Frequency of Gingivitis and Periodontitis in patients visiting Hamdard University Dental Hospital Karachi

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Abstract
Objective: To observe the frequency of periodontal diseases and its association with other factors in patients visiting Hamdard University Dental Hospital.
Study Design: It was a descriptive cross-sectional study.
Place and Duration of study: The study was carried out in department of Periodontology, Hamdard University Dental Hospital, Karachi. Total duration of this study was one year from January to December 2010.
Methods: Non probability purposive sampling technique was used. All patients with periodontal disease presented to dental OPD were included in this study. After taking informed consent, data was collected from patients on a structured questionnaire.
Results: Total 581 patients were included in this study. The male to female ratio was 1:1.5. Among males, frequency of gingivitis and periodontitis were 71% and 26.7% respectively while in females it was 70.8% and 18.6%. Smoking habits in males was 13.5% and in female this was only 0.56%.
Conclusion: The incidence of periodontitis is comparatively high in males which are most likely associated with high frequency of tobacco smoking.

Keywords: Gingivitis, periodontitis, smoking, betel nut

Introduction:
Oral health is a predictor of body health in both young and aged patients. Caries the most common dental problem while as the age progresses gingivitis and periodontitis becomes the most common oral disease. If not treated early these lesions can lead to loss of teeth which will further worsen the situation. Maintenance of good oral hygiene is a key for better dental health and now a days more stress is given to prevent dental diseases which will save treatment cost, time and give better results.1

If preventive measures like proper diet, correct brushing technique, use of floss, mouthwash etc. are not practiced regularly, then initiation of diseases like gingivitis will occur. Gingivitis is an inflammation of gums; bleeding from the gums occur in advance stages with ulcer formation seen in severe cases. If not treated properly further progression into surrounding bone involvement will proceed to loss of bone in both vertical and horizontal direction which is known as periodontitis.2

Various researches have proved the association of periodontitis with other systemic diseases like cardiovascular diseases, diabetes, and birth of low weight babies. Regarding etiology of periodontal diseases, poor oral hygiene, brushing habits, immunity, smoking, age are considered to be important factors.3

In 2003, National Oral Health Survey was conducted in 19 districts of Pakistan which showed that 93% of the population above 65 years have gingival or periodontal problem which is unfortunately very high.4

In our study oral examination along with questionnaire is
used to evaluate the incidence and prevalence of gingivitis and periodontitis. Some indexes like Oral Health Index, mean Decayed, Filled and Missing tooth surfaces (DMFS), Community Peridontal Index (CPI), Quigley-Hein plaque, Loe-Silness gingivitis index are also used to determine the oral hygiene.5

This study was conducted to evaluate the pattern of gingivitis and periodontitis in relation to various associated factors.

Materials and Methods:
It was a descriptive cross-sectional study. A total of 581 patients with age range from 24 to 74 years reported to Periodontology Department, Hamdard University Dental Hospital were included in this study by using non probability purposive sampling technique. The duration of this study was one year. The study included all patients with gingival and periodontal disease. After taking verbal consent, history and examination was carried out for every patient and structured questionnaire was used to obtain information from them. The collected data was statistically analyzed using SPSS software.

Results:
A total of 581 patients with age ranging from 15 to 70 years were included in this study; 228 were males while 353 were female patients. In males frequency of gingivitis and periodontitis were 71% and 26.7% respectively while in females it was 70.8% and 18.6% (as shown in table 1).

In males 13.5% patients had smoking habits and in female this was only 0.56%.

Among male patients 16.6% having habit of pan eating while 8.3% patients were taking betel nut, while in females 2.8% patients were eating pan and 12.74% patients had history of betel nut consumption (as shown in figure1).

Discussion:
Periodontal problems are more common in elderly, low socioeconomic status, decrease immunity, poor oral hygiene, smoking, pan eating are the various contributing factors causing periodontal diseases. In our study, pan and betel nut eating habits were found in 4.9% and 14.2% patients respectively, while Tanvir et al 6 found in her study conducted in Karachi that 32% and 28% patients had habit of pan and betel nut chewing respectively. As in our study another study noted that females are more involved in eating similar type of betel nut.7 In this study 5.6% of the patients have history of smoking, in which contribution of female was only 0.5%. Alam et al in his study conducted in population of Rawalpindi found that 16.5% of the study population (33% men and 4.7% women) had the history of tobacco consumption, like in our study consumption of tobacco is comparatively less in females as compare to males.8

Kaleem et al observed that periodontal problems have strong association with tobacco smoking. In smokers, furcation defects, probing depth and tooth mobility were more as compare to non-smokers group but the same is not found in our study.9

The incidence of gingivitis and periodontitis was 70.9% and 21% in our patients which was significantly higher than the study conducted in Pakistani immigrants in Norway wherein it was found that most of the adult population had periodontal diseases.10

Homata et al found in study conducted in Greek population that 16.2% had bleeding on probing. This indicated severe degree of periodontal disease.

Table 1: Frequency of gingivitis and periodontitis in males and females

<table>
<thead>
<tr>
<th>Findings</th>
<th>Male (n=228)</th>
<th>Female (n=353)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gingivitis</td>
<td>162 (71%)</td>
<td>250 (70.8%)</td>
<td>412</td>
</tr>
<tr>
<td>Periodontitis</td>
<td>61 (26.7%)</td>
<td>66 (18.6%)</td>
<td>127</td>
</tr>
</tbody>
</table>
problem, while in study conducted in population of Gambia it was found that about male have more incidence of periodontitis as compare to females. Singh et al observed in his study conducted in Indian population that periodontal problems are more common in males.11, 12, 13

This study indicate that incidence of periodontal diseases is very high in our population, as this study was conducted in one centre only, there is an immense need to collect data in various centers to get more significant results at national level.

Conclusion:
As habit of tobacco smoking is more in males as compared to females, males are mostly affected with periodontitis. Not only smoking tobacco is harmful for the oral health, chewing tobacco also plays more or less equal part in deteriorating the periodontal health. An encouraging finding is that periodontal disease progression slows in patients who quit smoking and that these individuals have a similar response to periodontal therapy as nonsmokers.

References: