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CONSERVATIVE DENTAL SURGERY

A split-mouth randomized clinical trial of single crowns retained with resin-modified glass-ionomer and zinc phosphate luting cements

Jokstad A *Int J Prosthodont* 2004; **17**: 411–416

The two cements were of comparable performance

In this study, seven Norwegian prosthodontic specialists each agreed to cement 10 pairs of complete crowns; one of each pair was cemented with a zinc phosphate cement, and the other with an experimental resin-bonded glass-ionomer cement. In all cases, the method was according to a stated protocol, and crowns occluded with antagonists.

The cements were randomly allocated, and patients were blind to the allocation. Four clinicians dropped out of the study without submitting results. The other three cemented 39 pairs of crowns.

Seven adverse events were recorded, three of them resulting in crown loss: two crowns cemented with zinc phosphate became loose, and one tooth with glass ionomer developed a necrotic pulp. The author estimated survival (no negative events) at 102 months as 89% for zinc phosphate cemented crowns, and 93% for glass ionomer (NS).

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PROSTHODONTICS

The impact of falling rates of edentulism

Mojon P, Thomason M *et al Int J Prosthodont* 2004; **17**: 434–440

Despite increased longevity, fewer complete dentures will be required in Europe in the future

In the US, the future complete denture market has been predicted from national data. In Europe, only Finland, Sweden and the UK have repeated national dental survey data over a number of years. In Finland, data were collected by questionnaire; in Sweden, by interview; and in the UK, by examination and interview. In all three countries, the longitudinal trends have been used to predict future edentulism prevalence.

Current edentulism prevalence from the latest available surveys shows some differences between the three countries, with Sweden lowest and the UK and Finland similar. Even making 'pessimistic' assumptions about improved health, the authors predict that the total UK edentulous population will decline from 15 million in 1998 to 6 million by 2028, in a current population of 59 million. The change will be mainly in younger age groups over the next 20 years. In Sweden (population 9 million), with edentulism less than half UK levels, a 60% decrease is predicted over the next 20 years.

Overall, taking into consideration limited data for other countries, the authors consider that the complete denture market is likely to reduce by 50–60% over the next 20 years, with effects on dental education and provision of dental care.

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ONCOLOGY

Betel quid without tobacco as a risk factor for oral precancers

Jacob B J, Straif K *et al Oral Oncol* 2004; **40**: 697–704

This study showed that betel quid chewers who did not use tobacco or alcoholic drinks had a high risk of precancerous lesions

Betel quid appears to be a risk factor for oral cancer, but many people chew it with tobacco. In a rural area in India, 82% of the population was interviewed and screened for oral lesions by trained health workers, who identified 927 subjects with leukoplakia, 170 with oral submucous fibrosis, 100 with erythroplakia, and the remaining 47,773 were judged free of oral lesions. Subjects who smoked or drank alcoholic drinks were excluded from the analysis.

The odds ratios for the above three precancerous conditions of patients were respectively 22.2, 56.2, and 29.0 in subjects who chewed betel quid without tobacco, and 72.2, 73.0 and 63.7 in those who chewed it with tobacco. In a very few who chewed tobacco only, the respective ORs were 263.0, 273.7 with no case of erythroplakia. All ORs were significant above the 5% level. Dose-response relationships were found for both frequency and duration of betel quid chewing without tobacco and the risk of oral precancers.

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IMPLANT DENTISTRY

Impact of IL-1 genotype and smoking status on the prognosis of osseointegrated implants

Gruica B, Wang H-Y *et al Clin Oral Impl Res* 2004; **15**: 393–400

This study suggests a synergism between smoking and a particular genotype resulting in a higher risk of implant biological complications

Smoking is known to cause some implant failure, and is also the principal environmental factor implicated in periodontitis. Interleukin-1 polymorphisms also have some relationship with periodontitis. This study involved 180 implant patients of whom 35 were heavy tobacco smokers, 18 were light smokers, and the remainder were never or former smokers; biological implant complications occurred respectively in 40%, 17% and 13% during a follow-up of 8–15 years.

The patients had received 292 implants over a seven year period. Two different polymorphisms considered as IL-1 genotype positive were identified in 64 subjects. The odds ratio for IL-1 genotype positive light smokers who were having biological complications was 2.35, and for heavy smokers, 4.15 (both $P < 0.05$). Regression analysis showed IL-1 genotype and smoking status were associated with bone loss ($P < 0.05$). IL-1 genotype negative smokers had no increased risks of complications or increased bone loss.

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