

31 Oral Health Conditions of Two Groups of Intellectually Disabled Adults L.P. LIM*, B.Y.Y. MOK and H.P.Y. THEAN (National University of Singapore)

The aim of the study is to compare the oral health conditions of 31 young adults with Down's syndrome (mean age 23.8) to that of an age and sex-matched control group presenting with other forms of intellectual disability. All subjects (IQ 35-55) were non-institutionalised and attended the same vocational training centre in Singapore. Periodontal health was assessed using direct vision and the WHO 621 probe around 6 sites of 8 selected teeth. Full mouth examination was carried out for the assessment of dental caries. The results were analysed using Student's t test. The periodontal examination revealed subjects with Down's syndrome presented with higher percentage of sites with bleeding on probing (mean = 73.6), marginal redness (mean = 85.1), probing depths greater than 3.5mm (mean = 61.2); the differences were however only significant for marginal redness and bleeding on probing ($P < 0.01$). The mean DMF of Down's syndrome clients was 10.2 as compared with 9.6 in the control. While subjects with Down's syndrome presented with lower mean number of decayed (D) and filled (F) components, the missing (M) component was significantly higher (mean = 6.6) than the control (mean = 4.1) ($P < 0.01$). The results confirm findings of other studies that Down's syndrome subjects appear to be at higher risk to periodontal disease, there is also a need to implement early preventive oral health care for the intellectually disabled in the community. This study was supported by the Singapore Dental Health Foundation

32 Dental manpower planning in Hong Kong. Lo ECM (Faculty of Dentistry, University of Hong Kong)

For the public health administrators, good planning is essential to prevent severe shortage of dental personnel to cope with the oral health problems of the population. In contrary, an oversupply of dental personnel results in unemployment and wastage of manpower resources. An accurate projection of the supply of and demand for dental care services is an important component of dental manpower planning. Annual output from dental schools, and the work pattern and attrition of dental personnel are important factors to be considered in projecting supply. Population size and composition, oral diseases level and utilization of dental services will influence the demand. Two major dental manpower planning exercises have been carried out in Hong Kong in 1987 and in 1996. A model developed by a joint WHO/FDI working group was used in both exercises to project the demand for dental care from oral epidemiological data. This model was found to be useful and results of the exercises were used as a guide to determine the annual intake of students into the dental school. At present there are about 1,500 dentists in Hong Kong and the population size is 6.2 million. Utilization of dental services among the Hong Kong adults is low, with only about 40% of the middle-aged and 20% of the elderly paying a visit to a dentist within a year. Results of the latest planning exercise showed that the present annual intake of 50 dental students is appropriate and there will not be a great discrepancy between the supply and demand in the next 10 years if there are no drastic changes in the population's demand for care and the attrition rate of dentists.

33 Oral Health and Dental Services Provided in a Capitation Based Youth Dental Care Programme (YDCP) in Hong Kong. E. Schwarz (The University of Hong Kong, Faculty of Dentistry), Hong Kong

Almost 90% of participants in a government School Dental Care Service for primary school children do not see a dentist within the year after promotion to secondary school. A Youth Dental Care Programme (YDCP) was set up to promote continued preventive dental care through an organized transfer from the public clinics to the private dentists. Financing was an annual capitation fee paid by parents. Participating dentists in two pilot districts reported on enrolled students' compliance with recalls and which dental services were provided at the dental visits. Specially produced monitoring cards containing information on the dentist, the student, oral health status (GBI and VPI indices on 6 indicator teeth), and an assessment of the value of the programme for the dentist's practice were distributed to all participating dentists (n=28) with a short explanation. No attempt was made to calibrate the dentists. Information was received from 23 dentists (82%) concerning 66% of the eligible students (n=1024). Most students were accompanied by their mother (70%) and most dentists planned to recall the students (73%). Only around 20% of students had no plaque and 40% were free of gum bleeding. Plaque on all indicator teeth was found in 35% of students and 16% had bleeding gums around all indicator teeth. Most students (92%) received at least one dental care item, dental examination, scaling and polish and oral health education being the most common services. The original purpose of the YDCP, to create a predominantly preventive oriented programme for secondary school students in private practice was fulfilled, however the overall participation rate was only 17%. The main barrier to participation was a low perceived need for dental care.

34 Utilization of Professional Dental Care Among Mothers. NURMALA SITUMORANG* (University of North Sumatra, Faculty of Dentistry, Medan, Indonesia).

The available literature indicates that dental care utilization is low relative to the utilization of other types of medical services. To identify factors which are related to utilization of professional dental care as to support major policy at various level of the dental care structure, a study was carried out in the district of Medan Kota among 275 mothers with dental symptoms one month before the study was done. Sampling was conducted with a two-stage cluster, and respondents were interviewed in their home using interview guide. A combination of univariate, bivariate and multivariate analyses (Multiple logistic regression) was used. In the episode of dental symptoms, mothers responded in various ways: 11.30% seeking professional care only, 12.40% nonprofessional care only, such as self-medication, 65.50% both professional and nonprofessional care, and 10.90% taking no care. Among various factors it was found that need factor (DMF-T) was to be the most important factor in seeking professional dental care. The magnitude of association (Odds ratio) indicates that mothers with more number of DMF-T were 2.60 times more likely to seek professional dental care than mothers with less number of DMF-T ($p = 0.003$; confidence interval: 1.37 ; 4.92), while attributable-risk percentage = 61.53%. We conclude that mothers with more number of DMF-T tend to seek professional dental care. A possible strategy would be the implementation of dental screening in the detection and evaluation of clinical dental conditions of mothers. This study was supported by The Department of Dental Public Health, Faculty of Dentistry, University of North Sumatra.

35 THE IMMUNOGLOBULIN-A LEVELS IN SALIVA OF SMOKERS AND NON-SMOKERS. R. FARIDA* (University of Indonesia, Jakarta, Indonesia)

The adverse effects of tobacco smoking on health are well known. Previous studies in subjects with a high standard of oral hygiene have shown a greater bone loss in smokers than non-smokers. The aim of this investigation was to determine the IgA levels in saliva of smokers and non-smokers with gingival health and disease, also with enamel caries, by turbidimeter. The study group consisted of 58 healthy dental students, 27 of whom were regular smokers. The clinical parameters studied of gingivitis were gingival bleeding on probing, gingival redness and gingival exudate. Whilst, the other group studied was with dentine caries. The results showed that the smokers with gingivitis had lower IgA levels in saliva (54.74 IU/ml) compared with the non-smokers with gingivitis (107.84 IU/ml). Furthermore, the smokers with healthy gingiva had lower IgA (37.18 IU/ml) as compared with the non-smokers (68.8 IU/ml). Finally, lower IgA in saliva was also found in smokers with dentine caries (51.99 IU/ml) than in non-smokers (98.45 IU/ml). These differences were significant ($p < 0.001$) as tested by ANOVA. Therefore, we conclude that smokers have reduced immune response.

36 Effectiveness of toothbrushing using the Roll and the Free methods in decreasing gingival inflammation. SETIYOHADI* and KRISNAMURTHY (Faculty of Dentistry, Trisakti University, Jakarta, Indonesia).

The effectiveness of toothbrushing using the Roll method compared to the free method is still controversial. This study was undertaken to evaluate the effectiveness of both methods in decreasing gingival inflammation. Sixty subjects of the age group 11 to 12 years with Papilla Bleeding Index (PBI) = 1 - 2 were divided into two groups, each group consisting of 30 subjects. The first group received a daily professional toothbrushing treatment with the Roll method and second group with Free method. Two weeks later, the subjects were assessed for their decrease in gingival inflammation. Data were evaluated statistically, resulting in a highly significant decrease ($p < 0.01$) in gingival inflammation in both groups. There was, however, no significant difference in the decrease of gingival inflammation between the groups ($p > 0.05$). It can be concluded, therefore, that the Roll and Free methods of tooth-brushing have equal effectiveness in decreasing gingival inflammation.

37 Serum Immunoglobulin G Levels in the Gingivitis and Periodontitis Predilection Areas. M. H. SADONO*, I. RIANASARI, and B. Oe. ROESLAN (Faculty of Dentistry, Trisakti University, Jakarta, Indonesia).

The development of the gingivitis into periodontitis may be caused by failure of the host immune responses. The aim of this study is to know the difference of serum IgG levels in gingivitis and periodontitis. Serum IgG levels were measured from 6 gingivitis and 6 periodontitis patients and the severity of periodontal diseases were determined by Periodontal Disease Index. Blood were collected directly from predilection area using specific foam containing EDTA and the IgG assay was performed by using radial immunodiffusion in a single blind method. It was found that serum IgG level in the gingivitis predilection area (9.45 ± 2.54 mg dl⁻¹) was significantly lower ($p < 0.01$) than in the periodontitis predilection area (16.75 ± 2.36 mg dl⁻¹) as tested by Student's t-test. Serum IgG level in the predilection area can also be used to predict the severity of periodontal diseases (R-square = 0.9458; $p < 0.01$) as analysis by regression. Hence it was concluded that the development of the gingivitis into periodontitis is not caused by decreasing production of serum IgG in the predilection area and serum IgG level can be used as indicator of the severity of the periodontal diseases.

38 Stress and Severe Periodontitis in Thai Population. N. Hongprasong*, V. Buatongsri, P. Phantumvanit, Y. Songpaisan, & N. Clarke (Fac. of Dent. Chulalongkorn Univ. Fac. of Publ. Hlth. Mahidol Univ. & Fac. of Dent. Univ. of Adelaide)

Since severe periodontitis had been found in developed countries similar to those in developing countries, stress is convinced to be one of modifying factors of this disease. The purpose of this study was to examine whether stress relates to severe periodontitis in the risk group population. The urban group with CPIITN4 was selected from workers in the banking and teaching professions (111) while rural group (248) was chosen from 4 villages in Chiangkam, Prayao province. The Spielberger Trait Anxiety index (20 questions with a potential score ranging from 0-60) was used as stress index and the relationship between stress and severe periodontitis was assessed. It was found that in urban group had greater number of high stress than rural group (93.7% VS. 80.2%) although urban group had lesser number of severe periodontitis than those in rural area (17.0% VS 27.9%). There was no significant difference between the percentage of CPIITN 4 persons in low and high stress group in urban and rural areas (33.3% VS 27.85 and 38.2% VS 35.17%). It seems no relationship between stress and severe periodontitis, however other risk factors should be considered. Supported by Chulalongkorn University Rajadapisek Sompot Research Fund.