Periodontal Presenting Complaints in a Teaching Hospital: Prevalence and characteristics

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ABSTRACT

Objective: To examine the prevalence and characteristics of periodontal presenting complaints among dental patients that attended University of Benin Teaching Hospital.

Methods: This was part of a larger cross-sectional study among University of Benin Teaching Hospital Outpatient Dental Clinic patients conducted between July and December, 2017. A self-administered questionnaire was used to elicit their complaints with particular emphasis on periodontal complaints. An intraoral examination was carried out to assess their oral hygiene and carious status.

Results: A total of 8 periodontal related main presenting complaints were recorded from 80 out of 394 patients giving a 20.3% prevalence. Nearly half (42.5%) of the participants reported deposits/stains as their complaint. Gum pain and bleeding gum accounted for 16.3% and 6.3% of the complaints respectively. The majority of the participants were young adults (72.5%), females (56.3%), single (61.3%), had tertiary education (80.0%) and were Edo indigenous people (51.3%). Aesthetic related complaints constituted 58.8% of the complaints. Females reported more deposits/stains, demand to clean their teeth and swollen gum while males reported more gum pain, sensitivity, bleeding gum, mobile tooth/teeth and mouth odour. Patients with symptomatic complaints were likely to smoke, indulge in alcohol consumption, have poor oral hygiene and dental caries.

Conclusion: Periodontal presenting complaints which were mainly aesthetic in nature constituted about one fifth of all main presenting complaints in outpatient dental clinic of a teaching hospital in Nigeria. This reflected a high periodontal treatment need so development of manpower to meet such need is recommended.

Keywords: Periodontal complaints, dental patients, outpatient

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CLINICAL IMPLICATIONS

Patients with symptomatic complaints are likely to smoke, indulge in alcohol consumption, have poor oral hygiene and dental caries thus will need counseling in addition to the treatment of their conditions. A minimum of one fifth of space in Dental healthcare setting should be dedicated to Periodontal healthcare service delivery in Dental Healthcare setting.

INTRODUCTION

Periodontal disease constitutes high oral disease burden in developing and developed countries with 85%[1]and 90.8%[2] of the population suffering from this disease in United States of America and Nigeria respectively. However, this disease condition is neglected by patients because it is generally chronic, slowly progressing and painless in nature even at advanced stages.[3]

The symptoms associated with periodontal disease are wide, ranging from deposits on teeth, gingival bleeding, bad breath and alteration in gingival shape or appearance, pain, pathological tooth mobility, periodontal abscesses and tooth migration.[4] Any of the above-mentioned symptoms could represent a periodontal complaint that will motivate patient to seek treatment. Periodontal care (17%) ranked third in main complaint of the needs and demands for dental care in patients visiting a university dental hospital behind surgical care (34%), restorative care (27%).[5] In a study carried out to determine the demand for dental care among dental patients in Sri Lanka; only 20% of them had complaints related to periodontal disease of which two-thirds had advanced symptoms of tooth mobility.[6] In analysis of presenting complaints in Oral diagnosis of a Teaching Hospital in Nigeria, periodontal disease constituted 15.3% of the oral diseases seen in form of chronic periodontitis (7.4%), gingivitis (acute and chronic) (6.4%), pericoronitis (0.5%), juvenile periodontitis (0.5%) and acute ulcerative gingivitis (0.3%).[7]

In another study by Demetriou et al.[8] individuals younger than 40 years of age complain mainly of gingival bleeding and gingival enlargement while those aged 40 years and more, reported tooth mobility and tooth migration as main symptoms. Understanding the prevalence of periodontal presenting complaints will help initiating strategy for disease control and also build capacity in periodontal healthcare delivery. However, there is paucity of studies on the characteristics of patients seeking dental care with periodontal presenting complaints in the literature despite the high burden of periodontal disease, globally. The objective of this study was to examine the prevalence and characteristics of periodontal presenting complaints among dental patients that attended University of Benin Teaching Hospital, Benin City, Nigeria

MATERIAL AND METHODS

This study was part of a larger cross-sectional study among University of Benin Teaching Hospital Outpatient Dental Clinic patients conducted between July and December, 2017. All consenting attendees with index teeth for Oral Hygiene Index – Simplified at the Outpatient Dental Clinic of University of Benin Teaching Hospital, Benin City, Edo State were included while attendees at the outpatient dental clinic of University of Benin Teaching Hospital, Benin City that did not give consent were excluded from the study. Data collection was done through the use of self-administered questionnaire and clinical examination.

The questionnaire which was anonymous with no identifiers elicited information on demographic characteristics and main presenting complaints while an intraoral examination was done to ascertain the oral hygiene and carious status. Oral hygiene status was assessed using Oral Hygiene Index – Simplified (OHIS-S) as described by Greene and Vermillion.[9] Carious status was assessed with Decayed Missing and Filled teeth (DMFT) and the obtained score was categorized into 0 as absence of dental caries and any value above 1 as presence of dental caries.

The age of the participants was categorized into young adults (18-40 years), middle-age adult (41-64years) and elderly (≥65years). The protocol for this study was reviewed and approval granted by the Ethics and Research Committee of the University of Benin Teaching Hospital, Benin City, Nigeria. Data was analyzed using IBM SPSS version 21.0. Test of statistical significance was done using Chi-square statistics and the level of statistical significance was set at $p< 0.05$.

RESULTS

Out of the 394 patients aged 18 to 82 years assessed, periodontal presenting complaint was elicited from

80 of them giving a 20.3% prevalence. Nearly half (42.5%) of the participants reported deposits/stains as their complaint. Gum pain and bleeding gum accounted for 16.3% and 6.3% of the complaints respectively (Table 1).

The majority of the participants were young adults (72.5%), females (56.3%), single (61.3%), had tertiary education (80.0%) and were Edo indigenous people (51.3%). Aesthetic related complaints constituted 58.8% of the complaints. Females and single participants reported more aesthetic related complaints (Table 2).

Females reported more deposits/stains, demand to clean their teeth and swollen gum while males reported more gum pain, sensitivity, bleeding gum, mobile tooth/teeth and mouth odour (Table 3).

Patients with pain and other related complaints (symptomatic complaints) were likely to smoke, indulge in alcohol consumption, have poor oral hygiene and dental caries (Table 4).

Table 1: Periodontal presenting complaints among the participants

Complaints	Frequency	Percent
Aesthetic related complaints		
Deposit/stains	34	42.5
To clean my teeth	13	16.3
Pain and other related complaints		
Gum pain	13	16.3
Sensitivity	5	6.3
Bleeding gum	5	6.3
Swollen gum	4	5.0
Mobile tooth/teeth	3	3.8
Mouth odour	3	3.8
Total	80	100.0

Table 2: Relating demographic characteristics to periodontal presenting complaints among the participants

Characteristics	Total n (%)	Pain and other related complaints n (%)	Aesthetic related complaints n (%)	P-value
Age category				0.826
Young adult	58 (72.5)	23 (39.7)	35 (60.3)	
Middle age adult	19 (23.8)	9 (47.4)	10 (52.6)	
Elderly	3 (3.8)	1 (33.3)	2 (66.7)	
Gender				0.103
Male	35 (43.8)	18 (51.4)	17 (48.6)	
Female	45 (56.3)	15 (33.3)	30 (66.7)	
Marital status				0.572
Single	49 (61.3)	19 (38.8)	30 (61.2)	
Married	31 (38.8)	14 (45.2)	17 (54.8)	
Educational status				1.000
Informal/Primary	5 (6.3)	2 (40.0)	3 (60.0)	
Secondary	11 (13.8)	4 (36.4)	7 (63.6)	
Tertiary	64 (80.0)	27 (42.2)	37 (57.8)	
Indigenous ethnicity				0.186
Edo	41 (51.3)	14 (34.1)	27 (65.9)	
Non-Edo	39 (48.8)	19 (48.7)	20 (51.3)	
Total	80 (100.0)	33 (41.3)	47 (58.8)	

Table 3: Relating gender to periodontal presenting complaints among the participants

Complaints	Male n (%)	Female n (%)	Total n (%)	P-value
Deposits/Stains	13 (37.1)	21 (46.7)	34 (42.5)	0.094
Gum pain	6 (17.1)	7 (15.5)	13 (16.3)	
To clean my teeth	4 (11.4)	9 (20.0)	13 (16.3)	
Sensitivity	3 (8.6)	2 (4.4)	5 (6.3)	
Bleeding gum	4 (11.4)	1 (2.2)	5 (6.3)	
Swollen gum	0 (0.0)	4 (8.9)	4 (5.0)	
Mobile tooth/teeth	3 (8.6)	0 (0.0)	3 (3.8)	
mouth odour	2 (5.7)	1 (2.2)	3 (3.8)	
Total	35 (100.0)	45 (100.0)	80 (100.0)	

Table 4: Oral health behaviour, carious and oral hygiene status among the participants

Characteristics	Pain and other related complaints n (%)	Aesthetic complaint n (%)	Total n (%)	P-value
Daily brushing frequency				0.290
Once	15 (45.5)	27 (57.4)	42 (52.5)	
Twice	18 (54.5)	20 (42.5)	38 (47.5)	
Alcohol consumption				0.149
Yes	11 (33.3)	9 (19.1)	20 (25.0)	
No	22 (66.7)	38 (80.9)	60 (75.0)	
Cigarette smoking				0.167
Yes	2 (6.1)	0 (0.0)	2 (2.5)	
No	31 (93.9)	47 (100.0)	78 (97.5)	
Dental visit history				0.137
First	21 (63.6)	37 (78.7)	58 (72.5)	
Previous	12 (36.4)	10 (21.3)	22 (27.5)	
Caries status				0.172
Presence of Caries	7 (21.2)	5 (10.6)	12 (15.0)	
Absence of caries	26 (78.8)	42 (89.4)	68 (85.0)	
Oral hygiene status				0.391
Poor	21 (63.6)	26 (55.3)	47 (58.8)	
Fair	3 (9.1)	10 (21.3)	13 (16.3)	
Good	9 (27.3)	11 (23.4)	20 (25.0)	
Total	33 (100.0)	47 (100.0)	80 (100.0)	

DISCUSSION

Presenting complaints represent patients' immediate demands and can significantly affect their attitude and willingness for the treatment.[10] Prompt and effective resolution of patients presenting complaints helps to improve dentist-patient relationship and greatly enhance patient's cooperation and treatment outcome. In this study, 20.3% of the patients attended with periodontal presenting complaints as compared to non-periodontal complaints which was similar to 20.0% reported in Sri Lanka[5] but higher than 17.0% reported by Ekanayake et al.[6] among patients visiting a university dental hospital and 15.3% reported by Ukeje et al.[7] in a teaching hospital in Nigeria. This may be related to the increasing awareness of the gain of early periodontal healthcare which made them to either need or demand to have scaling and polishing because previous study in the city revealed periodontal disease as the leading cause of tooth loss.[11] Brunsvold et al.[3] found that the motivation to seek periodontal treatment was most commonly

based on information given to the subjects by a member of the dental health team, rather than a periodontitis symptom.

According to the findings from this study, eight periodontal related complaints was reported namely; deposits, demand for teeth cleaning, gum pain, mobile teeth, swollen gum, sensitivity, foul odour, bleeding gum. The most common presenting complaints was deposits/stains which is an aesthetic related symptom. This was in tandem with Grover et al.[10] finding in India but differ with Abdulkareem and Mohammed finding in Iraq who reported bleeding gum as leading symptom. Gum pain (16.3%) was the second leading presenting complaint which were linked with acute gingivitis, acute exacerbation of chronic gingivitis and periodontitis, periodontal abscess and pericoronitis. Pain as a symptom which trigger care seeking behaviour has continually stood out as a survival symptom.

Young adults had more periodontal presenting complaints which may also be the resultant effect of increased awareness to reduce periodontal disease as a leading cause of tooth loss in the city. It may also be connected with the fact that young adults dominate as dental clinic attendees. Females were more concerned about teeth deposits than males because females are more interested in problems that affect their appearance and have better oral hygiene attitude when compared to males. This is obvious in table 4 where aesthetic complaints were more in female while symptomatic complaints were more in males. Never married participants constituted the majority and were seeking periodontal care with more aesthetic complaints which may be obviously related to the effect of dental appearance and cleanliness on attractiveness. The participants with higher educational attainment dominated in periodontal presenting complaint linking the close proximity of the studied teaching hospital to the university community.

Patients with pain and other related complaints (symptomatic complaints) are likely to smoke, indulge in alcohol consumption, have poor oral hygiene and dental caries. This suggests that patients with pain and other related complaints need lifestyle modification and nutritional counseling and oral hygiene instruction. Although patients with pain and other related complaints reported more twice daily teeth cleaning, it may be possible that this frequency of daily teeth cleaning increased with symptom appearance or that they indulged in it without effectively doing it.

CONCLUSION

Periodontal presenting complaints which were mainly aesthetic in nature constituted about one fifth of all main presenting complaints in outpatient dental clinic of a teaching hospital in Nigeria. This reflected a high periodontal treatment need so development of manpower to meet such need is recommended.

Conflict of interest

None

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