

Chief Complaints of Patients Seeking Periodontal Treatment: An Institutional Study

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ABSTRACT

Introduction

The patient's chief complaint is considered a vital component during diagnosis and treatment planning, but it is usually influenced by the severity of the disease. The aim of this study was to identify the most common chief complaints among patients visiting a Tertiary Care Center.

Methods

This is a descriptive cross sectional study, carried out from September, 2020 to March, 2021 at Gandaki Medical College Teaching Hospital. Ethical approval was taken from Institutional Review Committee (Reference Number:96/77/78). Convenient sampling was done. The relevant presenting chief complaints were recorded and a rank order was created based upon their frequency. The data were entered into the excel sheet and the frequency distribution of the parameters were analyzed.

Results

Among 420 patients, the most common chief complaint was deposits/stains, which was found to be 136 (32.38%) (0.27-0.37 at 95% confidence interval). The second most common complaint was bleeding gums, which was found to be 45 (10.71%), and the third was loose teeth 43 (10.24%), followed by pain 42 (10%), and gum swelling 33 (7.86%). The least common complaints reported were oral ulcer, tooth replacement, etc.

Conclusion

The most common chief complaint was deposit/stains which was lower in our study when compared to other studies done in similar settings.

Keywords

Chief complaints, epidemiology, periodontal disease

INTRODUCTION

Periodontal diseases are mostly diagnosed at a chronic stage so it often is overlooked by patients and clinician in early stages, especially when inflammation is not obvious.^{1,2} The chief complaints of such patients are considered significant because it encourages communication between the clinician and patient and also forms the framework around which a diagnosis and treatment outcome is built.³

Patients' awareness and demand for periodontal treatment generally is considered to be low despite suffering from periodontal diseases. There is a paucity of data regarding the spectrum of chief complaints in Nepalese patients, so it is important to have an epidemiological study to identify the common chief complaints so as to recognize the periodontal disease at its early stages.

This study was conducted in order to identify the most common chief complaints among patients visiting the Department of Periodontology and Oral Implantology of a Teaching Hospital.

METHODS

This descriptive cross-sectional study was conducted over a period of six months from September 2020 to March 2021. Ethical approval was taken from the Institutional Review Committee of Gandaki Medical College, Pokhara (Reference Number: 96/77/78). Informed consent was obtained from the participants prior to the commencement of the study. Inclusion criteria were new patients (i) who visited the Department of Periodontology and Oral Implantology for the first time during the study period, (ii) had a periodontal chief complaint and (iii) were seeking periodontal treatment. Patients with incomplete records, those who visited only for regular check-ups, those who were under follow up, referred from other departments, those who would become edentulous after extraction, smokers, and those who were not willing to participate were excluded.

Convenience sampling was utilized for the study and the sample size was calculated as, $N = Z^2 \times p \times q / E^2$, where, N= sample size, Z= 1.96 for 95% confidence level, p= prevalence of most common chief complaint (46.59%)⁴, E=Permissible error (5%), q= complement of p (100-46.59%). Thus, $N = (1.96)^2 \times 46.59 \times 53.41 / (5)^2 = 382$. Adding a 10 % non-respondent rate, the sample size of 420 was determined for the present study.

All the patients fulfilling the inclusion and exclusion criteria were interviewed with a specially designed format to record the various chief complaints reported by patients seeking periodontal treatment. This included the date of visit of patient, name, age, and chief complaints reported. The various recorded

complaints were divided into 3 major groups based on patient perception as chief complaints related to (i) true periodontitis symptoms, (ii) aesthetics and (iii) emergency. A routine oral checkup was considered for any patient visiting the department during the study period to assess their current oral health, any risk of future diseases, and advised on the care to be given and managed with necessary therapy.

The obtained data were entered in Microsoft Excel 2021 and further the frequency distribution of the parameters were analysed using statistical package for social sciences (SPSS) version 16.

RESULTS

The percentage of subjects within each age group varied, with the maximum number of subjects, i.e., 160 (38.10%) in the age group of 18-30 years (Table 1). Males constituted about 214 (50.95%), whereas females constituted 206 (49.05%) of the study sample (Table 1).

Among 420 patients visiting the Department of Periodontics, 136 (32.38%) (0.27-0.37 at 95% confidence interval) had deposits/stains as the most common chief complaint during the study period. Bleeding gums 45(10.71%) (0.07-0.14 at 95% confidence interval), loose teeth 43(10.24%) (0.07-0.13 at 95% confidence interval), and pain 42(10%) (0.07-0.13 at 95% confidence interval) were other major complaints reported.

The least common complaints were receding gums 7(1.67%) (0.00-0.02 at 95% confidence interval), midline spacing 3(0.71%) (0.00-0.02 at 95% confidence interval), gummy smile 3(0.71%) (0.00-0.02 at 95% confidence interval), tooth migration 4(1.00%) (0.00-0.02 at 95% confidence interval), oral ulcers 1(0.23%) (0.00-0.01 at 95% confidence interval), tooth replacement 1(0.23%) (0.00-0.01 at 95% confidence interval) and tongue tie as miscellaneous 1(0.23%) (0.00-0.01 at 95% confidence interval) (Figure 1).

Age wise categorization revealed the 18-30 age group with the major chief complaints of 60 (44.12%) deposits/stains. Similarly, females had

Table 1. Demographic characteristics of study population (n=420)

Characteristics	Number (%)
Age group	
18-30	160 (38.10)
31-50	121 (28.80)
> 50	139 (33.10)
Gender	
Male	214 (50.95)
Female	206 (49.05)

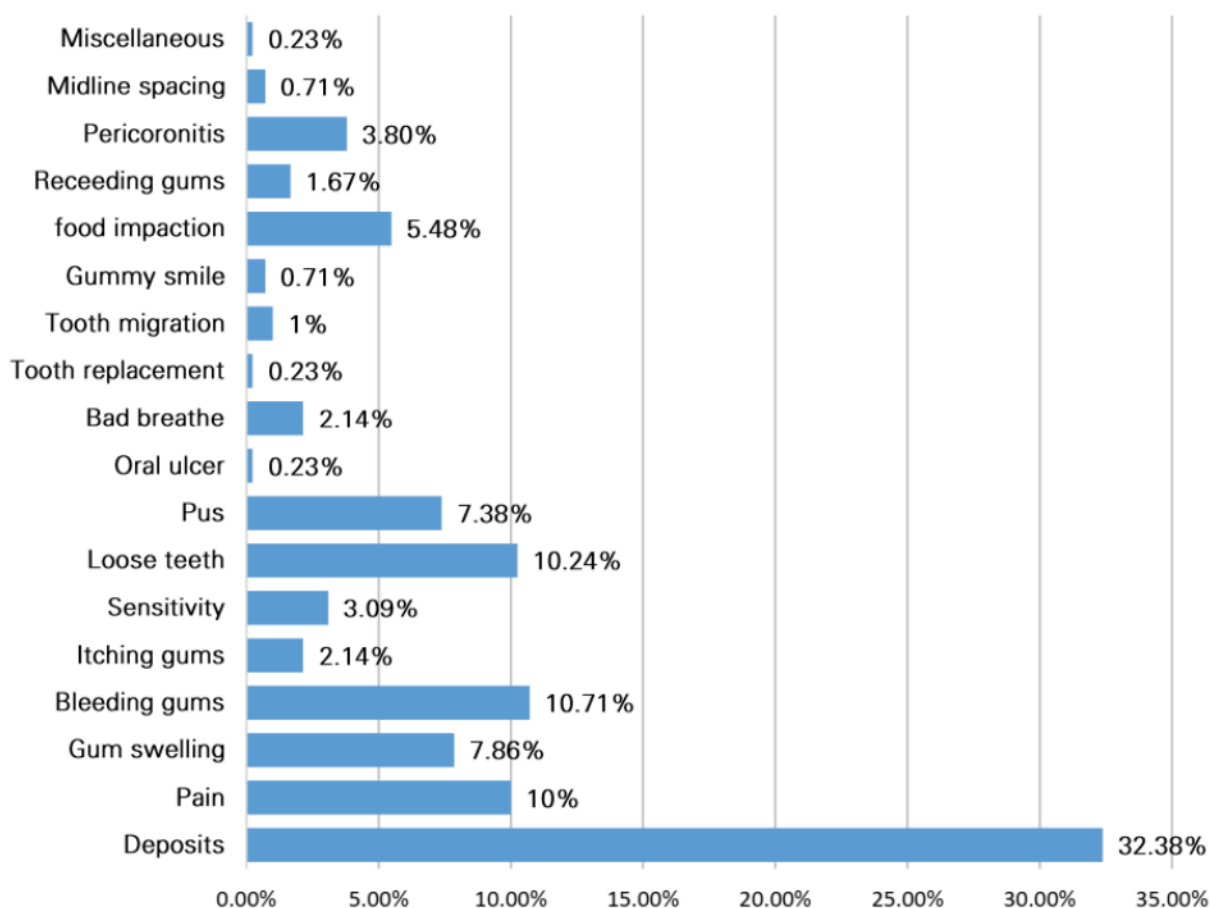


Figure 1. Distribution of chief complaints

Table 2. Distribution of chief complaints based on various age group and gender (N=420)

Chief complaints	Age group n (%)			Gender n (%)	
	18-30 years	31-50 years	>50 years	Male	Female
Deposits/stains	60 (44.12)	38 (27.94)	38 (27.94)	75 (35.05)	61 (29.61)
Pain	11 (26.19)	9 (21.43)	22 (52.38)	22 (10.28)	20 (9.71)
Gum swelling	16 (48.48)	8 (24.24)	9 (27.27)	12 (5.61)	21 (10.19)
Bleeding gums	24 (53.33)	11 (24.44)	10 (22.22)	16 (7.48)	29 (14.08)
Itching gums	3 (33.33)	0 (0)	6 (66.67)	5 (2.34)	4 (1.94)
Sensitivity	4 (30.77)	7 (53.85)	2 (15.38)	7 (3.27)	6 (2.91)
Loose teeth	8 (18.60)	14 (32.56)	21 (48.84)	25 (11.68)	18 (8.74)
Pus	11 (35.58)	10 (32.26)	10 (32.26)	17 (7.94)	14 (6.80)
Oral ulcer	0 (0)	0 (0)	1 (100.00)	0 (0.00)	1 (0.48)
Bad breathe	1 (11.11)	1 (11.11)	7 (77.78)	5 (2.34)	4 (1.94)
Tooth replacement	0 (0)	1 (100.00)	0 (0)	0 (0.00)	1 (0.48)
Tooth migration	2 (50.00)	0 (0)	2 (50.00)	2 (0.93)	2 (0.97)
Gummy smile	3 (100.00)	0 (0)	0 (0)	0 (0.00)	3 (1.46)
Food impaction	5 (21.74)	11 (47.83)	7 (30.43)	17 (7.94)	6 (2.91)
Receding gums	1 (14.28)	3 (42.86)	3 (42.86)	3 (1.40)	4 (1.94)
Pericoronitis	9 (56.25)	6 (37.50)	1 (6.25)	6 (2.80)	10 (4.85)
Midline spacing	2 (66.67)	1 (33.33)	0 (0)	2 (0.93)	1 (0.48)
Miscellaneous	0 (0)	1 (100.00)	0 (0)	0 (0.00)	1 (0.48)
Total	160	121	139	214	206

61(29.61%) deposits/stains as the most prevalent Chief complaints, followed by 29(14.08%) bleeding gums and 21(10.19%) gum swelling. Although, 75(35.05%) deposits/stains were found to be the most prevalent chief complaint among males as well, 25(11.68%) loose teeth followed by 22(10.28%) pain were the other common complaints. (Table 2).

Out of 20 chief complaints recorded, the majority belonged to periodontitis symptoms and the remaining were related to aesthetics and emergencies, according to the patient perception (Table 3). In the periodontitis symptom category, a total of 182 (43.34%) chief complaints were recorded, whereas for the aesthetic related category 146(34.76%) and for the dental emergency related group only 92(21.90%) were recorded.

DISCUSSION

Periodontal diseases are diagnosed at their chronic stage and it is seen that patients as well as clinicians are unable to recognize it at early stages.^{1,2} The symptoms accompanying early stage of periodontitis includes gingival bleeding, bad breath and alteration in gingival shape whereas severe symptoms like pain, pathological tooth mobility, periodontal abscesses and pathological tooth migration, are seen in additional advanced form of periodontitis.⁵ All mentioned above symptoms represent the patient's chief complaints that motivate them to strive for periodontal treatment. However, most patients do not opt for treatment unless they are in severe pain. This demonstrates not all patients report the disease to their clinician at an early stage and shows their scarcity of knowledge in recognizing the disease in its initial stage. Our study was conducted to identify the most common chief complaints among patients visiting the Department of Periodontology and Oral Implantology of a Teaching Hospital.

In the present survey, the most common chief complaints reported was deposits/stains, with a prevalence of 136 (32.38%). It was seen that the patients were not really aware of the role of local deposits on the initiation and progression of periodontal disease but merely saw them as unsightly, affecting their appearance. Our findings were supported by a study done by Grover et al.² where deposits/stains were most common with a prevalence of 4632 (60.31%) higher than in our study. On the contrary, a study reported tooth cleaning as the least common complaint.⁶ Similarly, our findings were not in accordance with the study conducted by Brunsvold et al.,⁷ where the most common chief complaint was gum disease. This differences in the results obtained could be attributes between people of different communities and also the criteria used for the selection of the study.

Table 3. Distribution of chief complaints based on motivational factors (N=420)

Motivational Factors	Number (%)
Emergency	92 (21.90)
Periodontitis	182 (43.34)
Aesthetic	146 (34.76)
Total	420

Some studies have shown bleeding gums as the most common clinical symptom that led the patients to seek periodontal treatment.^{6,8} However, bleeding gums was the second most common chief complaint in our study, which is consistent with the results reported by a previous study.⁷ The perception of patients about bleeding gums differed from local deposits as the former is considered an objective symptoms which is more noticeable and visible to the eyes.

In the current study, loose teeth were the third most common chief complaints, which was more or less similar to Dhaimaide et al.⁹ and Mohammed et al.¹⁰ Pain was reported late in the list in our study. This finding supports the previous findings of Brunsvold et al.,⁷ where they found it as the fourth most common chief complaints. The reason for this may be due to the chronicity and slow progression of most of the periodontal diseases that lead patients to seek periodontal treatment only at an advanced stage. Although, data from Elhassan et al.¹¹, Abdullah et al.⁴ have reported pain as the most common chief complaint, a timely diagnosis in an early stage is necessary, which seemed lacking in patients from our community. The reason behind the difference in the results may be related to individual difference in pain perception and variability in pain threshold.

The least common chief complaints recorded in our patient group were oral ulcers, tooth replacement, gummy smile, midline spacing, and tongue tie. Similar finding was seen in the study done by Grover et al.² but this was inconsistent with the previous studies where missing teeth was reported to be the second⁶ and/or fourth⁹ most common chief complaint.

The results of our study indicated that although, patients from all age group were reported to have periodontal problems, the most common age group was 18-30 years. This is consistent with other reported studies.^{12,13} It indicates that youths tend to be more concerned about aesthetics and are more aware of their oral health, thereby seeking for early periodontal therapy. The majority of patients in our study reported deposits/stains as their main chief complaint for all the age groups but, bleeding gums were seen as the second most common among younger patients. This could be because bleeding

gums are considered an early sign of inflammation which diverts attention towards periodontal health. It is not a good predictor of progressive attachment loss however its absence is an excellent predictor of periodontal stability.¹⁴ Pain was seen as the second commonest among the older age group, which can be correlated to the chronic nature of the periodontitis and that it is age related progression.¹⁵ These findings are in agreement with the results by Brown et al.⁸ A greater number of males reported deposits/ stains as a common chief complaint compared to females. This is consistent with the findings of Albandar et al.¹⁶ This indicates their negligence in oral hygiene maintenance and highlights the periodontal treatment needs of the male patients.

The major motivational factor for seeking periodontal care among our study participants was periodontitis symptoms, followed by aesthetic and emergency related symptoms. Among periodontitis symptoms, bleeding gums were the most prevalent. This is inconsistent with previous study by Grover et al.² This portrays the crucial role of health-care providers in diagnosing patients with periodontal diseases and also helps to raise the awareness level of this silent disease among the Nepalese population.

This is a single centered descriptive study reporting the most common chief complaints of patients in Pokhara city. The included population cannot be considered as a representative sample of the available heterogeneous population, because the convenience sampling technique was adopted in the studies. Considering the current trend of increasing populations in extreme age groups, with the addition of risk factors, further studies adopting the stratified sampling technique to ensure representation from all age groups are necessary.

CONCLUSION

The evaluation of the most common chief complaint among patient visiting the Department of Periodontics in a Teaching hospital showed deposit/ stains to be the most prevalent. This was followed by bleeding gums, loose teeth, and pain.

CONFLICT OF INTEREST

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