<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Oral health of a group of type 2 diabetic patients in Hong Kong</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Rong, WS; Lo, ECM</td>
</tr>
<tr>
<td><strong>Citation</strong></td>
<td>The 17th Annual Scientific Meeting of the International Association for Dental Research (Southeast Asian Division), Hong Kong, China, 18-20 September 2002. In Journal of Dental Research, 2003, v. 82 Sp Iss C, p. C-647, abstract no. 101</td>
</tr>
<tr>
<td><strong>Issued Date</strong></td>
<td>2003</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/10722/53829">http://hdl.handle.net/10722/53829</a></td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.</td>
</tr>
</tbody>
</table>
96 Socioeconomic Factors and Childhood Traumatic Dental Injuries in Chiang Mai, Ch. CHEUNSWOANUKUL (Dental Public Health Subdivision, Chiang Mai Municipal Hospital, Thailand), P. MALAIKEW and A. DASADEEPAN (Department of Community Dentistry, Faculty of Dentistry, Chiang Mai University, Thailand)

A cross-sectional study was carried out in the Class I level 6 Chiang Mai Municipal School Children to investigate the associations between socioeconomic factors and traumatic dental injuries to anterior permanent teeth. 372 students including 209 males (56.2%) and 163 females (43.8%), aged 11 to 18 years, were examined for the prevalence of traumatic dental injuries. 366 parents of the students (98.4% of the examined sample) returned the questionnaire of their socioeconomic information. The results showed that the prevalence of traumatic dental injuries was higher for boys than for girls (OR: 2.26; 95% CI: 1.87 - 4.12, p = 0.004) after controlling for age and all socioeconomic factors in the study. The most important indicator of socioeconomic factors in this study was "occupational status of mother". After controlling for sex, age and other socioeconomic factors in the study, the different unemployed mothers statistically and significantly experienced traumatic dental injuries 3.78 times (95% CI: 1.35 to 11.64) as much as those with employed mothers (p < 0.02). However, a statistically significant protective effect was presented in the children with their mothers being housewives compared to those whose mothers were employed (OR: 0.14; 95% CI: 0.06 to 0.37, p = 0.001). It is concluded that the socioeconomic factors played an important role in the occurrence of childhood traumatic dental injuries. This study was supported by the Thai Government.

97 Synergistic Effect of TGF-β and 1,25(OH)2D on Human Pulpal Fibroblasts, P. PAVASANT*, T. YONGNHAIRAKUL, K. PATTAMAMPH and M. ARKSENSKIT (Department of Anatomy, Faculty of Dentistry, Chulalongkorn University, Bangkok)

1,25(OH)2D3, and TGF-β1 can influence the function and differentiation of dental pulp fibroblasts. In this study, we examined the effect of 1,25(OH)2D3 and TGF-β1 on human dental pulp fibroblasts. Two strains of SPARC, the 43 and 38-kDa, were detected in each cell type. TGF-β1 increased the expression of SPARC about 2.5-fold after 3-day treatment but had no effect on the ALP activity in comparison with the control. On the contrary, 1,25(OH)2D3 increased ALP activity for 240-fold but had no effect on SPARC expression. The combination of TGF-β1 and 1,25(OH)2D3 induced the increasing of SPARC synthesis and ALP activity by five and ninefold respectively. This finding suggested the synergistic effect between TGF-β1 and 1,25(OH)2D3, in dental pulp fibroblasts on the synthesis of SPARC and ALP activity. This interaction could influence the function and differentiation of dental pulp fibroblasts.

98 The Effect of Time, from the Recording of Definitive Impressions, on the Acceptability of Fit of Cast Cobalt-Chromium Frameworks, S. BANHOO (Department of Prosthodontics, Faculty of Dentistry, Trisakti University, Jakarta)

The aim of this study was to determine if there is an optimal time for the placement of cobalt-chromium prosthesis in a patient's mouth after the recording of definitive impressions. The Null Hypothesis was that there would be no difference in fit on the casts irrespective of time from recording the definitive impressions. Three cobalt-chromium frameworks were made and each framework was assessed for fit on the definitive master cast plus after a second impression recorded two, four and eight weeks after the definitive impression. Assessment of fit was no visual and indirect means. There was a statistically significant difference in fit between the casts at baseline (T0) and after two (T2), four (T4), and eight (T8) weeks, after recording the definitive impressions. The results indicated that the fit of cast cobalt-chromium frameworks was influenced with time. It is recommended that further research should be undertaken in an attempt to produce guidelines to general practitioners.

99 Use of Prior Information for Reducing Dental Anxiety, S.K.S. NG, A.W.L. CHAU, (The University of Hong Kong, Hong Kong SAR, China)

A major issue in both dentistry and health psychology is the strategies for stress management and anxiety coping, e.g., preparing a patient for a critical yet necessary dental procedure. Common approaches involve providing the patient with information about the forthcoming event, instruction of relaxation and coping techniques as well as cognitive, behavioural and modelling approaches. This study examined the role of pre-operative information in reducing anxiety and how the effectiveness of these techniques varies for patients with high and low trait anxiety. Patients were randomly assigned to one of four groups receiving, prior to the operation, a) basic information only (NI), b) basic information with details of the operative procedures (P), c) basic information with details of both the operative procedures and recovery (PR), or d) basic information with details of the operative procedures and recovery led to significant reduction in self-reported anxiety in all patients. In contrast, information on operative procedures details only led to anxiety reduction in low but not high trait anxiety patients. It can be concluded that preoperative self-help information on the operative procedures helps reduce anxiety towards threatening situations or nosological stimuli, be decided in accordance with the trait anxiety of the subjects. For low trait subjects, prior information should be provided in any of the forms P, R or P+R, but for high trait subjects, only the information P should be provided in any of the forms to help reduce anxiety. E-mail: S. Ng@hku.hk

100 Student dental care service in the universities in Hong Kong, M.C. WONG* and C.H. CHU (Faculty of Dentistry, The University of Hong Kong, Hong Kong)

Objectives: The objective of this study was to describe the provision of dental care service by the dental students in Hong Kong Dental School. Methods: The comprehensive list of the dental services in each of the seven universities in Hong Kong on their missions, policy, background, development, organization, staffing, management and future plan of the university student dental service. Results: It was found that there are two routes of operation of the dental service in the universities, which are fully staffed by dental students and fully staffed by the overall university health service. Conclusion: The system was established in the two oldest universities. The institutions' run dental clinics are on-campus clinics and are generally larger in terms of space, facilities and staff. The other mode of operation is adapted by the five newly established universities to reduce the cost of dental services in these institutions. All universities provide subsidised dental care service to their students. The treatment charging system varies with universities and is time-based, demand-based or a combination. All the administrators interviewed were satisfied with the student dental service in their own university. Conclusion: The mode of operation and the charging system of the student dental service varies between the universities in Hong Kong. Despite the variations, the university administration is satisfied with the service provided.

101 Oral health of a group of type 2 diabetic patients in Hong Kong, W.S. RONG*, E.C.M. LO (Faculty of Dentistry, The University of Hong Kong, Hong Kong)

Objectives: To describe the oral health status and oral health related quality of life of a group of poorly controlled type 2 diabetic patients in Hong Kong; and to evaluate the impact of oral health conditions on quality of life in this group of patients. Methods and results: A total of 315 type 2 diabetic patients, aged 41-70 years old, with documented records of glycated haemoglobin (HbA1c) levels over 8% for at least six months participated in the oral health examination and took a panoramic radiograph. They also completed a questionnaire including the General Oral Health Assessment Concept Index (GOHAI) and investigated factors according to the WHO recommended procedures and criteria. Results: 128 patients (53 males, 67 females) participated in the study. The mean HbA1c level was 9.0% ± 1.1. 71.7% of the patients were taking oral hypoglycemic medication and 24.2% of them used insulin injection. The mean GOHAI score of the patients was 12.1 ± 4.8 (M: 12.5, S: 4.8, F: 12.2), which found number of tooth with a perceptual lesion was 1.11 ± 1.44. 60% of the patients required extraction and/or root canal therapy. None of the patients had a completely healthy periodontium, 78.3% and 35.8% of them had shallow and deep periodontal pockets respectively. The mean GOHAI score of the patients was 9.0 ± 5.8. Using a multiple linear regression analysis, the number of tooth with a perceptual lesion and the method to control blood glucose was found to be associated with the GOHAI score. Conclusion: Oral health status of this group of diabetic patients were unsatisfactory, and this was associated with their oral health related quality of life.


The purpose of this study was to investigate the prevalence of cervical abrasion among non-institutionalized elderly. Twenty-three hundred and eighty older adults aged 51 years and over living at home in an urban community in Bangkok. Data were collected from a clinical oral examination and an interview. The tooth wear index (TWI) was used to assess the level of cervical abrasion. In these dentate older adults, 81.8% had some cervical abrasion (TWI ≥ 10). 87.2% having extensive cervical abrasion (TWI ≥ 20). A 5 mm greater than 3 mm deep pulp exposure (TWI scores ≥ 5). The prevalence rates were highest among maxillary premolars, followed by mandibular premolars. Based on logistic regression analyses, factors found to be significantly associated with extensive cervical abrasion were the frequency of sites with extensive cervical abrasion, frequency of brushing, frequency of oral hygiene using fluoride toothpaste or pastilles. The percentage of sites with bleeding on probing (OHR 0.99). In conclusion, these correlations were found in a lack of knowledge toothbrushing as the main etiologic factor. This study was supported by RFF grant No. ROJ9099/2541.

103 Phospholipase enzymes and phospholipase H1 gene (cPLA2) expression in C. albicans, Y.L. SAMARANAYAKE, L.P., SAMARANAYAKE, B.P.K. CHEUNG, K.N. BASSANAYAKE, J.Y.Y. YAU and K.W.N. YEUNG (Oral Biology, Faculty of Dentistry, University of Hong Kong, Hong Kong, SAR)

Candidal phospholipase activity which is linked to the pathogenesis of oral candidiasis has not been investigated in yeasts from HIV-infected individuals. The main aims of this study therefore were (i) to investigate quantitatively the phospholipase expression of phospholipase C in oral C. albicans obtained from HIV-infected individuals and (ii) to correlate the enzyme activities with C. albicans isolates that produce phospholipase C. In total 393 (92.3%) C. albicans isolates were phospholipase positive. Candida species that secreted significant amount of phospholipase C at 24 h were defined as type II. Further, C. albicans isolates that produce phospholipase C were defined by C. albicans strain 70501 requiring no colonies grown on the media. However, C. albicans isolates that produce phospholipase C were found to be significantly as measured by C. albicans 32A1 (p = 0.001) on 24h. The phospholipase expression was significantly different in the isolates that produce phospholipase C. This result supports that C. albicans phospholipase H1 (cPLA2) expression is an important virulence factor in the oral cavity. It was strongly suggest that phospholipase secretion in vivo is due to the expression of C. albicans phospholipase H1 gene (cPLA2). (Supported by a grant from the Research Grants Council and ORG CUG of the University of Hong Kong, Hong Kong, SAR).