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RESEARCH ARTICLE

ASSESSING THE KNOWLEDGE AND AWARENESS CONCERNING PREVENTION OF EARLY CHILDHOOD CARIES AMONG PREGNANT MOTHERS ATTENDING YENEPOYA MEDICAL AND DENTAL COLLEGE HOSPITAL

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ABSTRACT

Objectives: To determine and assess the oral health knowledge and awareness of early childhood caries (ECC) and its prevention among the pregnant mothers.

Methodology: About 110 mothers were interviewed combined with questionnaires. The interview and questionnaires composed of questions about family demographics, personal oral health and hygiene measures, causes of ECC as per their purview and earlier knowledge, breast feeding and bottle feeding practices, types of food, level of dental care and hygiene practices of both mother and children, preventive methods of ECC, oral health awareness educational programs attended, if any, and knowledge regarding oral hygiene measures.

Results: 95 % of the mothers were from low socioeconomic status and low educational status. None of them knew about fluoride and its role in teeth and bones. Nor anyone knew about mother - to - child transmission of S.mutans. Majority of them were not aware about mother's oral hygiene importance during pregnancy. However all knew that sugars and starchy foods are dietary cause of dental caries. Low level of education, low family income, and having more children, were significantly correlated with knowledge regarding infant oral health and dental care. The knowledge and awarenwess of ECC prevention was poor and unsatisfactory.

Conclusion: Intensified mother and infant oral health care educational programmes (including home visits) is of utmost necessity and importance. Gynaecologists and pediatricians also have a very important role in these aspects of prevention of ECC.

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INTRODUCTION

Early childhood caries (ECC) is an infectious disease with S. mutans, the major reservoir which infants acquire it is from their mother (Berkowitz and Jones, 1985; Berkowitz, 2003) and is associated with unusual dietary practices (Hallett, 2003; Alaluusua and Renkonen, 1982; Ramos-Gomes *et al*., 2002). ECC initially presents with smooth-surface carious lesions affecting the primary maxillary incisors; as the disease progresses, decay appears on the occlusal surfaces of the primary maxillary first molars, with subsequent spread to other primary teeth, resulting in the eventual destruction of the primary dentition. ECC has been identified as a serious public health problem in lower socio-economic populations.

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The education of mothers or guardians (i.e., caregivers) is an essential aspect of ensuring good oral health for infants and children. Caregivers' awareness of oral health and the prevention of oral disease have an important and lasting impact on children's oral health and health-related behavior. Young children are susceptible to ECC if certain preventive measures are not initiated at an early age. Caregivers must have an oral health awareness that includes understanding the causes of ECC and the methods of prevention if the oral health of their children is to be preserved.

These caregivers are primarily responsible for initiating practices that will prevent dental disease. This includes proper self-care practices and dietary habits that prevent dental caries (Akpabio *et al*., 2008).

Objectives

1. To explore, determine and assess the oral health knowledge and awareness of early childhood caries (ECC) and its prevention among the pregnant mothers
2. To identify whether factors such as age, years of education, number of children in the family and their socioeconomic status affect their knowledge.

MATERIALS AND METHODS

110 pregnant mothers attending OPD, and patients admitted in the wards, Dept of Gynaecology & Obstetrics in Yenepoya Medical College Hospital, were interviewed combined with questionnaires, over a period of 10 days, with an average of 10-12 mothers per day.

The questionnaire and interview contained questions about:

- Family demographics & background,
- Socioeconomic status
- Personal oral health and hygiene measures
- Causes of ecc & preventive methods of ECC as per their purview and earlier knowledge
- Dietary habits
- Oral health awareness educational programs attended if any.
- Source of drinking water
- Any advice by gynaecologist / pediatrician regarding oral health care aspects.

RESULTS

- Majority (95 %) of the mothers were from very low socioeconomic status and about 5% were of middle class status
- 90 % of the mothers had educational status of not beyond 7th std, and same was true with their spouse as well.
- 50 to 60% of them were hesitant to face the interview. (This difficulty was overcome mainly with the help of female dentists for conducting the interview).
- None of them knew about Fluoride and its role in teeth and bones
- Nor anyone knew about mother - to - child transmission of S.mutans.
- Also none of them knew how many milk teeth a child had and by what age all would have erupted.
- 58 % answered correct about cleaning the gum pads of an infant even if teeth had not erupted out of which only 5 % knew how to clean.
- Majority of them were not aware about mother's oral hygiene importance during pregnancy.
- But all knew that sugars and starchy foods are dietary cause of dental caries.
- Only 23% knew when to start brushing a child's teeth; however, 95% knew that at least twice a day teeth brushing is necessary.
- Only 12% knew that breast milk can cause dental caries but surprisingly 87% agreed that night time breastfeeding or bottle feeding is harmful to teeth.
- Nobody knew when to take their child first to a dentist.
- Majority said it is not necessary to fill & treat milk teeth (anyway they will shed!!!)
- Only 3% answered that dental caries is the most common chronic disease in the childhood.
- Surprisingly neither any gynaecologist nor any pediatrician had suggested them to have a routine dental check up for the mother or the child.

DISCUSSION

These results prove a real need for information about dietary habits, because the level of oral health knowledge was unsatisfactory. Prevention of ECC begins with intervention in the prenatal and perinatal periods. Prevention of cariogenic feeding behaviors is one approach to preventing ECC. A promising approach toward primary prevention of ECC is to develop strategies that target the infectious component of this disease, for example by preventing or delaying primary acquisition of S. mutans at an early age through suppression of maternal reservoirs of the organism. Another approach is to prevent S. mutans from accumulating to pathological levels through topical application of antimicrobial agents.

Conclusion

Low level of education, low family income, and having more children, are significantly correlated with knowledge regarding infant oral health and dental care. Intensified mother and infant oral health care educational programmes (including home visits) is of utmost necessity and importance. Gynaecologists and pediatricians also have a very important role in these aspects of prevention of ECC.

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