

Early Childhood Caries Among Premature Children Enrolled in WIC: A Retrospective Case-Controlled Study

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Purpose:

Investigate the association between gestational age and early childhood caries (ECC) experience, while secondarily evaluating factors that may influence development of caries.

Methods:

Data collected from patients enrolled at the University of Iowa's Infant Oral Health Program consisted of prenatal history, child's demographics, neonatal history, oral hygiene, dietary habits, and clinical findings (visible plaque, enamel defects, and caries). Bivariate and logistic regression statistical analyses were utilized ($\alpha=0.05$).

Results:

Included in the study were 498 randomly matched premature and full-term subjects (mean age=21 months [range: 6-71 months]; 51.4% males and 38.9% African Americans. Bivariate analysis revealed no significant differences regarding cavitated and non-cavitated caries experience ($p>0.10$) between full-term and premature subjects. Additionally, premature subjects were more likely to eat between-meal cariogenic snacks ($p=0.028$), drink cariogenic beverages ≥ 2 times per day ($p=0.027$), not have their teeth brushed daily ($p<0.001$), and less likely to have seen a dentist ($p=0.04$). Logistic regression modeling among premature subjects showed number of teeth present (OR=1.24; $p<0.001$) and presence of visible plaque on maxillary incisors (OR=5.69; $p<0.001$) to be significantly associated with ECC.

Conclusions:

While there was no evidence that premature birth is associated with ECC, premature subjects had cariogenic dietary behaviors and high-risk oral hygiene behaviors.