

MINI REVIEW

Overweight And Obesity Leads To Dental Problems: A Mini Review

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ABSTRACT

Teeth are a much neglected part of most people. They care for their whole body except teeth. In this regard, they suffer many dental problems, especially in their mixed dentition stages. After checking the teeth of the students of a Cantonment School of Bangladesh with a registered physician and medical assistant, the result showed many teeth-related problems as well as the dental cavity. In addition, their feeding habit and the education of their parents at home were observed. Proper knowledge of health, food habit and exercise should be increased in most families.

INTRODUCTION

Like other parts of the human body, most people are very ignorant about their teeth. Nowadays, consciousness is increasing but we see some people who are not habituated to brush their teeth properly. From the very beginning, people wash their teeth by using plants stem and coal which were not proper for complete oral hygiene. Modern technologies of medical science have been focused on many points for caring for teeth. At the time of six months, infant's teeth start to erupt. Humans have 20 primary or milk or deciduous teeth by the age of 3 years. Teething age of primary teeth are : central incisors between 6–12 months, lateral incisors between 9–16 months, first molars between 13–19 months, canine teeth between 16–23 months and second molars between 22–33 months.

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The replacement of primary teeth begins around age six, when the permanent teeth start to appear in the mouth, resulting in mixed dentition [1]. The upper and lower central incisors are shed at age six to seven years. The upper and lower lateral incisors are shed at seven to eight years. The upper canines are shed at ten to twelve years. The lower canines are shed at nine to twelve years. The upper and lower first molars are shed at nine to eleven years. The upper and lower second molars are shed at ten to twelve years [2].

The process of shedding primary teeth and their replacement by permanent teeth is called exfoliation. The replacement of primary teeth begins around age six, when the permanent teeth start to appear in the mouth, resulting in mixed dentition [1]. The upper and lower central incisors are shed at age six to seven years. The upper and lower lateral incisors are shed at seven to eight years. The upper canines are shed at ten to twelve years. The lower canines are shed at nine to twelve years. The upper and lower first molars are shed at nine to eleven years. The upper and lower second molars are shed at ten to twelve years. By age twelve, there usually are only permanent teeth remaining [2] and the complete set will be 32. But it will be total 28 for those having no wisdom teeth. Dental problems are a remarkable issue in Bangladesh but knowledge about oral hygiene and good food can reduce these problems.

Food Habit

Frequent consumption of sweetened, pulpy and highly processed food products and sweetened carbonated beverages are risk factors for overweight, particularly in children and adolescents [3]. A balanced diet, proper nutrition and basic knowledge of proper health behaviors are the best methods for the prevention of both systemic diseases such as overweight and obesity, as well as dental and periodontal diseases [4].

Overweight and Obese

Overweight and obesity are considered risk factors for periodontal diseases. The pro-inflammatory mediators secreted by adipocytes in obese individuals may impair their immune functions, thereby modifying host responses to dental plaque [3].

Salivation

Oral inflammation and reduced salivary production have significant effects on dental plaque biofilm imbalance. The number of *Streptococcus mutans* and *Lactobacillus* increases leading to dental caries [4] [5] [6].

Gingivitis

Gingivitis is very common in overweight and obese patients which can be a result of metabolic disorders, inflammatory factors and improper oral hygiene habits [3].

Lymph Nodes

Excessive adipose tissue of the neck region may impede the palpation of lymph nodes [3]. Eating too fast can lead to ingesting more calories compared to those who eat slowly [7].

Diabetic Patient

Dental caries is more common among obese adults with diabetes mellitus than in non-obese with diabetes. Nonetheless, there is no direct evidence for the positive correlation between obesity and dental caries in this group of patients [4].

Students and Their Lifestyle

Saidpur Cantonment Public School and College, Bangladesh have 4000 plus students from nursery to intermediate level. Among these, except for college students, others were more prone to dental problems where overweight and obese were shown a very significant result. When those students came to 'Medical Center' with dental problems they expressed about their unhealthy food habit. Parents and students were not well aware about health, personal hygiene and ideal food also. Affected students were habituated in taking fast foods.

Concluding Remarks

Motivation on health is important for all sorts of people especially parents who are caring for their children. In the school syllabus, 'School Dental Health' program is focusing all about teeth with fluoride added tiffin for the students. A Biology teacher can play an effective role in this field. We should know that health is the source of all happiness not only for dental problems but also for our entire body parts which denote our fitness of health.

Table 1: Teeth problems due to overweight and obese in human being

Features	Examples	References
Dentition	For caring teeth knowledge is important	Taber 2004
Food habit	Food habit is a great problem in most families in Bangladesh	Slotwinska & Slotwinska 2015; Kubic-Filiks & Szymanska 2018
Overweight and Obese	Most cases overweight leads obesity	Kubic-Filiks & Szymanska 2018
Salivation	First changes occur in the mouth of human	Lehmann-Kalata et al., 2013; Slotwinska & Slotwinska 2015; Lehmann-Kalata et al., 2015
Gingivitis	Dental problems start with gingivitis or gum bleeding	Kubic-Filiks & Szymanska 2018
Lymph nodes	Throat problem may lead dental problems	Kharm et al., 2016; Kubic-Filiks & Szymanska 2018
Diabetes mellitus	In diabetic patient dental problems can be fatal	Slotwinska & Slotwinska 2015

REFERENCES

1. Robinson, S.; Chan, M. F. W.-Y. (2009). "New teeth from old: treatment options for retained primary teeth". *British Dental Journal*. 207 (7): 315–20. doi:10.1038/sj.bdj.2009.855. PMID 19816477. S2CID 205664010
2. "Tooth Eruption: The primary teeth". *Mouth healthy.org*. American Dental Association. Retrieved 2 June 2014.
3. Kubic-Filiks & Szymanska, J. 2018. Dental problems in obese patients. *Pediatrics i Medycyna Rodzinna* 14(4): 386-391.
4. Slotwinska, S. M. & Slotwinski, R. 2015. Host response, obesity, and oral health. *Central European Journal of Immunology* 40: 201-205.
5. Lehmann-Kalata, A. P., Surdacka, A., Ciezka-Hsiao, E. et al. 2013. Otylosc i jejwykladniki w jamie ustnej-przeglad pismiennictwa. *Dental Forum* 41: 57-61.
6. Lehmann-Kalata, A. P., Surdacka, A., Ciezka-Hsiao, E. et al. 2015. Klinicz-na ocena-biologicznych sliny u otylych pacjentow. *Dental and Medical Problems* 52: 415-423.
7. 7 Kharma, M. Y., Aws, G., Tarakji, B. 2016. Are dentist involved in the treatment of obesity? *Journal of International Society of Preventive & Community Dentistry* 6: 183-188.