

How much do we Care for our Dental Care?

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Teeth in our oral cavity are not only helpful in cutting, chewing and grinding the food we eat, it also devoted to maintain a definite shape of the face. Shining teeth is the symbol of sound health and reflects the personality. Teethless mouth may be an age related condition and confined either to the early childhood or late 60 in the long run of human life. Yet, it is undesirable for the old ones so far as day to day life is concerned. But, it is natural and nobody can ignore. However, teeth-related problems, commonly called as dental problems such as a common suffering from toothache, dental caries, tooth decay, tooth loss, gingivitis/periodontitis to an uncommon turn out of oral cancer among the younger generations are now become the order of the day. As a result, the victims welcome to an unwanted premature old age in their enjoyable life time.

The dental problems generally begin at the onset of growing up of the milk teeth during the early childhood and become more prevalent in the rise and persistence of the permanent teeth during the late childhood and adulthood period. Particularly, during late childhood age, the children are very fond of to take sugar, sweet juices, and various types of attractive packaged-flavoured-salty-fast food. These items are generally provided either by the parents or by the elders to their demanding children mercifully. Recently, it has been observed that there is a growing tendency to consume fast food among the adolescents worldwide. Particularly, the adolescents of developing countries are habituated with chewing and smoking of tobacco along with a growing interest of consuming fast food and drinking of chilled cold-drinks. Changing food pattern and acquiring modern life-style, the young-adults are found to be affected with multifarious dental diseases and oral cancer at large.

Now, a number of questions arise in the mind. 'How much do we care for our dental care? Are we really aware of causes and consequences of these dental problems? Can we prevent these for our normal and even better life? Let us analyse the real causes of dental problems and to chalk out some preventable cares for a hygienic oral health.

Each tooth is externally covered by the hardest substance of our body called enamel; but internally it contains a soft mass of tissues (called as dental pulp) supplied with blood vessels and nerve fibres making it to be a living entity. Tooth roots at the base hold the tooth tightly and fix it on the surface of both jaws whereas the gum or gingiva provides external support to make it more stronger, healthier and longer existence. Unfortunately, we are not aware of our teeth as living entity and so we take less care due to our own ignorance.

Teeth in the oral cavity are under a lot of stress and strain. Due to what with biting, chewing and grinding, of food, talking and moulding of shape of oral cavity and choking with aging at every moment directly affect the longevity of the teeth. Practically, the crown of the teeth get lost due to friction while biting, chewing and grinding no doubt, but chewing of tobacco, betel quid, gutkha and paan masala accelerate the avoidable unwanted frictional lost of the crown and dental erosion to a greater extent. As a result, the teeth become highly sensitive with fluctuating temperature of food and water. Due to erosion, the size of the teeth observed to be reduced gradually and in severe cases, it leads to total tooth destruction. On the other hand, persons habituated with taking very soft food items (particularly fast foods, such as pizza, noodles, readymade juices and soft-drinks etc.) without biting chewing and grinding, are also complained of

sensitive tooth, toothache and destabilized tooth. Such type of misuse and disuse of tooth bring about many dental problems. Thus, regular dentine exercises (biting, chewing and grinding) are essential for strong teeth and sound oral health. Avoiding frequent eating of soft food and chewing of tobacco, betel quid, gutkha and paan masala will be really helpful to prevent a number of dental diseases in particular and miserable oral health in general-which appears to be an emerging challenge in the 21st Century [1].

A common form of dental problem is called gingivitis, which is completely reversible. It is associated with a general increase in plaque mass around the gingival margin, which elicits inflammation. If not treated/cleaned properly, it may lead to a more serious, destructive and irreversible form of gum/periodontal disease called periodontitis. Due to our negligence, tooth plaques are formed in and around the margin of gingiva which directly aggravates the periodontitis condition of the victim. Many authors have reported that mostly Gram-negative proteolytic bacteria belonging to the genera *Prevotella*, *Porphyromonas*, *Fusobacterium* and *Treponema* are recovered from periodontal pockets at this stage [2,3], and the victim usually suffer from unusual gum-bleeding, halitosis, toothache and loose teeth due to swelling of gum followed by multi-step gingival/ oral carcinogenesis.

Another irreversible dental disease called dental caries is also referred as tooth decay or cavities. Due to unhygienic gum and eating with sugar enriched food, the pathogenic bacteria (such as *Streptococcus mutans* and *Streptococcus sobrinus*, and *Lactobacilli*) become more prevalent, flourish and form colonies on the surface of the teeth. These acidogenic bacteria are able to rapidly metabolize dietary sugars to acid, creating locally a low pH. In contact with the acidic microenvironment, the tooth enamel become demineralised, decalcified and forms cavities [4-6]. It can be prevented by avoiding sugar and sugar enriched food and by eating a healthy balanced diet.

Pradeep and Hegde have reported that there was a positive correlation between lead exposure and dental caries in children [7]. Earlier Rao had reported that, lead may interfere with the bioavailability of fluoride by binding to fluoride ions in saliva and plaque, thereby reducing the preventive capacity of fluoride to remineralize enamel after an acid challenge [8]. Epidemiological studies have substantiated the fact that cumulative environmental lead exposure appears to increase the risk of dental caries, teeth erosion and tooth loss not only in children but also among adolescents and adults [9,10]. Unusual excess brushing also leads to degradation of enamel from the tooth. Therefore, brushing should be done properly and in proper way to prevent enamel degradation.

Sometimes, the pathogenic bacteria invade the base of the tooth through a deep crack, fracture, or cavity and affect its root. These bacteria damage the nerves and the pulp tissue inside the tooth itself, if left untreated for a longer time. Severe dental root infections cause patients to develop painful abscesses and facial swellings [11]. In such cases, one must consult the dentist without any further delay. Otherwise, tooth loss will be the ultimate outcome.

The mouth provides a conducive environment for optimal growth of many micro-organisms and saliva has a profound influence on the microbial ecology of the mouth. Particularly, the ionic composition of saliva promotes its buffering properties and its ability to remineralize (i.e. repair) the enamel of the tooth. Saliva also contains components of innate (e.g. lysozyme, lactoferrin, sialoperoxidase, antimicrobial peptides, etc.) and adaptive immunity (e.g. sIgA) and so can directly inhibit some exogenous micro-organisms [12,13].

Xerostomia, also called as 'dry mouth' is characterised by lack of saliva secretion. Naturally, saliva secreted from the salivary glands and keeps our mouth a continuous bath, which keeps warm (35 - 36°C) and moist (at a pH of between 6.75 and 7.25). Besides keeping the mouth moisturised and wet, the saliva acts as an antibacterial agent and kills most of the bacterial colonies and protect the gum and teeth from bacterial infection [14]. Thus, person suffering from xerostomia is more prone to bacterial borne dental diseases like gingivitis, dental caries and even demineralisation, decalcification and degradation of tooth enamel. Therefore, proper care should be taken for xerostomia patients as early as possible through consultation with oral pathologist.

Dental fluorosis is an extremely common dental disorder and a sign of chronic fluoride intoxication during dental formation in childhood. It affects dental enamel structure by altering its shape and results in aesthetic and functional problems. On the basis of severity, the fluorosis is categorized into very mild, mild, moderate and severe types. Mild type fluorosis is the most common form of fluorosis, and is characterized by small, opaque, paper-white areas scattered irregularly over the tooth, covering 25 - 50% of the tooth surface. In moderate to severe fluorosis, teeth are physically damaged. Drinking-water, containing high concentration of fluoride, if consumed for a longer period can cause dental fluorosis which affects the teeth and bones at large. It is important to note that the permissible limit of fluoride concentration is 1.5 mg/l as standardised by World Health Organization (WHO); whereas, it is 1.0 mg/l in India. Intake of higher concentration of fluoride than the optimum level is the main reason for dental and skeletal fluorosis. However, there is a strange paradox that low level of fluoride intake helps to prevent dental caries [15], whereas inadequacy of fluoride in drinking water promotes the same caries [16]. In contrast to de Mayolo Kreidler [17], as fluorosis is absolutely a drinking water-related endemic problem, it cannot be attributed to lack of dental care only. The control of drinking-water quality is therefore critical in preventing dental fluorosis during premature growth of the children.

Dental problems are many and not confined to age, sex and locality; but the good news is that most of them can be easily prevented. Dental problems such as gingivitis, cavities, xerostomia, tooth loss, gingival/oral cancer are mostly lifestyle oriented. We can check and control these dental diseases by simply altering our complex and unhygienic life style to simple and hygienic one with caring and sharing. To keep our teeth strong and healthy, these really do need a little tender of love and care. Instead of soft and swallowable food, teeth exercisable food items are to be chosen for healthy teeth. Regular brushing of teeth and flossing of oral cavity (preferably before and after the meal) is the cheapest and easiest mode of keeping oral cavity fresh and hygienic in general and keeping a number of dental and gum diseases away in particular. Prior to become an edentulous adult (i.e. with no teeth at all).during adulthood, we must take care of our own teeth and should practice of attending a dental practitioner for checking-up of dental and oral health at regular interval for a healthy life.

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