

## Oral Session O02/Cariology 2

### O02-9

#### Investigation of dental health indices and caries associated microflora in children with cleft lip and palate

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**Introduction:** In children with oral cleft, a healthy primary dentition is important because of the increased need of orthodontic treatment during the primary dentition and transitional period. Early extractions or malformations of teeth will result in loss of bone preserved by primary teeth bordering the alveolar cleft. The purpose of the present investigation was to assess the prevalence of *Streptococcus mutans* and *Lactobacilli* in 3–5 year-old children with cleft lip and palate attending Pediatric Dentistry department of Marmara University and to determine the possible factors associated with the colonization of these microorganisms.

**Patients and methods:** 45 children with cleft lip and palate and 34 healthy controls (21 decayed, 13 caries free) matched for sex and age attending the same department participated in the study. All subjects accompanied by their parents were called for a clinical and radiological examination and a saliva sample collection. The parents were interviewed with a structured questionnaire.

**Results:** The mean caries experience (dmft) was  $6.42 \pm 5.48$ . The dental anomalies most seen in children with cleft were: rotation (60%), hypodontia (37.8%) and enamel alterations (33.3%). In children with cleft lip palate the values of MS, LB and *Candida* were high. Salivary secretion rate was significantly low especially in children who used dental appliance.

**Conclusion:** These results underline the need for a more intensive approach to prevention of oral disease in children with cleft lip and palate to optimize clinical outcome. Therefore a pediatric dentist responsible for initiating the preventive program should be included in the cleft team.

### O02-10

#### Avoidance behaviours as risk indicators for dental caries in 5-year-old children

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**Introduction:** The objective of the study was to explore the associations between dental anxiety and dental avoidance behaviour in parents and children and caries experience in 5-year-old children. It was hypothesized that parents' self-reports of dental anxiety and lack of access to dental care were related to child dental health and thereby could be assessed as risk indicators for dental caries in 5-year-old children.

**Materials and methods:** Data were collected from the dental records and by clinical and radiographic examination of 523 children. The parents completed a questionnaire regarding socioeconomics, dental anxiety, dental attendance and behaviour management problems. Bivariate and multivariate logistic regression was conducted. A written, informed consent was obtained from all parents. The investigation was approved by the

Regional Committee for Medical Research Ethics and The Norwegian Social Science Data Services.

**Results:** Having missed dental appointments before the age of five (OR = 4.7), behaviour management problems (OR = 3.3), child dental anxiety (OR = 3.1) and parents reporting no access to dental care (OR = 2.1) were bivariately associated with caries experience. In multivariate logistic regression, having missed dental appointments (OR = 4.0) and parents reporting behaviour management problems before age of five (OR = 2.4) were statistically significant risk indicators for having caries experience at the age of five, when controlling for parents education level and national origin.

**Conclusion:** Behaviour management problems during previous dental visits and parents that avoid bringing their child to scheduled dental appointments represent risk indicators for dental caries in 5-year-old children.

### O02-11

#### Oral biofilm activity, culture testing and caries experience in school children

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**Introduction:** To evaluate a chair side caries assessment protocol utilising an oral health questionnaire, oral biofilm activity, culture testing and routine dental examination in 5–12 year-old children at two regional schools.

**Patients and methods:** Permission was obtained from regional hospital and school ethics committees and informed consent was given by a parent or guardian for each volunteer child participant. Parents were interviewed by telephone and completed an interviewer assisted oral health questionnaire regarding current and previous child oral health behaviours. Oral biofilm was sampled from the labial and buccal surface of a maxillary incisor and the lingual surface of the mandibular incisor teeth using a sterile cotton swab. Biofilm activity was measured directly in relative light units (0–9999) using an adenosine triphosphate (ATP) bioluminescence meter. Bacterial counts were recorded after 48 h incubation by counting the highest density of colony forming units (Low, Medium and High). Each child's dentition was examined clinically and radiographically and their current caries experience recorded using dmfs and DMFS indices. Cross tabulations of selected categorical variables and grouped caries indices were performed using a Pearson Chi Square analysis.

**Results:** Caries experience was significantly associated with oral biofilm activity (RLU < 9000, 9000–9499, > 9500) in 292 children examined to date ( $P = 0.3$ ). Bacterial counts and oral health behaviours were not significantly associated with caries indices.

**Conclusions:** Oral biofilm activity rather than bacterial counts is significantly prognostic of baseline caries indices in this school child population. This study was supported by a Queensland government clinical research grant.