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PERIODONTICS; OBSTETRICS

Treatment of periodontal disease and the risk of preterm birth

Michalowicz BS, Hodges JS *et al.* *N Engl J Med* 2006; **355**: 1885-1894

Periodontal treatment had no significant effect on obstetric outcome.

The possible effect of periodontal disease on the health of the child is a controversial subject with some studies showing an apparent association and others not. There have also been studies of the effect of maternal periodontal treatment on the health of the child, again with conflicting results. This study is the largest to date of the effect of periodontal intervention, with random allocation of over 800 expectant women to non-surgical treatment between 13 and 17 weeks of gestation, or no treatment.

Groups were well matched for age, ethnic group, education, obstetric history, general medical history and periodontal status. Dropouts were 1.3%. Treatment improved the periodontal condition significantly in all measured parameters ($P < 0.001$). There were no significant differences in any obstetric outcomes. In the treatment group, 49 of 407 women gave birth preterm (before 37 weeks' gestation), and in the control group, 52 of 405 (NS). Further analyses of subgroups with the most severe periodontal conditions and those with predisposing obstetric conditions gave similar results.

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ORAL MEDICINE; BEHAVIOURAL SCIENCE

Factors associated with quitting areca (betel) quid chewing

Lai CS, Shieh TY *et al.* *Community Dent Oral Epidemiol* 2006; **34**: 467-474

People with certain characteristics are more likely to quit.

Betel quid chewing is common in Asia, and in Asian immigrants to other countries. With or without tobacco, betel quid is carcinogenic. There is little information on what factors influence successful quitting of the habit. In this study, 326 professional drivers and supervisors who were or had been regular users completed detailed questionnaires about their use of the drug and various psychological characteristics.

Of 231 who had tried to quit the habit, 114 reported success. In comparison with those who succeeded, unsuccessful quitters were significantly more likely to be drivers rather than supervisors (OR = 2.24), users of betel quid only (4.44), regular alcohol drinkers (2.41), and to have a lower score for internal locus of control (0.94). The authors consider that these are important factors for any public health approaches to reducing betel quid usage.

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CONSERVATIVE DENTAL SURGERY; PERIODONTOLOGY

Dental restorations: a risk factor for periodontal attachment loss?

Broadbent JM, Williams KB *et al.* *J Clin Periodontol* 2006; **33**: 803-810

Caries and restorations may lead to attachment loss in the 3rd and 4th decades of life.

There is controversy over whether restorative margins may lead to significant future periodontal breakdown, and one previous study suggests that after 26 years, sites with and without such margins experience equal levels of disease. In addition, there are confounding factors which need to be accounted for. In the present study, data from subjects when aged 26 and 32 years were obtained from a longitudinal health survey in a New Zealand cohort borne in 1972-3.

Over 95% of the surviving birth cohort participated in each examination, and 87% (884) had full relevant data for both examinations. Multivariate analysis was controlled for gender, oral hygiene, dental visiting, socioeconomic status, smoking and flossing. Where a proximal surface had been carious or filled at the first examination, or had progressed from being either sound or carious to being filled, there were significant ORs of 1.9 – 2.7 for associated attachment loss of 3+ mm at those sites.

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PREVENTIVE DENTISTRY

Retention of resin-based pit and fissure sealants: a systematic review

Muller-Bolla M, Lupi-Péguier L *et al.* *Community Dent Oral Epidemiol* 2006; **34**: 321-336

Fluoride-containing light-cured sealants had a higher retention rate when rubber dam isolation was employed.

Efficacy of fissure sealants depends upon their retention. Meta-analyses have demonstrated that resin-bonded sealants (RBS) are better than glass ionomer sealants on both counts. In this review, 124 studies relevant to RBS retention were identified, and 31 were clinical trials suitable for inclusion: 16 comparing 2 different types of RBS, and 15 focusing on suitable protocols for sealant application.

In many cases, study methodology was not clearly described, making evidence of low quality. Retention rates of autopolymerised and light-cured RBSs did not differ significantly at any follow-up interval. With regard to clinical procedure, there was no significant meta-analysis effect for tooth cleaning method, enamel preparation or adhesive agent application. Isolation method was important only with fluoride-containing sealants, the retention of which was improved with a rubber dam. The authors comment that further and better studies are needed in the future.

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