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Editorial

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Early Childhood Caries, Preventive Programs and Fluoride Therapies

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Introduction

Early childhood caries (ECC) is one of the most common chronic diseases affecting young children worldwide. It is defined as the presence of one or more decayed, missing, or filled tooth surfaces in primary teeth of children under six years of age. ECC can lead to pain, infection, difficulty in eating and speaking, and impaired growth and development. Because ECC develops rapidly and can have long-term consequences for oral and general health, early prevention is essential. Preventive programs and fluoride therapies play a central role in reducing the prevalence and severity of ECC [1,2].

Discussion

The development of early childhood caries is multifactorial, involving frequent exposure to fermentable carbohydrates, inadequate oral hygiene, prolonged bottle-feeding or breastfeeding at night, and early colonization of cariogenic bacteria. Socioeconomic factors, limited access to dental care, and lack of parental awareness further increase the risk of ECC. Preventive strategies therefore focus on both behavioral modification and clinical interventions [3,4].

Preventive programs aimed at ECC typically begin during pregnancy or infancy and involve parental education, dietary counseling, and early dental visits. Parents are educated on proper feeding practices, such as avoiding sugary drinks in bottles and limiting nighttime feeding. Establishing good oral hygiene habits early, including cleaning an infant's gums and brushing erupted teeth with age-appropriate toothpaste, is strongly encouraged. Community-based programs, such as school and daycare oral health initiatives, have proven effective in reaching high-risk populations and promoting preventive care [5].

Fluoride therapies are among the most effective tools in preventing ECC. Fluoride strengthens tooth enamel by enhancing remineralization and inhibiting demineralization, making teeth more resistant to acid attack. Topical fluoride applications, including fluoride varnishes, gels, and foams, are widely used in young children due to their safety and effectiveness. Fluoride varnish, in particular, is recommended for infants and toddlers because it adheres well to teeth and requires minimal cooperation. The use of fluoridated toothpaste in appropriate amounts and access to community water fluoridation further contribute to caries prevention.

Healthcare professionals, including pediatricians and nurses, also play an important role by identifying early signs of ECC and referring children for preventive dental care. An interdisciplinary approach enhances the success of preventive efforts.

Conclusion

Early childhood caries is a preventable condition that requires early and sustained intervention. Preventive programs focused on education, behavior modification, and access to care, combined with effective fluoride therapies, significantly reduce the risk of ECC. By promoting early oral health practices and integrating preventive strategies into community and healthcare settings, it is possible to improve oral health outcomes and ensure healthier futures for young children.

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