

DENTAL CARIES PREVALENCE AND ORAL HEALTH PRACTICES AMONG HIV-INFECTED CHILDREN AT KENYATTA NATIONAL HOSPITAL

Presented by

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Signed

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Declaration

This research project is my original work and has not been presented for Academic award in any other University.

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Supervisor

This research project has been submitted for the award of the Post Graduate Diploma in Research Methodology (PGDRM) with my approval as the University supervisor.

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Abstract

Background

Worldwide studies on oral health of HIV- infected children report high caries prevalence, particularly in the primary dentition. Besides being immunocompromised, other factors may be contributory to the high caries prevalence found in these children, including their socioeconomic background, uptake of dental treatment and oral health practices such as tooth-brushing frequency, feeding practices and the long-term use of sugar-containing medicines. There is very scanty information on the oral health status of Kenyan children who are HIV-positive.

Study objective

To determine the prevalence of dental caries among HIV-infected Kenyan children at Kenyatta National Hospital (KNH), Nairobi, determine their oral health practices and the association between oral health practices and dental caries experience.

Study population

Two hundred and twenty HIV- infected children aged 3-15 years enrolled at the KNH –CCC.

Study design

This was a descriptive cross-sectional study carried out to address the paucity of information on the prevalence of dental caries and existing oral health practices in a cohort of HIV-infected children.

Materials and methods

A purposive sampling method was used to select the children who participated in the study. All children who attended and met the inclusion criteria during the period December 2010 – February 2011 were recruited on a daily basis until the required sample size was achieved. Data was collected in the form of interviews and clinical oral examinations. Interviews were carried out using structured questionnaires containing both open and closed questions in order to ascertain the children's socio-demographic characteristics and oral health practices. An intraoral clinical examination of each child was then carried out to determine the presence of dental caries using dmft/DMFT indices. Data entry and coding was done and analyzed using the SPSS version 14.0 for Windows.

Results

One hundred and twelve (50.9%) males and 108 (49.1) females participated in the study; mean age 8.36 +/- 3.45 SD. Sixty percent of the children resided in urban Nairobi.

The accompanying caregiver was mostly 135 (60%) the mother. Education level of heads of households was mainly (50.9%) primary and secondary level, while 85 (38.6%) children came from households that were not headed by a male adult.

One hundred and twenty-six (57.3%) children brushed their teeth regularly, at least once a day while 41 (18.6%) children consumed sugary snacks at least once a day. Dental attendance was low with 179 (81.4%) children having never visited the dentist.

The overall prevalence of dental caries was 65%. The mean dmft and DMFT scores were 1.75 and 1.08 respectively. Gender differences in caries experience was not significant ($X=1.41$ $p=0.24$).

Caries experience was higher in the younger children for both dmft ($F=7.97$ $p=0.00$) and DMFT ($F=24.29$ $p=0.00$), as well as in children who resided in the urban regions ($X^2=15.8$ $p=0.00$).

Both DMFT and dmft scores were significantly higher in children who had visited the dentist ($F=10.16$ $p=0.00$, $F=8.50$ $p=0.00$) respectively, those with increased consumption of sugary snacks for DMFT ($F=4.09$ $p=0.00$) but not for dmft ($F=1.80$ $p=0.12$), and those who took their medication in the form of syrups ($F=4.97$ $p=0.03$).

Conclusion

Dental caries prevalence in 3-5 year-old children attending KNH-CCC was high and much of the caries remained untreated. The prevalence was significantly higher in the primary dentition than the permanent dentition.

A high caries experience was associated with residing in the urban region, increased consumption of sugary snacks and use of syrupy medication. The most unfavorable oral health practice was low attendance for dental treatment.

Recommendations

Due to the high caries prevalence observed in children who participated in this study, advocacy is highly recommended for inclusion of preventive oral health to form part and parcel of comprehensive care for HIV-infected children within the context of Primary Health Care (PHC).

There is indication for expansion of the study with a view to making the results more generalizable to the larger population of HIV-infected children.