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Review Article

Role of Dentist in New Emerging Tobacco like Catastrophe: Childhood Obesity

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Abstract: Childhood obesity is a globally emerging new tobacco which can trigger health problem not only to systemic organs but oral cavity as well; leading to impact in childhood and throughout the life span. The rate of childhood obesity has increased in all age groups among children and adolescents, throughout the world. Childhood dental caries and body weight are associated through the common risk factor of diet. Dentist can play an important role in prevention of childhood obesity by proper treatment of oral cavity problems and by educating parents as well as children.

Keywords: Caries, children, diet, dentist, obesity.

INTRODUCTION

An increase in the number of individuals who are overweight or obese is proving to be one of the most serious public health problems of the present day [1, 2]. Obesity; in simple words, it is an excess amount of body fat in proportion to lean body mass. The most important record for measurement of body fat is body mass index (BMI), which is defined as a person's weight in kilograms divided by the square of higs or her height [3, 4]. As per literature available definition of childhood obesity is, body mass index for age and sex should be greater than the 95th percentile [5]. In the last 50years, the occurrence rate of obesity is increased for children 3 to 6 years of age and adolescents 13 to 18 years of age, and has three times increased for children 7 to 12 years of age group, which may lead to critical health damage, endocrine, cardiovascular, metabolic, respiratory disorders, and disorders of oral cavity [4, 6]. The effect of childhood obesity is not only restricted to the children but may affects throughout adulthood. This is mainly because obesity in childhood is important predactory factor for being obese as an adult, but also because unhealthy lifestyle and eating food habits received during childhood are more tenacious and more difficult to rectify lately in life [7, 8].

Childhood obesity

Overweight and obesity are associated with various factors and may involve conditions like changes in physiological, biochemical, metabolic, anatomic, psychological, and social acceptance of a child [9, 10]. Childhood obesity are relatively is less common, consists of only 2-5% of all childhood obesity cases. Certain side effects may be occur because of childhood obesity, that includes high cholesterol, hypertension, type II diabetes mellitus, coronary plaque formation, and significant psychosocial involvement [10]. Factors like less physical venture, more of desk bound working habits and dietary modifications may lead to the spread of overweight and obesity in childrens [11, 12]. Poor food habits always plays a chief role in the increased of obesity; overweight children and adolescents consumes increased amount of carbonated drinks and fat rich foods such as "fast food". These habits are leading factors for increased in number of childhood caries and tooth decay and occurrence of other mucosal oral conditions [13]. Childhood obesity may lead to various oral health conditions of gingiva and most common dental caries, dental pain and fungal infections and burning of oral mucosa. Twenty-five percent of children ages 3 to 6years are reported with dental caries. Various foods and beverages that children consume these days have sufficient amounts of sugar, and inadequate

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fluoride content that may be the source for teeth decay in children [14-16]. All health professional in combined should come forward and take childhood obesity on serious note, and implement a mutifactorial approach to treat and prevent it.

Role of dentist

Childhood obesity has become serious problem in many developed and developing countries, and its rate is increasing worldwide [17]. Health care professionals usually ignore to question about patient's nutrition status and do not take any interest [17]. Dentists should be aware of nutrition effects on general and oral health of a child and how dental treatment can play a major role on the patient's nutritional status; as obese individuals may create a challenge to the dentist because of their body appearance and may present less clinical visibility and accessibility for anesthesia and dental treatment procedures [18, 19]. Oral health is strongly affected by the daily intake of food; and oral health can also play an important role in nutritional input and overall health status of the children [10].

Dietary counseling

Diet counseling for good oral health in children should be a main part of overall health counseling [20]. Dental caries risk is high, if sugar containing foods and drinks are consumed frequently and are in a sticky form that remains in the mouth and on the teeth for longer time duration [21-23]. Sucrose in the form of sugar, is the most common cariogenic factor, because it can form glucan, which helps bacteria to adhere to teeth surfaces and restricts diffusion and buffering of acids in the oral cavity. Meanwhile starch-rich foods constitute a low caries possibility, although food like, cereals, potato or corn chips are highly cariogenic factors [22]. Breastfed infants are at risk of nursing bottle caries, as they may receive sugary milk or eat foods with sugars and fermentable carbohydrates [23]. To decrease the risk of dental caries in children and implement all possible health and developmental results, it is recommended that parents should follow certain things: [21, 23].

- Breastfeed the infants during the first year of their life and beyond as advised. After nursing and removing the breast from a sleeping infant's mouth, oral cavity should be cleaned with wet cotton.
- Do not allow a child's sleeping with a bottle; any bottle taken to bed should contain only water.
- Reduce the amount of sugary foods and drinks to mealtime.
- Give fresh fruit juices and limit he intake of carbonated beverages and juice drinks.
- Motivate children to drink only water and milk between meals.
- Inspire children to eat fresh fruits.

Caries

Dental health of a child is related to the diet and weight directly and dentist should work in association with pediatricians, family physicians and dietitians for better treatment of dental caries and other oral conditions in a child [21]. For caries prevention and maintaining good oral hygiene condition dentist can use preventive measures; fluoride, a natural element has been used in the decrease in dental caries by majority of dentists [22]. Professionally applied topical fluorides (PATFs) by dentist always have main effect in preventing dental caries and should use at regular intervals [23]. Dentist applied topical fluorides are safe and effective, along with varnishes gives the advantage of adherence to the tooth surface, decreases the ingestion, and increases the time of contact between the fluoride and tooth surface. In the primary dentition, varnish effectiveness ranges from 32% to 64.2% [24].

Anticipatory guidance and childhood obesity

Parents of a child should be prepared in advance by health care professionals for appropriate growth of child in terms of good physical, emotional and psychological landmarks of life. Anticipatory guidance during child visits to dentist is an important method to educate parents about maintaining children's overall health [22]. Anticipatory guidance for oral health may include the following features:

1. Infant oral hygiene instruction to parents: Teeth of infant should be cleaned at least twice daily with wet cotton. For children with increased risk of dental caries, pea-sized amount of toothpaste should be used for brushing the teeth daily. Flossing should begin as soon as adjacent teeth are in contact and for surfaces at which teeth touch and they can no longer be cleansed with a toothbrush.
2. Counseling regarding non-healthy oral habits: Use of pacifiers in the first year of life may prevent sudden infant death syndrome. Sucking habits of fingers in adequate time period, duration in a day, and intensity may lead to infections in periapical regions. Sucking habits after 3 years of age should be evaluated by the dentist to assess nutritive deficiency in the child.
3. Age-according information regarding dental injury prevention: Dentist should advise parents to cover all sharp corners of household furniture at the level of walking infant and toddlers, and be careful of electrical cord risk for mouth injury. Dentist should make parents aware about fitted mouth guards for youths involved in sporting activities to avoid the accidental orofacial injury risk.

CONCLUSION

Oral health is a fundamental part of the overall health and well-being of children. Childhood obesity is escalating at a high rate that needs the attention for collaboration of all health care professionals with the dentist. Dentist with the knowledge of dental caries; is

capable of assessing caries risk, and comfortable with applying various strategies of prevention and intervention of other oral infections. It is important that education programs about childhood obesity and its effect in oral cavity as well on life should be implemented in education system as well as in society. Pediatric dentists should be encouraged to not only advocate for the best interests of children, but to put obesity prevention into action in their practices.

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