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Oral Session O19 – Prevention 1

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Oral Session O19/Prevention 1

O19-136

High school children as advocates of oral health promotion in schools

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Introduction: School-based dental health programs conducted by dentists, hygienists, dental nurses and school teachers had shown several levels of success. The recent program was initiated and conducted as a pilot study. Aim of our study was to investigate the dental health knowledge in 9–10 year old.

Materials and methods: Oral health education was designed for 20 high school children (Experimental Group-I) and 20 primary school teachers (Experimental Group-II) and training workshops were carried out by the dental team in liaison with school administrators and sponsors (Oral B, Wrigley's). Group I and Group II were assigned with 305 and 298, grade 3 (age 9–10 years) children respectively in promoting oral health. There was no control group. A pre- and post-program questionnaire survey for knowledge, attitude and practice of oral health was answered by all the children at the beginning and at the end of the academic year. The data were statistically analyzed.

Results: Knowledge about oral health was improved in both the groups. Significant increase of attitude and practice of oral care was seen well in children of Group I. Level of motivation was high among high-school children as trainers, when compared to teachers.

Conclusion: Adolescent's interaction and reinforcement on regular basis had a great impact on younger children. Hence we recommend the inclusion of high school children in the oral health promotion program as they will be available in school for a period of 3–5 years.

O19-137

Prevention of oral health – knowledge of polish paediatricians

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Introduction: Clinical experience and a recent published literature review indicated that paediatric dentists are not contacted by the parents unless there are acute oral health problems in their children. Paediatricians, who are checking the children on more frequent basis, might be in an ideal position to give parents and caregivers advice about prevention of oral disease.

Materials and methods: A questionnaire on oral health knowledge was distributed to all participants of a paediatric conference. We obtained a response rate of 57%. Questions comprised sections on socio-demographic and medical practice characteristic as well as knowledge in regard of oral health risk factors and attitude towards the prevention of that diseases.

Results: 57% paediatricians examine child's oral cavity during regular check up visits. One third of questioned paediatricians refer patients to a dentist only when they recognize some dental problems. 35% of questioned paediatricians refer a child to a dentist when it reaches second year of age. Almost half of

participants believe that a dental examination should be performed every 6 months. Only 22% of paediatricians recommend tooth brushing in a 1-year-old child and they recommend a tooth paste without fluoride.

Conclusion: Our results showed a lack of oral health knowledge in Polish paediatricians. It also showed the need to sensitize paediatricians for dental problems as well as to improve the collaboration between paediatricians and paediatric dentists.

O19-138

The role of salivary carboanhydrase and salivary buffers in caries prevention in children

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Introduction: Caries risk assessment is of special importance in preventive dentistry. Saliva is an important ethiological factor in caries pathology. The aim of this study was to determine carboanhydrase activity, pH value and concentrations of salivary bicarbonates and phosphates in unstimulated and stimulated saliva of children with low and high caries risk and validate the importance of carboanhydrase activity in caries prevention.

Patients and methods: The study included 123 children with permanent dentition, with approximately equal sex distribution and age (13 ± 0.7). The investigated children were divided into two groups according to the DMF. The first investigated group (low caries risk – LCR) was composed of 52 children with an average DMF=0. The second one encompassed 71 children with high caries risk (HCR), with average DMF=7.7. The samples of unstimulated and stimulated saliva of each child were collected into sterile tubes and immediately closed to prevent the loss of bicarbonates. pH value and bicarbonate concentration were determined immediately and saliva samples were then frozen at -20°C until the determination of the other parameters.

Results: Carboanhydrase activity was significantly lower in saliva of HCR children ($P < 0.01$), compared to LCR group. Also, the salivary buffering capacity, estimated through bicarbonate and phosphate concentrations, was significantly lower in HCR in comparison to LCR group.

Conclusion: The obtained results show that the investigated parameters play an important role in diagnostics of caries risk in children, which could be of importance in the prevention of this frequent dental disease.

O19-139

Obesity and oral health among adolescents in the United Arab Emirates

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Introduction: Today, with the improvement of living standards all over the world, obesity is posing a growing threat to the health of both children and adults in developed and developing countries. The association between obesity and many systemic chronic

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diseases are well established. However despite the high prevalence of obesity among children in the UAE such an association has not been investigated.

Materials and methods: This is a cross sectional study involving 11–14 year old adolescents, who were recruited from Intermediate schools Grade 6 to 9, of both genders attending private and public schools in Sharjah City, UAE. The study consisted of two parts: 1) Questionnaire to assess the socio-demographic characteristics, dietary habits, physical activity, oral health behaviours, medical history, school performance and psychological status. 2) Clinical examination to assess oral health and Anthropometric measures to record height and weight.

Results: There is a high prevalence of dental caries (21% caries free), and low percentage of filled teeth (81% no restoration). The percentage of overweight and obese was 57 (27%) and 37(18 %) respectively. The median BMI was higher among female adolescents 22.3 (19.4, 25.5) in comparison to males 20.3 (17.8, 25.8). Emiratee had lower BMI 20.0 (17.8, 25.8) compared to other Arab adolescents 22.5 (19.1, 25.6). Frequency of fast food consumption was associated with a significant increase in BMI ($P = 0.006$). T.V viewing while eating also significantly contributed to increased DMFT ($P = 0.002$).

Conclusion: Adolescents who watch TV while eating had a higher number of DMFT. No association was found between BMI and DMFT.

O19–140

Pathway to oral health: the management of high caries risk paediatric patients

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Introduction: Early childhood caries (ECC) is a form of dental decay that affects the primary dentition. Because of their very young age and the complex nature of condition, most children affected with ECC require treatment under general anaesthesia (GA). This report will discuss the Pathway to Oral Health program aimed at patients waiting for treatment under GA.

Clinical management: Patients with ECC referred to SDH are assessed by a paediatric dentist and placed on a waiting list for treatment under GA. The large number of patient referrals has resulted in a lengthy waiting time for GA treatment. During the period between the initial assessment and dental treatment, the patients are seen by the clinic dietician for dietary counselling, and a dental therapist for oral hygiene instructions and/or caries stabilisation. Two weeks after completion of dental treatment, the patients are given recall appointments to assess the restorations, oral hygiene status and dietary practices. These patients are then reviewed at regular recall intervals at SDH or referred back to their local community clinic. A preliminary review of patient records over the past 4-year has revealed a decrease in the number of repeat GA treatment.

Conclusion: Pathway to oral health was developed to address the need for a preventive program for patients waiting for treatment under general anaesthesia. It aims to prevent the recurrence of the disease by focusing on the importance of caries prevention.

O19–141

Pregnant women's knowledge of oral health care for children

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Introduction: Good oral health for young children is dependent on the knowledge and understanding of their parents. Effective dental caries prevention requires that appropriate preventive measures are introduced as the first teeth erupt. The aim of the study was to investigate expectant mothers' knowledge about preventing dental caries in infants.

Materials and methods: A questionnaire was designed to assess knowledge, dental experience and understanding of dental caries prevention in pregnant women. Three hundred and twenty five questionnaires were distributed through public and private lead maternity carers over a 4-month period. Responses were collated and analysed using SPSS.

Results: One hundred and four surveys were completed. Oral health was important for children in 94 per cent of respondents and 72 per cent thought that children should have their teeth brushed before 1 year of age. Only 29 per cent believed their child should be seen by an oral health professional before the first birthday. Several interventions to prevent dental caries were identified by 63 per cent of the respondents. However, 43 per cent noted they did not have enough information about their child's dental needs. Mothers would like information from well-baby nurses, family medical practitioners, family dentists or the media.

Conclusion: Despite the availability of an oral health care system for pre-school children, it appears that significant numbers of expectant mothers were unaware of this and do not have good knowledge of how to prevent dental caries. Results will inform the design of further oral health promotion resources for this group.

O19–142

Comparison of salivary characteristic between children with ECC and caries-free children

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Introduction: Early childhood caries (ECC) is one of the most common chronic childhood diseases. Saliva as a host factor plays essential roles in maintaining the integrity of oral structures. The aim of the present study was to compare salivary pH, buffering capacity and sIgA, calcium and phosphate concentrations between patients with ECC and caries-free children.

Materials and Methods: In this cross-sectional study, samples of unstimulated saliva of 90 children (45 in ECC group & 45 in caries-free group) were taken with Scully method. The pH and buffering capacity were determined by pH meter. Secretory IgA, calcium and phosphate concentrations were quantitated with ELISA, CPC photometric, phosphomolybdate/UV methods. Data analyzed using SPSS-13 software. The protocol was reviewed and approved by the Medical Research Ethics Committee of Rafsanjan University of Medical Sciences.

Results: The mean pH was significantly higher among caries-free group and the buffering capacity was significantly better among this group ($P < 0.05$). The mean sIgA concentration was significantly higher among ECC group. There were no statistically

significant differences between calcium and phosphate concentrations between two groups.

Conclusion: Further studies on the effects of salivary characteristics and components like pH, buffering capacity and immunoglobulin concentration may help in the better understanding of the nature of early dental caries in children and may also be helpful in the prevention of early childhood caries in the future.

O19-143

Baby clinic – a pre- and postnatal project to promote oral health

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Introduction: Severe Early Childhood Caries (S-ECC) affects primary teeth soon after their eruption. The consequences of this condition can include malnutrition, pain, tooth extractions and/or restorations. The present study was designed to examine the feasibility of implementing a comprehensive pre-natal and post-natal oral care program, to prevent S-ECC and to assess its effectiveness on the prevalence of this condition.

Patients and methods: Pre-natal phase: Lectures by pediatric dentists to couples enrolled in a birth preparation class emphasized feeding habits, avoidance of mutans streptococci transmission and the early establishment of oral hygiene. An informed consent was obtained and the project approved by the Helsinki committee. The post-natal phase consisted of individual dental visits scheduled at regular intervals according to the babies' risk for caries development and comprised: (a) oral health and risk assessment (b) diet and hygiene counseling (c) fluoride varnish application in high risk patients.

Results: 91.2% of mothers and babies had no health complications. 137 babies attended the first dental consultation; their average age at this appointment was 14 months. The prevalence of caries between the examined infants was very low: only 4 were found to have caries (2.9%). If we disregard those who came only once, 4 out of 103 developed caries, what is equivalent to 3.9%. In both cases the prevalence of caries in young children, age 3 or less was significantly lower ($P < 0.001$, 1-Sample chi-square test) than reported before (15.3%).

Conclusion: The Baby clinic concept is effective in preventing and controlling the severity of S-ECC.

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