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

Antibiotic prophylaxis in patients with ventriculo-peritoneal shunts: a pilot study

Helpin M, Rosenberg H M et al.
J Dent Child 1998; 65: 244-247

In a small group of hydrocephalus patients at risk of severe neurological infection, limited dental treatment without antibiotic prophylaxis led to no infections.

A common treatment for hydrocephalus, which affects 1 in 750 people as a birth defect, is a surgically-implanted shunt which removes excess cerebrospinal fluid. The commonest type of shunt at present connects with the peritoneal cavity. Although infection may affect the shunt in up to 20% of infants, it appears to affect fewer than 5% of adults and older children. A previously-used shunt (ventriculo-venous), to the internal jugular vein, was more susceptible to infection from bacteraemia, and is generally considered to require antibiotic prophylaxis for dental procedures.

In 14 patients aged 2-11 years, neurological examination was performed monthly for 3 months prior to treatment with dental prophylaxis and topical fluoride administration, and thereafter monthly for one year. No patients received antibiotics for any reason during the study, and no sign of shunt infection was observed at any time. The authors suggest that a study should be performed involving patients who require more invasive procedures.

Immune, stress, and mood markers related to recurrent oral herpes outbreaks

Logan H L, Lutgendorf S et al.
Oral Surg 1998; 86: 48-54

Although only 9 subjects participated, this study found alterations in endocrine and immune function during the week before herpes reactivation.

From volunteers responding to advertisements, these investigators selected 2 men and 7 women aged 20-40 years (mean 29) with a history of herpes labialis recurring more than 3 times per year in the same tissue area. Subjects were seen weekly for 12 weeks, for clinical and psychological examination (with daily diaries for mood and stress experience) and blood samples. In all, 8 subjects developed 10 outbreaks of the lesions.

In the week before outbreak, natural killer (NK) cells were significantly elevated, and this was associated with an elevated mood of discontentment. Serum epinephrine decreased in the week of outbreak; analysed throughout the study, this parameter was positively associated with a desire for emotional stimulation (assessed by the Affect Intensity Measure). Taken with other studies, these data suggest that epinephrine and NK cells may be involved in reactivation.

The authors were particularly interested in CD8+ cell changes, but these did not appear related to the outbreak in the small number of subjects studied, although there were some associations with psychological mood.

Dental implant installation without antibiotic prophylaxis

Gynther G W, Köndell P Å et al.
Oral Surg 1998; 85: 509-511

This study describes another situation in which there was no advantage with antibiotics, against the present background of concern over their unnecessary prescription.

This was a retrospective study of Brånemark implant treatment outcome in 2 groups of patient treated in Sweden. From 1980 to 1985, 147 patients received 350 maxillary and 440 mandibular implants with penicillin prophylaxis; from 1991 to 1995, 132 patients received 316 and 348 implants in the respective jaws, without any antibiotics. All patients were outwardly in good health, although 1/3 of each group smoked. In the first group, about 1/5 of treatment involved overdentures; all other treatment was with fixed appliances.

During follow-up, one patient in each group experienced early infection (within 1 week), in the prophylaxis group, 8 experienced late infection (from 1 week to abutment connection at 3-8 months), and in the non-prophylaxis group, 6 were so affected. The authors point out that their study covered 2 different time periods, and various factors may therefore have influenced results. However, they also consider that antibiotic prophylaxis in this situation has a very low cost-effectiveness, contributes to the emergence of resistant organisms and exposes perhaps 0.3% of patients to the risk of an allergic reaction.

Treatment outcomes with mandibular removable partial dentures: a population-based study of patient satisfaction

Frank R P, Milgrom P et al.
J Prosthet Dent 1998; 80: 36-45

Patients with a partial denture in both jaws had greater dissatisfaction than those with an upper complete denture or natural dentition facing a partial denture in the lower jaw.

In an attempt to find out more about patients receiving lower partial dentures in private dental practices, a sample was identified of 800 such patients living in the Seattle area and on a particular dental prepayment plan covering 1.1 million persons. A questionnaire was sent and 410 patients returned usable data.

Significantly more patients were dissatisfied if they were below age 60, or it was their first partial denture, or they had a lower level of health generally, or the upper jaw had a removable partial denture. Multiple logistic regression identified odds ratios of 1.7, 1.9, 1.9 and 3.1 for these factors.

Factors having no significant effect on satisfaction were the number of posterior missing teeth, whether anterior teeth were replaced, and the Kennedy classification according to the patient's identification of replaced teeth on a diagram. The authors comment that in questionable situations, a maxillary complete denture may be a more suitable option than an upper partial denture when a lower partial denture is indicated.