

# ABSTRACTS

## 1,000 ABSTRACT ANNIVERSARY

This special double-page spread celebrates a milestone in *BDJ* history. It includes the 1,000th abstract published in the Journal by our current editor and writer for these pages, Dr Trevor Watts, *BDJ* Adviser on Abstracts (see News section of this issue).

The abstracts are aimed at both general and specialist practitioners, and cover most aspects of clinical dentistry. Trevor intends to highlight studies of clinical significance, and deliberately avoids the abstruse. The regular abstract selection process covers some 40 journals, most of which are dental, and 4 of which are medical. Occasionally Trevor chooses an item of dental interest from other scientific literature. Once a page of abstracts is completed, Trevor emails it to the *BDJ* where proofs are made which are then emailed back for checking. At least three people read this proof for accuracy before it is published in the *BDJ*.

When Trevor's work began in 1989, his starting point was the published abstract, which was edited to improve readability and sometimes to insert details which authors had not mentioned, either accidentally or deliberately! However, selecting papers later became easier with the advent of e-journals, and time saved in this area has allowed Trevor to rewrite virtually all abstracts himself. His aim is to report objectively, but this does not prevent him writing an occasional com-



ment on experimental difficulties or other implications of a paper.

Occasionally, a study is fast-tracked to the next available *BDJ*, usually within 1–2 months. Examples include the large 1998 Philadelphia study showing minimal dental involvement in endocarditis (*Annals of Internal Medicine*), and in 2003, the interesting association between caries and smoking (*Journal of the American Medical Association*) and case reports on the serious complication of intracranial hypertension induced by doxycycline (*British Medical Journal*).

## PERIODONTICS

### Meta-analysis of the effect of scaling and root planing, surgical treatment and antibiotic therapies on periodontal probing depth and attachment loss

Hung H-C, Douglass CW *J Clin Periodontol* 2002; **29**: 975–986

There is difficulty in combining different studies in a meta-analysis, but all these therapies appear to have some useful effects.

This study examined scaling and root planing effects in relation to modified Widman flap surgery and 3 types of locally delivered antimicrobial therapy. Meta-analysis was performed on reported studies with < 20% dropouts in the first year, and adequate information for inclusion. Not all studies used constant force probes, and longitudinal comparisons were made, which means that bias may have played a part in results.

Shallow initial PD was unaffected by treatment, sites of 4–6 mm PD reduced by a mean 1 mm, and deeper sites by 2 mm, with about 0.5 mm PAL gain. Surgery increased improvements as sites became deeper, but the difference with root planing decreased with length of follow-up. Use of tetracycline, metron-

idazole and minocycline preparations following root planing led to minor adjunctive improvements overall. The authors conclude that both patients and dentists have choices to make regarding these therapies.

## IMPLANT DENTISTRY; PERIODONTICS

### Outcome of implant therapy in relation to experienced loss of periodontal bone support. A retrospective 5-year study

Hardt CRE, Gröndahl K *et al. Clin Oral Impl Res* 2002; **13**: 488–494

Previous periodontitis relates to peri-implant bone loss.

There is evidence that patients who have lost teeth through advanced periodontitis may have increased risk of implant failure. This study compared 25 otherwise healthy patients with non-cantilever implant-supported prostheses in the maxillary canine to molar regions, who had lost teeth through periodontitis and had been followed up for 5 years (P), with 25 similar patients who had had little or no periodontitis (NP).

In the P group (100 implants), mean age was 53.5 yrs, 63% bone support remained, and 1/4 of teeth had < 50% bone; related figures for the NP group (92) were 57yrs, 92% and 1%. Both groups had a mean of 16–17 teeth present. Mean peri-implant bone loss

Abstracts on both these pages have been chosen and edited by Dr Trevor Watts

≥ 2 mm after 5 years affected 44% of NP implants and 62% of P implants. Respective failure rates were 3.3% and 8.0%.

## 1,000th Abstract

### ORAL SURGERY

#### Necrotizing fasciitis caused by dental infection: a retrospective analysis of 9 cases and a review of the literature

Umeda M, Minamikawa T *et al.* *Oral Surg* 2003; **95**: 283-290

This potentially fatal dental complication may be resolved with aggressive treatment.

This study reviewed 125 reported cases and 9 new cases of the condition. Of these 9, 2 cases were associated with diabetes, and one of these had other systemic problems. All cases were confirmed by gas bubbles in the CT scan. Treatment was with multiple antibiotics and surgical debridement within 24 hrs, 4 patients were given tracheostomy, and the outcome was satisfactory in all cases. Inpatient care continued for 18-46 days.

Review of the 125 reported cases showed 20% mortality, particularly when there were systemic complicating factors or delay of surgery. The authors noted that a history of diabetes or alcohol abuse, or the complication of mediastinitis, was associated with mortality. They consider that treatment success depends on early diagnosis and prompt, thorough surgical treatment.

### ORTHODONTICS

#### Maxillary retention: is longer better?

Destang DL, Kerr WJS *Eur J Orthod* 2003; **25**: 65-69

Retention for one year gave better orthodontic results than retention for 6 months.

To compare these different regimes, 2 consultant orthodontists using them were selected from a Scottish survey. Group 1 was of 20 patients in retention with a Hawley appliance 3 months full time and 3 months nights only. Group 2 had 18 patients with a similar retainer for respective periods of 6 months each.

Subjects were aged 11-19 yrs at start of treatment, and limited to Classes I or II malocclusion with anterior maxillary crowding or contact point displacement. All subjects were first treated with pre-adjusted edgewise mechanics using Roth prescription brackets, and retention co-operation was judged similar in both groups.

Measurement up to 3 months post-retention showed incisor irregularity relapse to be greater in Group 1 (7 patients > 3 mm), with no changes in inter-canine and inter-molar width or arch length. The authors suggest that 1 year's retention is clinically beneficial.

### ORAL PATHOLOGY; METABOLIC MEDICINE

#### *Candida*-induced stomatopyrosis and its relation to diabetes mellitus

Vitkov L, Weltgasser, R *et al.* *J Oral Pathol Med* 2003; **32**: 46-50

Burning mouth syndrome (BMS) caused by *Candida* appeared to indicate predisposition to or presence of Type 2 diabetes.

In an Austrian clinic, 72 patients aged 29-88 yrs with BMS were examined for *Candida* infection. A control group of 40 healthy denture wearers was similarly investigated and found to be without infection. All subjects not known to be diabetics were given an oral glucose tolerance test.

In the BMS group, 2 of 3 subjects using steroid sprays (all denture wearers) were found to have increased density of *Candida* (ICD). Of 69 not using sprays, 27 with dentures and 9 without were found to have ICD, while 33 with dentures did not. In the 36 non-spray users with ICD, 43% had increased glucose tolerance, and 43% had Type 2 diabetes; in the 33 without ICD, these proportions were 23% and 20%.

### REMOVABLE PROSTHODONTICS

#### Clinical quality of removable dentures provided by dentists, denturists and laboratory technicians

Tuominen R *J Oral Rehabil* 2003; **30**: 347-352

Complete dentures provided illegally by technicians in Finland were found to have many more unsatisfactory characteristics in this blind study.

In Finland, denturists have been licensed for complete denture prosthesis since 1964; technicians, however, may only work with dentists as in UK. In this study, a sample of 362 men aged 64 - 92 yrs was examined.

Of 162 maxillary complete prostheses, dentists, denturists and technicians provided respectively 49, 100 and 13, and of 88 mandibular ones, 22, 59 and 7. Of 69 maxillary partial dentures, dentists provided 56, and denturists (illegally) and technicians, 13, and of 89 mandibular ones, respectively 60 and 29.

When examined blind for defects of retention, coverage, fit and stability, 90% of illegal maxillary complete dentures had defects, compared with 43% of legal ones, and respectively 86% and 59% of mandibular complete dentures. In the case of partial dentures, differences did not reach statistical significance. In multivariate analysis, the strongest determinant of denture defects was the age of the prosthesis. Dentures provided by technicians were also more often in need of a large repair.