.

DOI: 10.1038/bdj.2007.589

PROSTHODONTICS; IMPLANT DENTISTRY

An eight-year follow-up to a randomized clinical trial of aftercare and cost-analysis with three types of mandibular implant-retained overdentures

Stoker GT, Wismeijer D *et al.* *J Dent Res* 2007; **86**: 276-280

A bar linking 2 implants appeared the best support.

Implant retained lower overdentures are a significant improvement over conventional complete dentures, and there are limited data on cost-effectiveness. In this study from the Netherlands, aftercare and its costs were examined for 103 of 110 subjects originally randomised to completed dentures supported by 2 implants with ball attachments, or 2 implants joined by a bar, or 4 implants joined by 3 bars.

Aftercare included prosthetic, hygiene and surgical care. Expressed in € values from 2000, respective mean total costs for 8.3 yrs of aftercare for the 3 types of treatment were: 997, 961 and 984. This amounted to 22-29% of total mean costs including the original treatment, which were respectively: 3410, 3563 and 4548. The authors consider the second option the best when clinical results and patient satisfaction are also examined.

DOI: 10.1038/bdj.2007.591

PERIODONTOLOGY; METABOLIC MEDICINE

Does periodontal care improve glycemic control? The Department of Veterans Affairs Dental Diabetes Study

Jones JA, Miller DR *et al.* *J Clin Periodontol* 2007; **34**: 46-52

There was no effect in a 4-month study of subjects with poorly-controlled diabetes.

There is controversy over whether periodontal treatment may improve metabolic control in diabetics. Most studies are of cohorts without an untreated diabetic control group. In this study, 165 subjects with Type 1 or 2 diabetes and HbA1c of 8.5+ were randomized to usual dental care or one of 2 regimes of non-surgical periodontal treatment, one with courses of doxycycline and chlorhexidine. Those in the control groups subsequently received one of the non-surgical regimes. There were 33 drop-outs.

There were no significant differences between test and control subjects on any of a wide range of periodontal parameters, 4 months after treatment. In the control group, HbA1c decreased by >0.5% in 52% of subjects, compared with 55% in early treatment ($P = 0.38$); respective results for a decrease of >1.0% were 34% and 41% ($P = 0.31$). The authors consider that larger studies are required to show if there is any effect of periodontal treatment.

DOI: 10.1038/bdj.2007.590

PERIODONTOLOGY; OBSTETRICS

Periodontal disease and perinatal outcomes: a case-control study

Bassani DG, Olinto MGA *et al.* *J Clin Periodontol* 2007; **34**: 31-39

With confounding variables controlled, there was no association.

Some studies have shown an association between periodontal disease and obstetric outcome, and others have not. This was a further case-control study in a Brazilian town where 304 mothers giving birth either before 27 weeks or to babies of less than 2.5 kg were compared with 611 controls with normal weight, full-term babies (usually the next 2 births in the same hospital).

There was no difference in the prevalence of periodontitis (cases 59%, controls 55%), or in its severity (mild 28% v. 30%, moderate 23% v. 20%, severe 7% v. 5%), or in those with > 50% either of gingival bleeding or visible plaque. There were differences between groups in pre-natal care, previous low birth weight and previous prematurity, all well-established obstetric risk factors. Smoking status, a significant confounder, was similarly distributed in both groups ($P = 0.93$).

DOI: 10.1038/bdj.2007.592