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## ORTHODONTICS

### A randomized clinical trial to compare the effectiveness of canine lacebacks with reference to canine tip

Usmani T, O'Brien KD *et al.* *J Orthod* 2003; **29**: 281-286

Lacebacks (steel ligatures between canines and first molars) produced a mean incisor retroclination of 0.5 mm with minimal mesial molar movement.

Lacebacks are intended to restrain the crown of the canine during edgewise treatment, while allowing the root to tip distally, thus reducing incisor proclination. In this study, 16 patients receiving canine lacebacks as part of orthodontic treatment were compared with 19 orthodontic patients who did not, out of a total of 42 originally randomized to the treatment groups. Examiners were blinded by being given pretreatment and posttreatment study models in random order.

Before treatment, groups were comparable. After treatment with lacebacks, upper incisors reduced proclination by a mean 0.5 mm, but those without lacebacks proclined by 0.36 mm. There was no difference in the effect on mesial molar movement. Multiple regression analysis showed that if canines were initially more distally inclined, incisors were more likely to procline. The authors however do not consider the modest benefits of lacebacks (mean 0.86 mm alteration of incisor proclination) sufficient for them to be used routinely.

## PERIODONTICS

### Epidemiology of necrotizing ulcerative gingival lesions in adolescents

Lopez R, Fernandez O *et al.* *J Periodont Res* 2002; **37**: 439-444

In a Chilean second decade population, diabetes was positively associated with acute necrotizing ulcerative gingivitis (ANUG).

Multistage random sampling was employed to obtain a sample of 9203 Chilean students aged 12-21 yrs. As part of a larger study, ANUG was identified when it occurred, and was examined in relation to a number of demographic and health statistics. Diagnosis was made on the basis of simultaneous necrosis and ulceration in one or more papillae, at the time of clinical examination.

Prevalence of ANUG in this population was 6.7%, and the mode was at ages 15-17 yrs. One quarter of ANUG subjects smoked tobacco and 8 of the 618 total were diabetics. Multivariate analysis identified several factors which were significantly related to ANUG: daily toothbrushing (OR = 1.23), seeing a dentist more than a year ago (1.6) or never (1.93), and being diabetic (2.12). Smoking did not appear related, and the authors suggest

this may be because of its short duration in this young population. However, the surprise finding of diabetes as a risk factor may be related to effects on the host response.

## ORAL BIOLOGY

### Biological interpretation of the correlation of emergence times of permanent teeth

Parner ET, Heidmann JM *et al.* *J Dent Res* 2002; **81**: 451-454

This study supports the hypothesis that innervation plays a significant part in tooth eruption.

This study used data from a Danish database, for 24,737 children born in 1978. Annual records are maintained from age 3 to 18 years, and data were used for all children with at least 12 records. This meant that eruption ages could be determined as the presence of individual teeth was recorded at successive examinations.

A correlation matrix was calculated for eruption data from all combinations (378) of pairs of permanent teeth (excluding third molars) within individual children. The results for boys and girls were closely similar, and all results were above 0.5, indicating that eruption times were more related to individual children than to individual teeth. Furthermore, correlations were higher between teeth which have the same nerve supply, and lower between those with different innervation, supporting innervation as a significant factor in eruption.

## CARIOLOGY; DENTAL PUBLIC HEALTH

### Predicting caries in permanent teeth from caries in primary teeth: an eight-year cohort study

Li Y, Wang W *J Dent Res* 2002; **81**: 561-566

Chinese children with caries in primary molars were highly likely to have caries in permanent teeth 8 years later.

It is currently a matter of controversy whether there are any predictors of caries which may be used to target preventive measures in populations. In 1992, 504 Chinese children aged 3-4 yrs were examined for caries, and in 2000, 362 of them were re-examined.

Mean dmft in 1992 was 6.1 with dmfs 12.5, and DMFT in 2000 was 0.9 with DMFS 1.1; respective caries prevalences at the 2 examinations were 83% and 40%. Where dmft was above the mean, there was a highly significant relationship with permanent dentition caries, and similarly with dmfs. Overall, sensitivity of prediction was high (94%), but specificity was low (20%). Predictive efficiency was highest (65.8%) for caries on all primary molars.