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METABOLIC MEDICINE; PERIODONTOLOGY

Type 2 diabetes and periodontal indicators: epidemiology in France 2002-2003

Mattout C, Bourgeois D *et al.* *J Periodont Res* 2006; **41**: 253-258

Diabetes has a strong influence on periodontal health.

There is a well-known association between diabetes and periodontal disease. This study utilised data from a national epidemiological survey in France in 2002-3. In a population sample, 71 had type 2 diabetes and 2,073 were not diabetic. The groups differed significantly in that the diabetics were older (mean 54.5 yrs *vs.* 49), and had higher BMI (mean 29.9 *vs.* 25.4), higher blood sugar, more hypertension and lower alcohol intake.

Significant dental differences were that diabetics had more caries-free teeth, and more plaque, gingival inflammation and attachment loss. When subjects were stratified according to plaque index, diabetics had greater gingival inflammation. Significant periodontal risk factors in non-diabetics included age, gender, smoking and alcohol intake, but in diabetics only smoking was a risk factor.

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PERIODONTOLOGY; CARDIOLOGY

Severity of periodontal disease and number of remaining teeth are related to the prevalence of myocardial infarction and hypertension in a study based on 4,254 subjects

Holmlund A, Holm G *et al.* *J Periodontol* 2006; **77**: 1173-1178

Associations between periodontal and cardiovascular conditions were not consistent.

There is current interest in whether periodontal inflammation is related causally to cardiovascular disease. In a Swedish clinic, 3,352 patients, and also 902 subjects in random sample dental health surveys, were examined and answered a questionnaire.

In the whole sample there was a significant association between myocardial infarction (MI) and the severity of periodontitis. However, adjustment for gender, age and the presence of smoking reduced this to significant only for ages 20-40. Hypertension (HT) was also significantly related to periodontal disease severity, but not after the adjustment.

Number of teeth was significantly related to MI after adjustment, but not in individual age groups. HT was not related to tooth number after adjustment. The authors note they obtained no data on tobacco dose or other cardiovascular risk factors. It is also possible that cardiovascular and periodontal diseases are related by common but unquantified behavioural factors.

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MAXILLOFACIAL SURGERY

Epidemiological analysis of maxillofacial fractures in Brazil: a 5-year prospective study

Brasiliero BF, Passeri LA *et al.* *Oral Surg* 2006; **102**: 28-34

Traffic accidents caused nearly half of all fractures.

Understanding the causes of trauma may lead to ways of preventing it. In this study in Piracicaba, over a 5 yr period, 1,892 patients were seen with maxillofacial injuries, of whom 1,024 (mean 31 yrs, range 2-88; 80% male) had 1,399 fractures.

Fractures occurred principally in traffic accidents (45%), assaults (23%), falls (18%), sporting (8%) and working (5%) activity. Patients in traffic accidents were using bicycles, cars and motorcycles in respectively 34%, 31% and 27% of cases, and were pedestrians in 9%. Limbs were the commonest site for additional lesions in the whole group. Conservative treatment was given to 48% of patients, and surgical treatment to 48%, the latter involving rigid internal fixation in most cases.

The authors discuss the major role of traffic accidents, and consider that legislation enforcement and continuous public education are necessary to reduce this cause.

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CARDIOLOGY; PERIODONTOLOGY

Inflammation, heat shock proteins and periodontal pathogens in atherosclerosis: an immunohistologic study

Ford PJ, Gemmell E *et al.* *Oral Microbiol Immunol* 2006; **21**: 206-211

Periodontal bacteria may help to maintain inflammation in atherosclerotic lesions.

Infection and inflammation are important in atherosclerosis. Respiratory and periodontal pathogens have been found in arterial plaques. In this study, 31 carotid endarterectomy specimens were examined for the presence of one respiratory and 5 periodontal bacterial species, and the nature of the inflammatory lesion.

From 20% to 50% of specimens contained the respective periodontal organisms, and 20%, the respiratory organism. Nearly 80% contained a periodontal organism, and 20% had none of the selected bacteria. The authors interpret their immunological findings as showing mainly activated but non-proliferating CD4+ T cells, significantly fewer CD8+ T cells in lesions without the test bacteria, and a large number of CD14+ macrophages. They point out that it is not known whether bacteria initiate inflammation in atherosclerotic plaques, but these organisms may certainly potentiate it.

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