

Periodontal Health Status of Patients attending Isra Dental College OPD using CPI Index

1. Amtul Qayoom Shams Qazi 2. Naveed Irfan 3. Saeed Sattar Shaikh

1. Asstt. Prof. of Oral Pathology, Isra Dental College & Hospital, Hyderabad Sindh 2. Lecturer of Community Medicine, Isra Dental College & Hospital, Hyderabad Sindh 3. Asstt. Prof. of Pathology, Al-Tibri Medical College & Hospital, Isra University Karachi Campus Sindh

ABSTRACT

Objectives: To assess the periodontal health status among patients attending Dental OPD of Isra dental college Isra University Hyderabad. To predict for planning of periodontal care programmes for population attending Dental OPD of Isra dental college Isra University Hyderabad.

Study Design: Cross sectional study.

Place and Duration of Study: This study was carried out in dental OPD of Isra dental college Isra University Hyderabad. Duration of study was six months.

Materials and Methods: The study was conducted on 500 subjects. For the assessment of the periodontal status of a population visiting OPD of Isra Dental College, CPITN recording were made for patients visiting within 6 months and selected at random without consideration of sex, religion, education, socioeconomic condition and systemic health at filtration clinic of OPD. The subjects were examined by a single examiner with the help of a plane mouth mirror and CPITN Probe. The index teeth were selected for examination.

Results: A total of 500 subjects were surveyed in the study who visited filtration clinic of Dental opd of Isra dental college out of them 190 (38%) were female and 310 (62%) were males (fig 1). (Fig.2) showed the percentage of CPITN code 1 was highest (54.8%) which shows bleeding gums, followed by the percentage of code 2 (27.2%) which represents the presence of supra and sub gingival calculus. The percentage of code 3 was found to be 8% denoted by presence of periodontitis having pathological pocket depth of 4 to 5 mm. About 10 % patients were found having healthy periodontal tissues.

Conclusion: Using the research results, a greater effort can be made in providing periodontal health to the population of at or around the city of Hyderabad. Systemic diseases and environmental or genetic risk factors were not included in this study. A further broad scale study is needed to measure an accurate prevalence of periodontal diseases among the patients of at or around city of Hyderabad.

Key Words: Periodontal, Health Status, CPI Index

INTRODUCTION

The periodontal disease is the most prevalent disease in adult population¹. It affects the supporting and investing tissues of the teeth and recognized as major health problem worldwide². The severity of disease may vary, but in most countries the adult populations experience distressing symptoms of periodontal disease such as bleeding and receding gums and loosening and migration of teeth. These changes reduce the physiologic and social values of the dentitions³. Epidemiological studies that have been performed in many parts of the world indicate that periodontal diseases of varying severity are of nearly universal in both children and adolescents^{4,5}. The prevalence of gingivitis is virtually 100% in a population with no oral hygiene and declines with improved oral hygiene^{4,6}. Community periodontal Index of Treatment Needs (CPITN) is an index which has been formulated adopted and utilised by World Health Organisation (WHO) in epidemiological studies conducted in several

countries of the world. This index entails study of both prevalence of periodontal disease in a population and assessment of treatment needs for the same⁷. It is claimed to be a quick and dependable index where a large population can be covered in a short period. Till now a good number of epidemiological studies have been conducted by CPITN in different countries⁸⁻¹³. The prevalence of periodontitis has been elucidated by the World Health Organization (WHO) presenting data on periodontal condition from many countries in its global oral data bank using the community periodontal index of treatment needs (CPITN) criteria. Reports from different places around the world showed a prevalence of severe Periodontitis in around 8-10% of the Population; Sweden 8%, England 7%, The Netherlands 10%, Italy 9.6 % and Srilanka 8%.^{4, 6}. In India, periodontal diseases are the main cause of Dental extractions⁴. Using data from the 1999-2002 to 2004 National Health and Nutrition Examination Survey (NHANES), United States of America (USA), Researchers demonstrated that adults with low

income and less than a high school education are approximately twice as likely to have periodontal diseases compared with more affluent adults with higher educational attainment^{14,15}. The aim of this survey is to determine the periodontal health status of patients attending Isra Dental College OPD by using CPITN system. The establishment of the global goals for oral health for all by the year 2000 A.D. has made an implication that there is an increased need to collect epidemiological data on various oral health problems⁽¹⁶⁾. Data on prevalence, incidence and severity of the disease can help in evaluating the significance of the disease and its consequences.

MATERIALS AND METHODS

This cross sectional study was carried out in dental OPD of Isra dental college Isra University Hyderabad for a period of six months. The study was conducted on 500 subjects having non probability (Convenience).

Inclusion Criteria:

- Age ranges 18 to 70 years
- Male and female subjects.

Data collection procedure: For the assessment of the periodontal status of a population visiting OPD of Isra Dental College, CPITN recording were made for patients visiting within 2 months and selected at random without consideration of sex, religion, education, socioeconomic condition and systemic health at filtration clinic of OPD. The subjects were examined by a single examiner with the help of a plane mouth mirror and CPITN Probe. The index teeth were selected for examination.

16,17	11	26,37
26,27	31	46,47

The clinical condition and scoring were followed as suggested by Ainamo et al¹⁷.

Clinical Condition	Score	Treatment Needs (TN)
No sign of disease	0	No Treatment
Gingival bleeding after gentle probing	1	Improvement in personal oral hygiene (TN1)
Supra and / or gingival calculus	2	Improvement in personal orgal hygiene and scaling (TN2)
Pathological pocket 4 to 5 mm deep	3	Same as score 2
Pathological pocket 6 mm or deep	4	Same as score 2 and complex treatment (TN3)

Data Analysis: Data was analyzed by SPSS version 17.

RESULTS

A total of 500 subjects were surveyed in the study who visited filtration clinic of Dental OPD of Isra dental college out of them 190 (38%) were female and 310 (62%) were males (fig 1). (Fig.2) showed the percentage of CPITN code 1 was highest (54.8%) which shows bleeding gums, followed by the percentage of code 2 (27.2%) which represents the presence of supra and sub gingival calculus. The percentage of code 3 was found to be 8% denoted by presence of periodontitis having pathological pocket depth of 4 to 5 mm. About 10 % patients were found having healthy periodontal tissues.

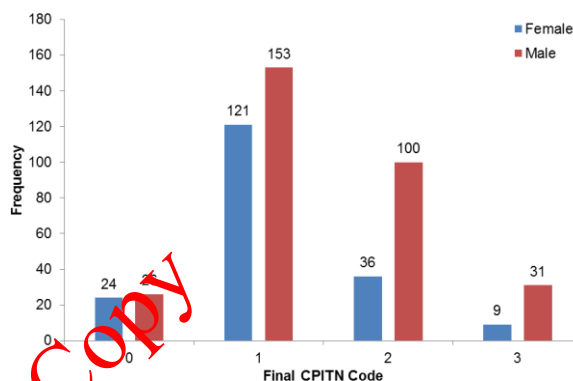


Figure No.1: CPITN Score Evaluation with Respect to Gender of the Patients (n=500)

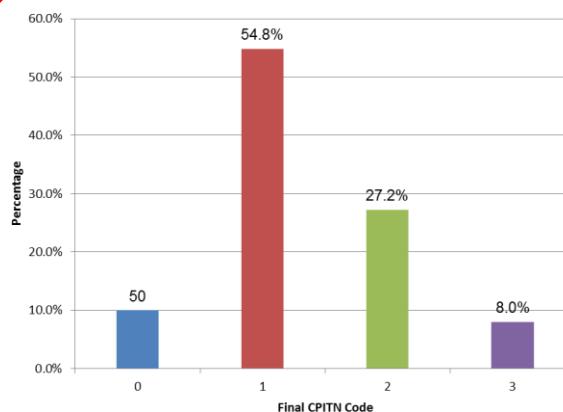


Figure No.2: CPITN Score Evaluation of the Patients (n=500)

DISCUSSION

Oral health is an integral part of general health. The universality of periodontal disease is very well established and Oral appearance affects self-esteem and the willingness to interact with others. Appropriate nutritional intake can also be influenced by incapacity to masticate or persisting pain due to oral diseases¹⁷. Several attempts have been made to develop methods for assessing periodontal disease status and treatment needs on a population basis which would help in the

planning of dental public health services. The CPITN is a useful approach to screening population because it uses accepted clinical criteria, partial mouth scoring and a simple recording procedure, which permits rapid assessment of individuals for periodontal conditions related to treatment needs.

From this study it is evident that though calculus is widespread, involvement by score 4 and score 0 are much less these findings are in line with an Indian studies named as chirag¹⁸ et al and Vandana¹⁹ et al. It indicates that periodontal disease is not common healthy people are less in number though destructive periodontal disease is not common, so it may be concluded that calculus in maximum cases does not produce advanced destructive periodontal disease. CPITN code 1 and 2 were found more than code 3 and 4 which shows gingivitis is more prevalent than periodontitis in the studied population supporting the results of Saudi study named as Zahid²⁰ et al. Providing periodontal care (scaling/surgery) for such large population would put huge burden on the health care system. Therefore, a community based approach for general promotion of good oral hygiene practices should be carried out on large scales for control and prevention of periodontal disease²¹. If population is made aware of various oral hygiene measures, the treatment needs could be reduced considerably. The present study suggests that there is higher treatment needs in the studied population. So, more dental awareness camps should be organized in the targeted population to decrease the treatment needs and finally the burden on dental health sector.

CONCLUSION

Using the research results, a greater effort can be made in providing periodontal health to the population of at or around the city of Hyderabad. Systemic diseases and environmental or genetic risk factors were not included in this study. A further broad scale study is needed to measure an accurate prevalence of periodontal diseases among the patients of at or around city of Hyderabad.

REFERENCES

1. Van der Velden U. The onset age of periodontal destruction. *J Clin Periodontol* 1991;18(6):380-83.
2. WHO. Technical report series no. 621 (epidemiology, etiology and prevention of periodontal disease), World Health Organization, Geneva;1978.
3. Mistry KM. The changing pattern of oral disease in India. The need for preventive approach. *J Ind Dent Assoc* 1983;55(10):387-93.
4. Bergenholtz A, Jorkjend L. Some modern aspects of periodontal disease. *The Saudi Dent J* 1990; 2(4):156-164.
5. Assery M, Awartani FA. Level of periodontal health knowledge among high school students in the east of Saudi Arabia. *The Saudi Dent J* 1998;10(3):116-122.

6. Al-Khateeb TL, Al-Amoudi NH, Fatani HH, et al. Periodontal diseases and caries experience of Diabetic patients in an Arabian community. *The Saudi Dent J* 1990;2(3):91-95.
7. Ainamo J, Barmes DE, Beagrie G, Cutress T, Martin J, Sardo-Infirri J. Development of the World of Treatment Organization (WHO) Community Periodontal Index of Treatment Needs (CPITN). *Int Dent J* 1982;3:281-291.
8. Garcie ML, Cutress TWA. National survey of periodontal treatment needs of adults in the Philippines. *Community Dent. Oral Epidemiol* 1986;14:313-316.
9. Pilot T, Barmes DE, Leciercq MH, McCombie BJ, Sardo-Infirri J. Periodontal conditions in adults 35-44 years of age. An overview of CPITN data in the WHO. *Global oral Data Bank. Community Dent. Oral Epidemiol* 1987;14:310-312.
10. Pilot T, Barmes DE, Leciercq MH, McCombie BJ, Sardo-Infirri J. Periodontal conditions in adolescents 15-19 years of age. An overview of CPITN data in the WHO Global oral Data Bank *Community Dent. Oral Epidemiol* 1987;15: 336- 338.
11. Oliver RC, Brown LJ, Ioe H. An estimate of periodontal treatment needs in the U.S. bases on epidemiological data. *J Periodont* 1989;60: 371-380.
12. Strkohmenger L, Cerati M, Brambilla E, Malerba A, Vogel G. Periodontal epidemiology in Italy by CPITN. *Int Denta J* 1991;41:313-315.
13. Miyazaki H, Pilot T, Leciercq MH, Barmes DE. Profiles of periodontal conditions in adolescents measures by CPITN. *Int Denta J* 1991;41:67-73.
14. National health and nutrition examination survey (NHANES); 1999 - 2002.
15. National health and nutrition examination survey (NHANES); 1999-2004.
16. Aggeryd T. Goals for oral health in the year 2000: Cooperation between WHO, FDI and the national dental associations. *Int Dent J* 1983;33(1):55-9.
17. Ainamo J. The Community index for Treatment needs (CPITN) procedure for population groups and individuals. *Int Dent J* 1987;37(4):222-33.
18. Shah CS. An epidemiological study in gujarat by community periodontal index of treatment needs (cpitn). *Annals and Essences of Dentistry Current Issue* 2013;5(1).
19. Vandana KL, Sesha Reddy M. Assessment of periodontal status in dental fluorosis subjects using community periodontal index of treatment needs. *Ind J Dent Res* 2007;18:67-71.
20. Hossain MZ, Fageeh HN, Elagib MFA. *City Dent. Coll J* 2013;10(1).
21. Pal TK, et al. Periodontal health status or rural population of West Bengal using CPITN inducing system. *JISP* 1998;1(1):23-5.

Address for Corresponding Author:

Dr. Saeed Sattar Shaikh

Cell No.: 0333-2703951