
Oral findings in special needs children with and without gastrostomy. AMAL H. JAWADI, THE OHIO STATE UNIVERSITY AND COLUMBUS CHILDREN'S HOSPITAL, COLUMBUS, OH.

Children with global disabilities, including oral motor dysfunction, may require gastrostomy (GT) feeding and then accumulate calculus at a rate far exceeding non-GT children. The implication of the calculus accumulation on aspiration pneumonia (AP) common in GT patients is unknown as is the effect of calculus removal during routine dental visits. The OBJECTIVE of this study was to compare AP-associated microflora, calculus accumulation, and oral hygiene/care seeking behaviors in children with special health care needs (SHCN) with GT and SHCN without. EXPERIMENTAL METHODS: This IRB-approved study used a convenience sample of 27 GT children, 3-12 years of age, drawn from Columbus Children's Hospital and matched for age and gender with 27 comparison SHCN children from the hospital dental clinic. Parents/caretakers completed a piloted and revised questionnaire on medical and oral health parameters and 2 trained examiners recorded calculus and gingival inflammation with standard indices, reconciling differences to one score. Plaque was obtained using a pre-weighed dry paper-point. Samples were drawn from saliva using sterile pipettes and cultured by a trained technician, using standard bioassay and plating procedures in the hospital clinical laboratory within 20 minutes of sampling. RESULTS showed no significant ($P \leq 0.05$ /chi-square) differences between groups for age, gender, weight, or primary diagnosis, but GT children received 4 medications versus 1 for non-GT. GT children were significantly more likely to have had AP, need special feeding, and drool, but groups did not differ significantly for vomiting, constipation or swallowing disorder. Oral health measures were not significantly different for brushing frequency, dentifrice use, brushing problems, frequency of dental care or gingival inflammation, but GT patients had significantly more plaque and calculus. GT patients had significantly ($p \leq 0.005$ /Kruskal-Wallis) more *H. influenzae* with trends to more gram - enteric rods, *Pseudomonas* and *S. pneumoniae*, with high concentrations in several GT-patients and little or none in comparisons. GT children had significantly less *b*-streptococci than non-GT children. CONCLUSIONS: GT children had significantly more of one AP-associated organisms than comparison non-GT SHCN children, as well as significantly more calculus and plaque in spite of similar care seeking and hygiene behaviors. High concentrations of AP-associated organisms in some GT patients suggests further study.