

Early Childhood Caries - A Definitive Prerequisite for Caries Assessment Tools

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Dental caries is an irreversible microbial disease of the calcified tissue of the teeth, characterized by demineralization of inorganic portion and destruction of organic substance of tooth which often leads to cavitation [1]. Dental caries is a rapidly progressing disease in the developing countries like India where the resources are inadequate for dental treatment. It has been estimated that nearly 60-70% of all restorations were done on previously restored teeth, with secondary carious lesions [2]. This signifies the fact that although the existing carious lesions were treated, the actual cause and risk factors were not adequately and thoroughly resolved [3]. The recent concept of management of dental caries had gradually changed with the central integrity on the multifactorial nature of caries. The estimated rate of success in caries prevention and management primarily resides on altering the complex nature of dental biofilm.

Early Childhood Caries was previously known as baby bottle caries, nursing bottle caries or baby bottle tooth decay [4]. Nursing decay, is a relatively new term that is used nowadays for defining caries occurring in infants. One of the most concerning and greatest challenge a pediatric dentist faces in terms of esthetic and functional rehabilitation of toddler with Early Childhood Caries [5].

Prolonged and continuous exposure to fermentable carbohydrates gradually lowers oral pH thereby increasing the rapid proliferating risk of dental caries. An associatively related concern with respect to feeding is nocturnal feeding of infants which act as one of the predominating risk factor thereby increasing caries in infants [6]. As such a feeding mode when the child is asleep will

result in prolonged retention period of food in the child's mouth thereby causing a longer duration of contact with *Streptococcus mutans* and thereby contributing in being a risk factor. The factors associated with ECC are fermentable carbohydrates, the increased frequency of sugar intake and several other subsidiary factors [6]. Thus there arises adequate early caries assessment and diagnostic aids in assessing such conditions thereby preventing development of debilitating scenarios in children.

Several treatment options are available for restoring these grossly decayed teeth and the suggested treatment modality entirely depends on the clinician to make the best decision for each individual situation. The advised rehabilitation strategy should provide longevity and should not alter normal growth and development of the child [7]. The recent advancement in treatment of dental caries is using risk based caries assessment. Caries Management by Risk Assessment (CAMBRA) is one such recent risk assessment tools which helps in identifying risk factors promoting dental caries formation. The clinicians can determine patient's risk factors for disease and disease progression in a systematic manner [8].

The advent of this modern protocol helps in designing a novel treatment plan to arrest dental caries. The initial caries lesions can be diagnosed with the aid of risk assessment tools, thereby maintaining the integrity of tooth surface. Apart from this latest approach for combating dental caries is through the development of an effective vaccine that is well suited for public health applications especially in environments that do not tend themselves to regular health care thus aiding in preventing dental caries progression to a great extent.

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