

Early Childhood Caries: Scenario in Nepal

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Editor

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Early childhood caries (ECC) is a virulent form of dental caries present in primary dentition and is the most common infection related disease in young children worldwide.¹ It's been on the rise in many countries, and has become a significant health problem especially in socially disadvantaged populations. ECC does not only affect teeth but it also leads to other health consequences like pain, infection, altered eating habits, sleep disturbances, altered childhood development and psychological outcomes.²

Caries process starts soon after teeth eruption and progresses rapidly. The microbes are transferred from mother to child and through the sharing of spoons and soothers.³ Risk factors for ECC are poor oral hygiene and certain feeding practices. Breastfeeding after 12 months is considered to be risk factor for ECC in infants. Prolonged bottle-feeding with milk or sweet fluid, on-demand nocturnal breastfeeding, delayed weaning, consumption of sweetened food, and confectionery are also ECC risk factors.⁴

Literatures show higher prevalence from 36 to 85% among 3-year-old in far East Asia region, whereas this figure is 44% for 8 to 48 months olds reported in Indian studies.^{5,6} In context of Nepal, national data is unavailable till date. According to study conducted by Parajeeta et al in 2017, prevalence of ECC was reported to be 55.6% with a mean dmft of 3.28 3.581 and Significant Caries Index score to be 7.439.⁷ The same study reported that the most decayed teeth to be mandibular second molars followed by maxillary central incisors and the least affected teeth

were mandibular lateral incisors. Increase in severity of ECC could be due to globalisation, urbanisation, and change in lifestyle.⁸ In a recent study conducted among 96 young Nepalese children, 60 (62.5%) children had severe form of ECC and mean dmft index was 6.77 ± 5.9 .⁹

The best prevention of dental caries in children is possible by identification and avoidance of causative factors which are associated with feeding practices. Breastfeeding is recommended by health care professionals, however, done in a prolonged manner or night feeding has been reported to be a potential risk factor for the development of ECC.⁴ In Nepal, it was reported that breastfeeding to be the main feeding practice followed by mixed: breastfeeding and bottle feeding but there was no significant relation between caries occurrence and the type of feeding technique used by mother but higher caries incidence was associated with prolonged feeding.⁹ Weaning in Nepal is usually started at the age of four to six months with traditional food. Nowadays, there is change in trend due to busy schedule of mothers. Babies are given more often ready-made infant formula food containing starch, sucrose, and lactose which predisposes to caries. Children who were given ready-made infant formula food like cerelac are found to have had more severe-ECC (S-ECC) (92%) compared to non-severe ECC (7.1%) and children who were given homemade gram flour food "lito" were noted to have less S-ECC (27.5%) compared to non-severe ECC (72.5%).¹⁰ Caries distribution was almost same in children having rice and pulses or mixed type. Children taking confectionery or biscuits showed higher occurrence of S-ECC.⁹

Prevention and early diagnosis are of utmost importance for better oral as well as general health of children. Community, professionals and parents have a significant role in prevention of ECC. Oral health education to mothers or caregivers to promote healthy dietary habits in infants has been the main strategy for the prevention of ECC. Early screening for signs of caries, starting from the first year of life, could identify infants and toddlers at risk

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of developing ECC. Education to mother during antenatal and postnatal visits by gynecologists, identifying the disease by the pediatrician and referring to pediatric dentist are hallmarks for prevention of the disease. According to study done in a sample of pediatrician and gynecologist of Nepal in 2019, moderate knowledge about ECC is reported and realizing the importance, 83% of pediatricians and gynecologists revealed their interest in taking oral health training to obtain basic knowledge.¹⁰ Hence, Preventive strategy should be focused on awareness programmes for mothers, related health professionals and community.

Larger national scale studies are needed to estimate prevalence, associated risk factors, consequences, economic burden to family and nation as well. Health authorities of Nepal and professional societies like Nepal Dental Association, Nepalese Association of Pediatric Dentistry along with other dental and medical societies should bring up due attention for ECC and work together for its prevention.

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