Original Article

Prevalance of Common Dental Diseases

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Abstract:

A total of 1246 patients were studies, among them 621 patients are from urban area and remaining 625 were from suburban area. Patients came with different types of problems. Diagnosis of the disease condition were done by proper clinical assessments and necessary investigations. Samples were divided into different age groups irrespective of sex. Diagnosis were sorted in four main groups, eg. Patient having caries; patients having periodontitis; patients having both caries and periodontitis and others. The primary objective of this study is to see the prevalance of caries and periodontitis in different community and age groups.

Introduction:

Among the dental diseases, caries and periodontitis are the most common in all races and locations, not only in Bangladesh but globally.

Dental caries is a microbial disease of the calcified tissues of the teeth, characterized by demineralization of the inorganic portion and destruction of the organic substances of the tooth. It is the most prevalent chronic disease affecting the human race. Its manifestations persist throughout life even though the lesion is treated.

Periodontitis is a set of inflammatory diseases affecting the periodontium — that is, the tissues that surround and support the teeth. Periodontitis involves progressive loss of the alveolar bone around the teeth, and if left untreated, can lead to the loosening and subsequent loss of teeth. Periodontitis is caused by microorganisms that adhere to and grow on the tooth's surfaces, along with an overly aggressive immune response against these microorganisms. Caries and Periodontitis, irrespective of their etiology or starting point, the end results are same, the loss of tooth.

People from different community, urban, sub-urban or rural, represent their different socio-economic status, different food habit, different oral hygene status and different level of awareness regardieg their health issues.

Occurrence of disease among the people of different age groups are different due to their food habit, hygiene maintenance, anatomical variation (dentition status, e.g. Primary, mixed and permanent dentition;), immune status and disease conditions.

Searching the etiological factors and to provide particular preventive measures for particular age groups, identification of the prevalence of these two main diseases in respect to age is very important.

Materials and Methods:

Total 1246 patients were studied, among, 621 were from urban area and 643 from sub-urban area who were seeking dental treatment for their different types of dental problems.

- Patients were studied irrespective to sex and race.

- Samples of sub urban area are collected from a dental clinic in Harirampur union, Turag, Dhaka and of urban area from a dental clinic in Uttara Model Town, Dhaka.

- Caries were diagnosed by clinical examination and through radiographs where necessitated. Carious lesions in any form (pit- fissure caries, smooth surface caries, gross caries, Broken down crown and root due to caries, peri-apical lesions due to caries) were diagnosed as caries.

- Periodontitis were also diagnosed by proper clinical assessment, where there were periodontal pocket depth more than 3 mili meters, pathological mobility, proof of alveolar bone loss resulting in exposed furcation or through radiographic interpretation.

- Patients with any form of gingivitis were cautiously diagnosed and were excluded from the group Periodontitis and were counted in 'others' group.

- Apart from caries and Periodontitis, the 'others' group includes samples with orthodontic problems, developmental problems, physiological mobility of deciduous teeth, routine check ups, impacted teeth, ectopic eruptions, mechanical loss of teeth tissue, retained deciduous teeth, etc.

  - Samples were divided into four age groups

  o Primary dentition: Samples of up to 6 years

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o   Mixed dentition: 6+ years to 14 years

o   Permanent dentition (young): 14+ years to 40 years

o   Permanent dentition (Aged/ geriatric): 40+ years.

Result:

Irrespective of age groups a total of 1246 samples were studied, among, 734 were suffering from only caries, which is 58.91% of the sample population; 131 were suffering from only Periodontitis, which is 10.51% of the total samples and 86 were suffering from both caries and Periodontitis which is 6.90% of the total population. Other problems comprise 295 samples, which is 23.68% of the total samples.
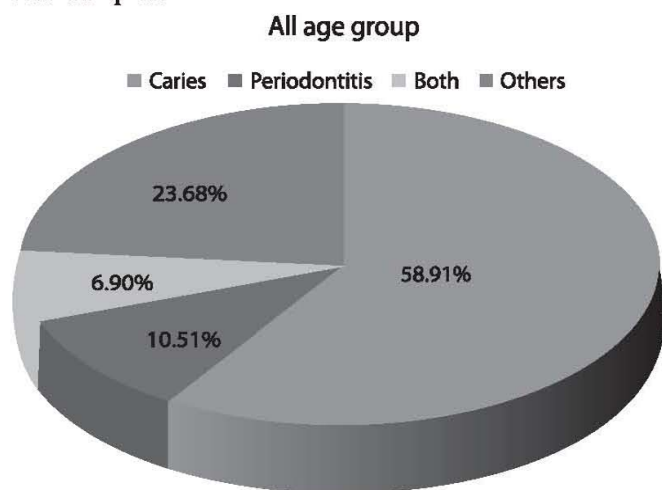
All age group

■ Caries ■ Periodontitis ▨ Both ■ Others

Fig : 1. Distribution of Dental diseases irrespective of age group.
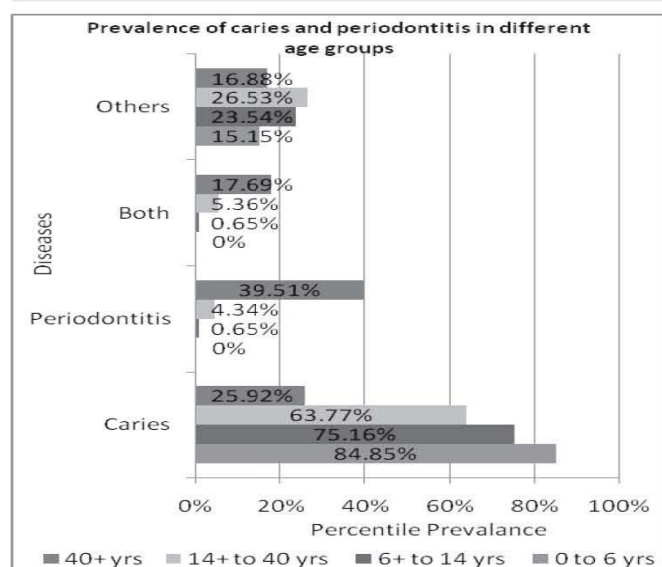

Fig-2: Distribution of caries , periodontitis and other diseases among different age group.

Among 1246 samples:

▪   66 were of 0 to 6 years of age:

o   Among 66, 56 had caries only; which is 84.85% of the sample population; the rest 10 neither had caries nor Periodontitis ; which is 15.15% referred as other group.

▪   153 were between 6+ years to 14 years of age:

o   Among 153, 115 had caries only; which is 75.16% of the sample population, 1 was suffering from Periodontitis only which is 0.65%. and 1 was suffering from both Caries & Periodontitis, which is also 0.65% of the sample population. The rest 36 were in other group;which is 23.54%.

▪   784 were 14+ to 40 years of age:

o   Among 784, 500 had only caries, which is 63.77% of the sample population; 34 were suffering from Periodontitis only, which is 4.34% of the sample population and 42 were suffering from both caries and Periodontitis, which is 5.36% of the sample population. The rest 208 were in other group;which is 26.53% of the sample population.

▪   243 samples were of above 40 years:

o   Among 243, 63 had only caries, which is 25.92% of the sample population; 96 were suffering from Periodontitis only, which is 39.51% of the sample population and 43 were suffering from both caries and Periodontitis, which is 17.69% of the sample population. The rest 41 were in other group; which is 16.88% of the sample population (Figur-2).

Discussion:

Prevalence of caries is very high in the younger age and its prevalence declines with the increment of age. On the contrary, the prevalence of Periodontitis is very low in the younger and significantly increases with aging. From studying the above data, we clearly understand that there is a linear relation between dental diseases and age. Caries prevalence is inversely relates to age. With age, this relation reversed in case of Periodontitis. Periodontitis prevalence is directly proportional to age.

Conclusion:

Prevalence Oral diseases is related to patients' oral hygiene, food habit, and oral health awareness, immuno-status and disease condition, e.g. diabetes mellitus; nutrition status, fluoridation, integrity of tooth materials, etc. With

change of age, above conditions alter. There is scope of further study and research to identify age related disease modifying factors.

And modifying those factors we may be able to modify the disease pattern and prevalence by means of implementation of appropriate age related preventive measures.

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