

ORIGINAL ARTICLE

PERIODONTAL DISEASE STATUS AMONG ADULT POPULATION ATTENDING PRIVATE DENTAL HOSPITAL AT GADAP TOWN KARACHI

¹Raza Abbas, ¹Mahwish Bano, ¹Samreen Mazhar, ¹Asghar Ali Shigri

¹Department of Community Dentistry, Baqai Dental College, Baqai Medical University, Karachi. Pakistan.

ABSTRACT

The purpose of this study was to evaluate the periodontal disease status among adult population of private dental clinic of outpatient department Karachi. It was descriptive cross sectional study. A brief study protocol was explained and verbal Informed consent was obtained from each study participants before the oral examination. The examination of oral cavity was carried out according to the World's Health Organization oral health survey form (1997) using an examination instruments and CPITN probe under proper light source. The data was analyzed by using statistical package for social sciences SPSS 20 version. A total of 104 study participants. The mean age was 2.09 and standard deviations showed 0.837, along with the three age groups were 20-25 (30.8%), 26-35 (29.8%), and 36-45 (39.4%). However, the individuals were doing private job were 44.2%, governments job peoples was 14.4%, businessman persons were 1.9%, jobless individuals were 4.8%, those women's are housewives were 32.7% and other jobs doing participants like tailor, labor-man, shopkeepers etc., were 1.9%. According to the community periodontal index (CPI) the patients who had diagnosed with bleeding gums were 22.1% this result showed that gingivitis was seen in this rural community of Gadap town, likewise, those patients who attended the dental hospital OPD that have a poor oral hygiene noticed that plaque and calculus deposition was seen during the oral examination were 52.9%. A few personnel who attended the dental clinic in the hospital they had a periodontal pocket depth 4-5mm and gingivitis were 3.8%.

KEY WORDS: Periodontal Disease, Private Dental Hospital, Out Patient Department

INTRODUCTION

Oral health is an essential part of general health and an important advantage for any human being. Periodontal diseases are a collection of chronic, progressive bacterial infections resulting in inflammation and destruction of tooth supporting tissues. (1) Its impact on individuals and communities in conditions of pain, distress, impairment of function, and reduced quality of life is significant. In addition a variety of demographic factors such as socioeconomic status and level of learning can influence the development of periodontal disease. (2)

Quite a lot of epidemiological studies comprise of gums disease and its related to the structures is as older as humankind. It continues to be one of the most frequent diseases. There is a broad variation in the periodontal status of individuals living in different geographic locations which could be assigned to difference between the life

styles and oral hygiene practices. (3)

Periodontal diseases are one of the most frequent importances among oral health conditions affect the populations around the globe. These are the most important cause of tooth loss mainly among the aged people and its considerably representing a community health problem. (4) In several studies widespread the dental plaque development and inflammation of gingival tissue are universally and strongly associated with the age, gender and ethnic identification. (5) The predominance of periodontitis is significantly high in the developing countries. (6)

Moreover the most necessary oral health education and simple intervention like pain relief and emergency care for sensitive infection and distress are not accessible to the huge preponderance of population. (7)

These days usually decided that approximately all types of periodontal diseases occur as an outcome of varied microbial infection surrounded by the particular group of pathogenic bacteria can exists. (8-9) In another study evidence is reviewed previously on the possible roles of adaptable and non adjustable risk factors linked with the periodontal disease and an thoughtful risk factors is important for clinical practices. (10) The purpose of this study was to evaluate the periodontal disease status among adult population of private dental clinic of outpatient department Karachi.

MATERIAL AND METHODS

The 104 participants, who were divided into three groups aged 15-24 years were qualified to group one, group two aged from 25-35 years, and group three aged 36-45. The subjects in every group were male and female. Descriptive cross sectional study design. A brief study protocol was explained and verbal Informed consent was obtained from each study participants before the oral examination. The examination of oral cavity was carried out according to the World's Health Organization oral health survey form (1997) using an examination instruments and CPITN probe under proper light source. The periodontal status was evaluated by Community Periodontal Index of Treatment Need (CPITN). The oral cavity was divided into 6 sextants, consisting of maxillary and mandibular molars, premolars, incisors and canines. One tooth in each sextant was examined for presence of gingival bleeding (code

1), calculus (code 2) and periodontal pocket (code 3 if its depth was 3.5-5.5 mm, and code 4 if it was 6mm or deeper). Code 0 means healthy periodontium. The examination was carried out on maxillary, mandibular first molars, maxillary and mandibular central incisors. The WHO oral health assessment survey form was used to record the data. The data was analyzed by using statistical package for social sciences SPSS 20 version.

RESULTS

A total of 104 study participants the male individuals were 58.7% and 41.3% were female participants respectively. The mean age was 2.09 and standard deviations showed 0.837, along with the three age groups were 20-25 (30.8%), 26-35 (29.8%), and 36-45 (39.4%). However, the individuals were doing private job were 44.2%, governments job peoples was 14.4%, businessman persons were 1.9%, jobless individuals were 4.8%, those women's are housewives were 32.7% and other jobs doing participants like tailor, labor-man, shopkeepers etc., were 1.9%.

Those individuals who lived in urban area were 24%, those persons that lived in peri-urban area were 44.2% and those personnel who lived in rural area of Gadap town were 30.8%. According to the community periodontal index (CPI) the patients who had diagnosed with bleeding gums were 22.1% this result showed that gingivitis was seen in this rural community of Gadap town, likewise, those patients who attended the dental hospital OPD (Outpatient department) that have

TABLE: 1 SIGNIFICANT RESULTS OF PERIODONTAL DISEASE INDEX

Community Periodontal Index	Loss of periodontal attachment				Total	Chi square P value
	0-3mm	4-5mm	6-8mm	9-11mm		
Healthy	22	0	0	0	22	0.000
Bleeding	13	10	0	0	23	
Calculus	4	24	24	3	55	
Pocket depth 4-5mm	0	0	4	0	4	
Total	39	34	28	3	104	

a poor oral hygiene noticed that plaque and calculus deposition was seen during the oral examination were 52.9%. A few personnel who attended the dental clinic in the hospital they had a periodontal pocket depth 4-5mm and gingivitis were 3.8%.

The patients who were came to the department of periodontology; after clinical examination of oral cavity had been done with the CPI probe they had observed a 0-3mm loss of periodontal attachment and with periodontitis were 37.5%. Then those individuals had 4-5mm loss of periodontal attachment 32.7% were noticed in a population of Gadap town, 26.9% persons had 6-8mm loss of periodontal attachment were observed after the clinical examination of oral cavity was diagnosed with gingivitis and periodontitis. A small number of patients who had 9-8mm loss of periodontal attachment were 2.9% respectively.

According to the age groups of 15-45 years participated in this study there were had a large number of patients they diagnosed with the periodontal disease in the community of Gadap town area.

DISCUSSION

The oral lesions are easy to prevent by primary preventive measures; lack of oral hygiene lead to tooth loss which is a public health issue across the globe that affects individuals of all ages¹¹ and dental plaque has main function in initiating dental caries, gingivitis, and periodontal problems and consider as the cause in most of the dental diseases and its removal is necessary for healthy dental tissue.¹²

A path- finder study done in Pakistan under auspices of WHO shows that among kids of 12-15 years of age group, 32% had healthy periodontium in year 1991. The findings of this study are suggestive of the fact that since the path finding survey was done in Pakistan, nothing has been done in this regard to improve the oral health. It has been seen that there is a wide difference in the periodontal status of urban and rural population as seen in different research studies.¹³ This cross-sectional survey was conducted to accessing the periodontal disease status among adults as well as elderly individuals of Gadap town area.

Another study showed that the results concerning periodontal diseases are more common in males where trends were higher for gingivitis (51%) and periodontitis (10%) which when compared with females who have relatively lower percentages with gingivitis occurring in 29% and periodontitis occurring in 5% individuals. These findings were in accordance with previous studies which reported that males are more severely affected with periodontal disease than females¹⁴. As compared in our study the 22.1% study subjects had diagnosed with gingivitis and 26.9% individuals had periodontitis and loss of periodontal attachment were noticed. On the contrary, periodontal status seems to have further deteriorated. It is not very unlikely that if samples from population of other rural areas are studied, similar results will be achieved. Leaving the situation in situ at this alarming stage will put general health of the rural population in jeopardy as it has been documented that periodontal diseases are strongly associated with Carotid Atherosclerosis, risk of adverse pregnancy consequences, respiratory diseases and diabetes mellitus¹⁵. The foremost reason for prevalence of such high periodontal ailments in Gadap population may be its socioeconomic status as the impact of socioeconomic standing of a person plays a substantial role in retaining or not retaining good oral health. The other collaborating factors may be illiteracy, cultural constraints, lack of public policies, restricted resources of the health sector, low human development in the country, competing health priorities and low-priced accessibility of betel quid and areca nut. WHO introduced The Community Periodontal Index (CPI) to provide profiles of periodontal health status in countries and to facilitate them to plan interventional programs for effective control of periodontal disease. In the past twenty years, numerous countries have provided CPI data to be kept in the WHO Global Oral Health Data Bank and they are displayed through WHO Country/Area Profile Program (CAPP) by University of Niigata, Japan.¹⁶ It is surprising to note that in the latest display of periodontal profile of countries by Niigata University, CPI of Pakistan is not included. The reason behind may be lack of valid and authentic data by any competent authority or professional

organization. This study suggests rising prevalence of periodontal disease and indicating higher periodontal treatment needs for the population. The data strongly recommends that it is timely and prudent that the disease is given its due attention and CPI of Pakistan is introduced. Evaluation using these indices will help in identifying and classifying periodontal disease rapidly thus periodontal treatment needs can be assessed.¹⁷

CONCLUSION

Prevalence of periodontal diseases especially in rural youth is very high due to low socio-economic status, low medical education background, and negative attitudes towards oral hygiene skills and dental services that why it requires immediate attention of the concerned authorities before disease burden becomes unmanageable.

LIMITATION

The prevalence of female respondent was lower as compared to male in this study, it could be the reason that dental hospital timing was at morning, on this moment most of the female spend their time at their household due to this reason that do not have time to access to dental clinic for dental treatments as compared to the male.

FUNDING

None mentioned

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES:

1. Banodkar AB, Gaikwad RP, Gunjekar TU, Lobo TA. Evaluation of accuracy of cone beam computed tomography for measurement of periodontal defects: A clinical study. *Journal of Indian Society of Periodontology*. 2015 May;19(3):285.
2. Philip B, Chithresan K, Vijayaragavan VS, Maradi A. Prevalence of periodontal diseases among the adult tribal population in Nilgiris-an epidemiological study. *International Journal of Public Health Dentistry*. 2013 May 27;4(1).
3. Petersen PE, Baehni PC. Periodontal health and global public health. *Periodontology 2000*. 2012 Oct;60(1):7-14.
4. Lorenzo SM, Alvarez R, Andrade E, Piccardo V, Francia A, Massa F, Correa MB, Peres MA. Periodontal conditions and associated factors among adults and the elderly: findings from the first National Oral Health Survey in Uruguay. *Cadernos de saude publica*. 2015;31:2425-36.
5. Albandar JM, Rams TE. Global epidemiology of periodontal diseases: an overview. *Periodontology 2000*. 2002 Apr;29(1):7-10.
6. Arjun TN, Sudhir H, Eshani S, Rana PT, Shubham J, Abhishek G. Assessment of Periodontal Status among Eunuchs Residing in Bhopal City, Madhya Pradesh, India: A Cross Sectional Study.
7. Shaju JP, Zade RM, Das M. Prevalence of periodontitis in the Indian population: A literature review. *Journal of Indian Society of Periodontology*. 2011 Jan;15(1):29.
8. Blandino G, Milazzo I, Fazio D, Puglisi S, Pisano M, Speciale A, Pappalardo S. Antimicrobial susceptibility and β -lactamase production of anaerobic and aerobic bacteria isolated from pus specimens from orofacial infections. *Journal of Chemotherapy*. 2007 Oct 1;19(5):495-9.
9. Pussinen PJ, Paju S, Mantyla P, Sorsa T. Serum microbial-and host-derived markers of periodontal diseases: a review. *Current medicinal chemistry*. 2007 Sep 1;14(22):2402-12.
10. Ruby J, Barbeau J. The buccale puzzle: the symbiotic nature of endogenous infections of the oral cavity. *Canadian Journal of Infectious Diseases and Medical Microbiology*. 2002;13(1):34-41.
11. Veiga NJ, Pereira CM, Ferreira PC, Correia IJ. Oral health behaviors in a sample of Portuguese adolescents: an educational issue. *Health promotion perspectives*. 2014;4(1):35.
12. Leghari MA, Ali SI, Rehan F, Ali H, Arain US. Prevalence of oral hygiene aids and bleeding gums among the people visiting Private Dental Hospital in Gadap town, Karachi. *International Dental & Medical Journal of Advanced Research*. 2017;3(1):1-5.

13. Maher R. Dental disorders in Pakistan--a national pathfinder study. J Pak Med Assoc. 1991 Oct;41(10):250-.
14. Asad M, Mirza AJ, Siddiqui MA. Periodontal Status of the Residents of a Rural Community in Gadap Town, Karachi, Pakistan. JPDA. 2016 Jul;25(03):94.
15. de Salud Bucodental OE. Métodos básicos. Organización Mundial de la Salud. 4ta ed. Ginebra. 1997:46-52.
16. Kingman A, Albandar JM. Methodological aspects of epidemiological studies of periodontal diseases. Periodontology 2000. 2002 Apr;29(1):11-30.
17. Peres MA, Peres KG, Cascaes AM, Correa MB, Demarco FF, Hallal PC, Horta BL, Gigante DP, Menezes AB. Validity of partial protocols to assess the prevalence of periodontal outcomes and associated sociodemographic and behavior factors in adolescents and young adults. Journal of periodontology. 2012 Mar 1;83(3):369-78.