

033 *Mutans streptococci* and caries experience in Mongolian children.

(TW3)

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Objective: *Streptococcus mutans* and *Streptococcus sobrinus* have been implicated as the principal etiological agents of dental caries in humans and experimental animals.

The objective of this study was to detect *S. mutans* and *S. sobrinus* by PCR, and to compare their presence with the incidence and risk of dental caries in Mongolian children.

Materials and methods: Dental examination and caries risk assessment using the Cariostat test were carried out on 421 Mongolian children. The subjects comprised 3 groups: children aged 6-30 months, preschool children aged 3-5 years and school children aged 12-15 years.

Oligonucleotide primers designed on the basis of nucleotide sequences of dextranase genes were used for amplification of species-specific amplicons of *S. mutans* and *S. sobrinus*. The presence of bacteria was checked by PCR.

Results and conclusion: In children aged 6-30 months, 45% were positive for *S. mutans* alone, 9% were positive for *S. sobrinus* alone, 18% were positive for both *S. mutans* and *S. sobrinus*, and 28% were negative for both strains. However in preschool children, 63.4% were positive for *S. mutans* alone, and 36.6% were positive for both *S. mutans* and *S. sobrinus*. In school children, 75% harboured *S. mutans* only, and 25% both *S. mutans* and *S. sobrinus*. The dmft/DMFT scores of children positive for both *S. mutans* and *S. sobrinus* were significantly higher than those positive for *S. mutans* alone in all groups of children. The detection of *S. sobrinus* increased statistically significantly with increasing caries risk levels in all children ($p < 0.01$).

The results indicate that children harbouring both *S. mutans* and *S. sobrinus* have a significantly higher incidence of caries than those with *S. mutans* alone, and that *mutans streptococci* colonization increased with increasing age.

034 “Social Nicotine Dependence” of dental undergraduates in Japan

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Objectives: Smoking behavior persisted due to psychological and physical dependence. A new questionnaire, “the Kano Test for Social Nicotine Dependence (KTSND)”, has been developed. Psychological nicotine dependence can be assessed with the KTSND questionnaire which is composed of ten questions with a total score of 30. This study aimed to establish the association between age, gender, smoking status, relationship with smokers and KTSND scores, in a sample of Japanese dental undergraduates. **Methods:** A sample of 798 dental undergraduates at the Aichi Gakuin University, aged 18 to 46 years (21.4 ± 2.8 years), was used. Each was assessed with a KTSND questionnaire. **Results:** The sample included 97 smokers (12.3%), 39 ex-smokers (4.9%), and 654 non-smokers (82.8%). Two hundred and twenty-four students (32.7%) inhaled second-hand smoke at home. The total KTSND score was 11.8 ± 6.3 in this sample. According to smoking status, the KTSND scores were 15.9 ± 6.2 in smokers, 14.9 ± 6.3 in ex-smokers, and 11.1 ± 6.0 in non-smokers. Smokers' and ex-smokers' KTSND scores were significantly higher than those in non-smokers ($p < 0.01$). Those who received second-hand smoke at home showed higher KTSND scores than their counterparts (12.9 ± 6.3 ; 11.5 ± 6.1 , $p < 0.01$). Male students demonstrated higher KTSND scores than female students (12.4 ± 6.6 ; 10.6 ± 5.3 , $p < 0.01$). **Conclusion:** The prevalence of smoking in Japan was lower among dental undergraduates than general population. The total KTSND score was associated with smoking status, relationship with smokers and gender. This study confirmed the differentiability of the KTSND questionnaire. **Acknowledgement:** This study was supported by a Grant-in-Aid for Scientific Research from the Japanese Ministry of Health, Labour and Welfare (H18-Cancer-youth-004) and a 2008 Japan Society for Tobacco Control Grant.