Original Research Article

A study for correlation of demographic data, chief complaints and risk factors with periodontitis

Urjita Vinchurkar[1], Anvi G. Piludariya[2], Palak R. Modi[2], Yogita D. Mistry[2]*, Gunvant Parmar[3], Summaiya A. Mullan[2]

[1]Department of Dentistry, GMC, Surat, Gujarat, India
[2]Department of Microbiology, [3]Department of Dentistry, GMC, Surat, Gujarat, India

*Correspondence:
Dr. Yogita D. Mistry,
E-mail: dryogitamistry@gmail.com

ABSTRACT

Background: Periodontal disease, ever since the days of hippocrates has crippled the survival of human dentition. As a quiescent disease most of the time, periodontal disease presents mainly a chronic or asymptomatic chief complaint. In its most common form, periodontal disease generally is considered to be a painless process unless it reaches severe stages. For this reason, it often is overlooked by patients and dentists in early stages, especially when inflammation is not obvious**.** The aim of this study was to determine the most common chief complaints of chronic periodontitis patients to assess public awareness about this disease symptom, distribution of these chief complaints among males & females and their correlation with age and some of periodontal parameters.
Methods: The data of patients include chief complaint of the patients, age-sex, patient's education level, systemic and oral health status, smoking, tobacco and gutka chewing habits were collected. The examiner also collected information related to the toothbrushing frequency of each patient.
Results: Total samples testing in the study were 100 (n=100). Out of which majority samples were female patients. Maximum samples were received from age group of 51-60 years. Major pre-disposing factor is Tobacco and Gutka Chewing. Majority of chief complaint was mobility of teeth.
Conclusions: 51 years to 60 years of age group with higher number of females and tobacco chewer have higher incidence of periodontitis with major chief complaint of mobility of teeth. These patients are brushing once in a day.

Keywords: Periodontitis, Demographic data, Chief complaints

INTRODUCTION

Periodontal diseases are a group of diseases that cause inflammation and destruction of the investing and supporting structures of the teeth. Periodontal diseases, including gingivitis and periodontitis, are among the most common chronic diseases. Periodontal disease, ever since the days of Hippocrates has crippled the survival of human dentition. As a quiescent disease most of the time, periodontal disease presents mainly a chronic or asymptomatic chief complaint. In its most common form, periodontal disease generally is considered to be a painless process unless it reaches severe stages. For this reason, it often is overlooked by patients and dentists in early stages, especially when inflammation is notobvious.[1] The symptoms associated with periodontitis have a wide range starting from gingival bleeding, bad breath and alteration in gingival shape or appearance at early stages of the disease to more severe symptoms like pain, pathological tooth mobility, periodontal abscesses and tooth migration, later in more advanced form of periodontitis the patients experience a periodontal abscess or a symptomatic tooth is

extracted or pathological migration of anterior teeth may occur resulting in aesthetic problems.[2] It is a multifactorial disease where interplay of microbiologic, genetic, immunologic, and environmental/behavioural risk factors decides the onset, course, and severity.[3] To thoroughly characterized periodontal status, epidemiological studies assess numerous sites throughout both arches on several clinical conditions for each individual.[4] The aim of this study was to determine the most common chief complaints of chronic periodontitis patients to assess public awareness about this disease symptom, distribution of these chief complaints among males & females and their correlation with age.[4]

METHODS

Study population

This study was prospective observational study, was carried out at department of dentistry. Every month approximately 100-120 patients of periodontitis come in the OPD for check-up. We evaluated 100 OPD patients of periodontitis from 3 May 2022 to 2 June 2022 (of 1 month duration). Informed consent was obtained from all the patients and the study protocol was approved by the Human Ethics Committee.

Inclusion and exclusion criteria

Patients with periodontitis were included in the study. Patients with any other dental complaints other than periodontitis were excluded.

Study design

Data of the periodontitis patients were collected. The data sheet includes chief complaint of the patients, age-sex, patient's education level, systemic and oral health status, smoking, tobacco and gutka chewing habits. The examiner collected information related to the toothbrushing frequency of each patient. After the questionnaire had been completed, each patient received a full mouth examination for assessing gingival recession, plaque and calculus, high frenum, and traumatic toothbrushing. All descriptive data were analyzed using frequency distributions; Analysis was conducted with a statistical software SPSS version 23.0.

RESULTS

There were 100 patients of periodontitis, among them 60% were female patients and 40% were male patients. As mentioned above, 5% patients belonged to age group of 21-30 years, 13% belonged to 31-40 years, 21% belonged to 41-50 years, 28% belonged to 51-60 years, 17% belonged to age group 61-70 years, 13 % belonged to age group 71-80 years and 2% belonged to ages more than 81 years. As observed maximum patients were from age group of 51-60 years, i.e., 28%.

Here literate population consisted of 62%, with 53% having completed higher secondary education and 18% having a graduate degree.
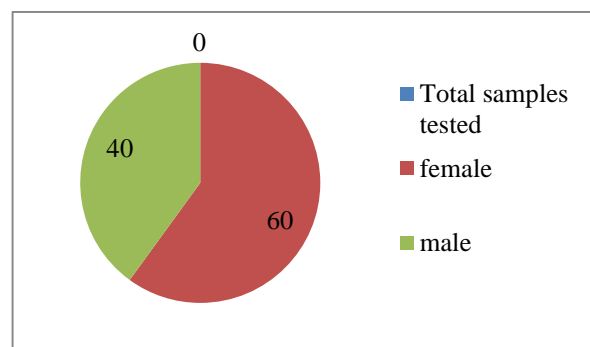

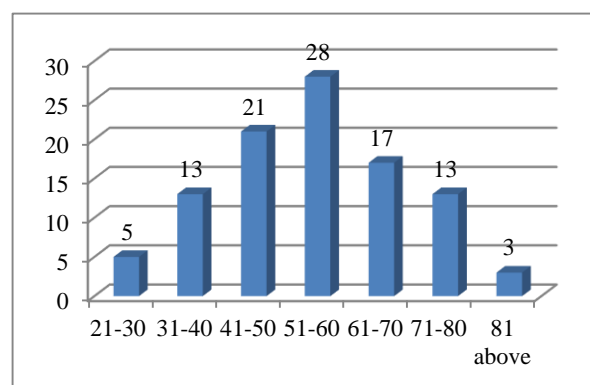**Figure 1: Sex wise distribution of periodontitis patients.**

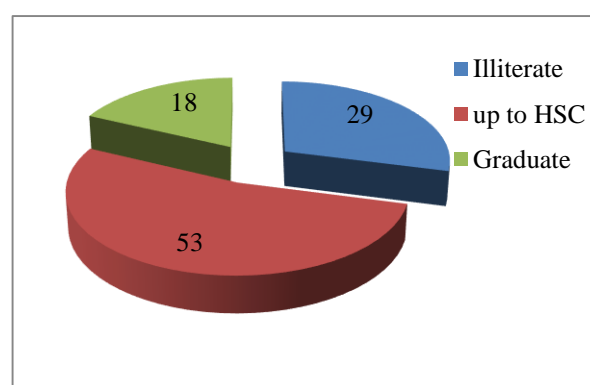**Figure 2: Age wise distribution of periodontitis patients.**

Figure 3: Education of periodontitis patients.

Rest 29% were illiterate. Out of total patients with periodontitis, 15% were having diabetes mellitus, 2% had pre-existing malignancy, 16% had pre-existing hypertension, 2% had smoking habits and 20% had tobacco and gutka chewing habits. As seen in the data, the major pre-disposing factor is Tobacco and Gutka Chewing 20%. The presenting chief complaints of the patients included swollen gums in 4%, bleeding gums in 6%, dental caries in 16%, mobility of teeth in 53%, pain in gums in

6% and sensitivity of teeth in 15%. With majority of chief complain being mobility of teeth with 53%. Out of total patients, the patients with no brushing habit regularly consisted of 1%, who brushed teeth 2 times per day consist of 3% while majority of patients, 96% brushed their teeth for once a day.
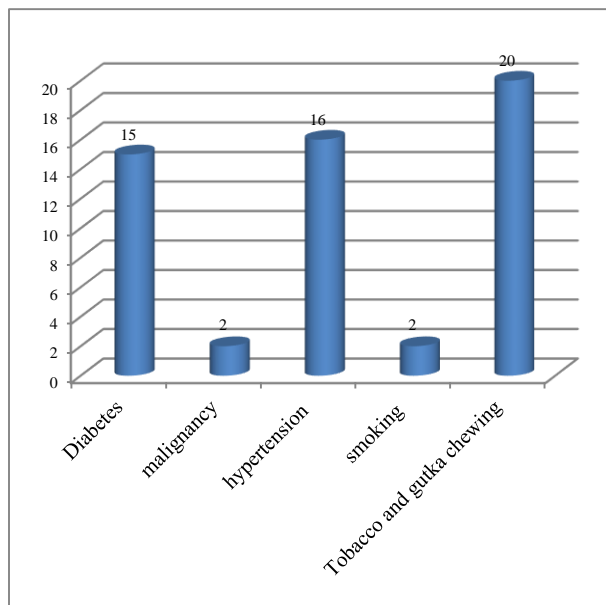

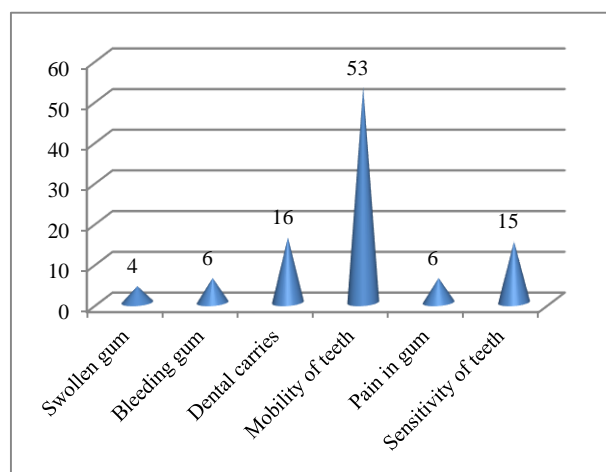**Figure 4: Predisposing factors of periodontitis patients.**

Figure 5: Chief complaints of periodontitis patients.

DISCUSSION

In our study, 53% patients presented with chief complaint of mobility of teeth, whereas in study of Grover et al major chief complaint was deposits in teeth (60%) and in study of Abdulkareem et al bleeding gums (29%) was major chief complaint. In study of Soundarajan et al also bleeding gum (23%) was the main chief complaint.[1,5,6] In present study, male (40%) female (60%) ratio is 2:3. In study of Soundarajan et al females constituted about 59%, whereas males constituted 41%.[6] Similar results were found in study of Tadjoedin et al 58% female patients and 42% male patients. Whereas study of Toker et al, female and male subjects was 76% and 82% respectively.[5-8] In this study, age group between 51 years to 60 years was associated with maximum periodontitis patients (28%). Whereas Saravanan et al study, 67% patients were between age group of 21 years to 30 years.[9] Bokhari et al also reported that subjects aged 40 years and above were four times more likely to have periodontitis using community periodontal index (CPI) methods.[10]
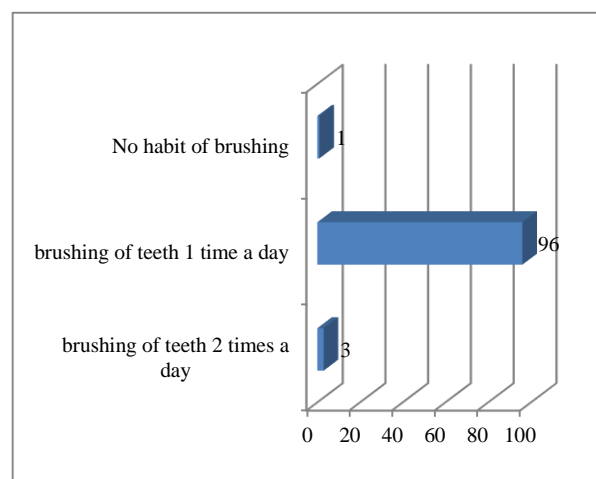

Figure 6: Habit of brushing of periodontitis patients.

In study of Grover et al maximum number of periodontitis patients were found between age group of 41 years to 50 years, whereas 28% patients were found between age group of 51 years to 60 years of age.[1] Similar study of Abdulkareem et al mainly between 51-60 years of age representing about 34% of the total number of patients.[5] In our study, tobacco and gutka chewing (20%) were major predisposing factors associated with periodontitis. But in Saravanan study, alcohol (63%) which is maximum followed by Gutka chewing (35%) were predisposing factors.[9] In study done by Tokeret al 31% having habit of smoking, 5% having hypertension, 3% having diabetes and 79% having other disorders.[9] Whereas in present study, only 2% were smoking, 15% had diabetes and 16% had hypertension and remaining (45%) were healthy.[10] Here in this study, 96% patients were brushing once in a day, whereas 3% patients were brushing twice in a day and only 1% patient had no habit of brushing teeth while In the study of Ejemai 72% patients were brushing once in a day, whereas 25% were brushing twice in a day.[11] In present study, 53% patients were studied upto Higher secondary school whereas only 18% patients were graduated and 29% were illiterate. In study done by Toker et al and other study 60% patients were studied upto high school, whereas 40% were studied beyond high school.[8,10]

Limitations

We were able to collect the data only from Government institute's Dentistry Department during study period and not from all areas of our region.

CONCLUSION

Total 51 years to 60 years of age group with higher number of females and tobacco chewer have higher incidence of periodontitis with major chief complaint of mobility of teeth. These patients are brushing once in a day.

REFERENCES

1. Grover V, Malhotra R, Kapoor A, Kaur G, Kaur RK, Jasjit KS. Chief complaints of patients seeking treatment for Periodontitis. Int Dent J Stud Res. 2017;5(1):19-24.
2. Manjunath BC, Praveen K, Chandrashekar BR, Rani RM, Bhalla A. Periodontal infections: a risk factor for various systemic diseases. Natl Med J India. 2011;24(4):214-9.
3. Brown LJ, Löe H. Prevalence, extent, severity and progression of periodontal disease. Periodontol. 1993;2:57-71.
4. Roshna T, Nandakumar K. Generalized aggressive periodontitis and its treatment options: case reports and review of the literature. Case Rep Med. 2012;2012:535321.
5. Brunsvold MA, Nair P, Oates TW. Chief complaints of patients seeking treatment for periodontitis. J Am Dent Assoc. 1999;130(3):359-64.
6. Soundarajan S, Malaippan S, Gajendran PL. Relationship between Chief Complaints and Severity of Periodontitis in Patients Seeking Periodontal Therapy: A Retrospective Study. World J Dent. 2020;11(5):396-401.
7. Tadjoedin F, Fitri AH. Effect of age on the periodontium. J Clin Periodontol. 1984;11(5):281-94.
8. Toker H, Ozdemir H. Gingival recession: epidemiology and risk indicators in a university dental hospital in Turkey. Int J Dent Hyg. 2009;7(2):115-20.
9. Saravanan N, Thiruneervannan R, Christopher P. A study to assess the periodontal status of transgender in Chennai city. Biosci Biotech Res Asia. 2005;12:1673-8.
10. Bokhari SAH, Suhail AM, Malik AR, Imran MF. Periodontal disease status and associated risk factors in patients attending a dental teaching hospital in Rawalpindi, Pakistan. J Indian Soc Periodontol. 2015;19:678-82.
11. Akhimie EE, Oginni F, Oginni A. A study of tooth brushing pattern and its effects on dental tissues in Obafemi Awolowo University students. Nig Dental J. 2012;21:70-6.