Investigation of the consistency between reported chief complaint and periodontal health status of Iraqi patients in relation to age and gender (A retrospective study)

A. A. Abdulkareem, B.D.S, M.Sc., Ph.D. ⁽¹⁾ Hayder Raad Abdulbaqi, B.D.S, M.Sc., Ph.D. ⁽¹⁾ Ahmed Khleel Nayyef, B.D.S, H.D.D. ⁽²⁾ Saif Seham Saleem, B.D.S, M.Sc. ⁽¹⁾

ABSTRACT

Background: Chief complaint of patients attending dental clinic represents the first step towards treatment plan. However, most of patients are not aware but the extent and severity of periodontal disease, which could be also, misdiagnose by the dentist.

Aim of the study: To investigate whether reported chief complaint(s) are consistent with oral hygiene status

Materials and methods: Records of 1102 patients, attending periodontics clinics in the college of dentistry/ university of Baghdad, were used to determine ten most commonly reported chief complaints. Sample of patients was further subdivided according to gender and age. In addition, plaque and gingival index were recorded to determine oral hygiene status.

Results: Patients mostly attend clinic of periodontics in response to motivation by dental students or staff members or referred from other department. Further, removal of stain or deposits from their teeth represented the highest chief complaint (32%). Other true periodontal signs were seldom reported in spite of significantly high plaque and gingival index (P<0.05) with increasing age.

Conclusion: Nation-wide educational programs are needed due to discrepancy between reported chief and periodontal health status. In addition, the actual need of patients, which was mainly oriented towards scaling, reflects ignorance and lack of knowledge about nature and alarming signs of disease.

Keywords: Periodontal disease, chief complaints, periodontal health. (Received: 10/1/2018; Accepted: 19/2/2018)

INTRODUCTION

Periodontal disease is group of inflammatory conditions that destroy supporting apparatus of the teeth. In general, periodontal diseases are chronic in nature, which are aggravated by ignorance of oral hygiene measures ⁽¹⁾. Eventually, tooth loss is the ultimate result of advanced form of periodontal disease that represent a worldwide issue as indicated by previous epidemiological studies ⁽²⁾.

Since periodontal diseases mostly are painless and asymptomatic, the patients and sometimes dentist, overlooked the disease and the reported chief complaint (CC) usually not reflecting the real periodontal problem exists ^(3, 4). This notion is supported by previous studies, which indicated that the patients mostly not reporting true periodontal problem as a CC unless the disease progress to advance stages ^(5, 6). Brunsvold et al., 1999, showed that periodontal-related CC was in third place out of 21 reported CC and the main reason for visiting

dentist was due ¹to motivation given by professional dental health member⁽³⁾. Furthermore, data of 1196 patients showed that 60% of these patients were complaining of acute painful periodontal condition and they were willing to complete the treatment; in contrast to those suffering from chronic and less painful periodontal conditions ⁽⁵⁾. Although Grover et al., 2017, indicated that majority of patients CC were presence of deposits and bleeding; however, the main concern of these was esthetic-related rather than periodontal-related complain ⁽⁷⁾. It can be concluded from these studies that most of patients are not aware about existing periodontal issue in spite of poor oral hygiene as symptomatic periodontal disease sign only appear at late or acute phases, a point that may motive the patient to seek periodontal treatment.

Patient's CC is an integral part for deciding treatment plan that help the dentist to understand the patient's immediate demands. In addition, CC could implicate patient's attitude towards periodontal treatment that may great improve his/her

⁽¹⁾ Department of Periodontics, College of Dentistry, University

of Baghdad

⁽²⁾ Iraqi ministry of health- Al-Khark district

cooperation and treatment outcome ⁽⁸⁾. Thus, the aim of the present study was to investigate the consistency between periodontal chief complaint and gingival health status in relation to age and gender of patient attending clinics of college of dentistry/ university of Baghdad in relation to their age and gender.

MATERIALS AND METHODS

The dental records of 1102 patients (age range 14-74 years), seeking periodontal treatment at department of periodontics/ college of dentistry/ university of Baghdad (between September 2016 to June 2017), were selected for this study. Sample consisted of 772 male (70.6%) and 330 female (29.4%). Patients were further divided according to age into three groups 14-30 (group-1), 31-50 (group-2), and 51-74 (group-3) years. All patients complaining from systemic conditions or under medications in the last 6 months were excluded from this study. For each patient, ten of mostly commonly reported periodontal chief complaint(s) were recorded. In addition, plaque index (PLI) (Silness and Loe, 1964)⁽⁹⁾ and gingival index (GI) (Loe and Silness, 1963)⁽¹⁰⁾ were used to determine the periodontal health status.

Statistical analysis

Frequency of chief complaints for all groups was expressed as percent to the total sample size while PLI and GI were expressed as mean \pm standard deviation. Multiple groups' comparison was performed by ANOVA and Bonferroni *post hoc* test, using SPSS software (version 21, IBM, USA). Difference was considered significant when P-value ≤ 0.05 .

RESULTS

Analysis of data (Fig 1A) showed that the least reported chief complaints recorded were pathologic mobility of teeth and hypersensitivity (1% each). Followed by halitosis, unpleasant taste, referral from orthodontist and visit for routine check-up which represent about 2-3%. The percent increase in association with patients complaining of pain and those referred from prosthodontic department 22.5% and 18.6% respectively. While the most commonly reported chief complaint among all patients was visit for scaling purposes (about 32%).

However, from gender perspective, female (Fig 1C) mostly complaint from pain (11%) as the highest

periodontal problem as compared to male (Fig 1B) whom attend to the clinic just to scale their teeth (26%). Furthermore, most of patients within age groups group-1 (Fig 2A) and group-2 (Fig 3B) also looked for scaling but majority of patients within age group group-3 (Fig 2C) years were referred department of prosthodontic without from complaining of specific periodontal problem. Mean of PLI and GI (Table 1) showed no significant difference (P>0.05) between male and female. In contrast, significant difference (P<0.05) of these indices was recorded between younger-aged group-1 and the olders groups-2 (Table 2) and group-3 (Table 3). The latter two groups showed no significant difference (P>0.05) in plaque and gingival index.



Figure 1: Frequency distribution of chief complain in A = study sample, B = study males, and C = study females







	Gender	N	Mean	P value	
PLI	Male	770	0.848 (0.421)	P > 0.05	
	Female	330	0.804 (0.420)		
GI	Male	690	0.748 (0.411)	P > 0.05	
	Female	310	0.832 (0.291)		

Table 1: Mean plaque and gingival indices in
both genders

	Age groups	N	Mean	P value
PLI	Group 1	180	1.184 (0.457)	P < 0.05
	Group 2	552	0.775 (0.403)	
GI	Group 1	180	1.071 (0.430)	P < 0.05
	Group 2	552	0.737 (0.329)	

Table 2: Mean plaque and gingival indices in1 & 2 age groups

		Age groups	N	Mean	P value	
	PLI	Group 1 180 1.184 (0.457) P < 0.		P < 0.05		
		Group 3	370	0.756 (0.343)		
		Group 1	180	1.071 (0.430)	P < 0.05	
G	GI	Group 3	370	0.684 (0.346)		

Table 3: Mean plaque and gingival indices in1 & 3 age groups

DISCUSSION

Despite the fact that periodontal disease is one of the highly prevalent pathologic conditions that affect people worldwide ^(2, 12). However, early detection of periodontal disease rely mostly on dental staff personnel rather than the patients themselves. This due to that periodontal disease are chronic, slowly progressing and mostly conditions asymptomatic with periods of exacerbation (13). These characteristics leave majority of patients unaware about the condition in addition to misdiagnosis or underestimation by the dentist sometimes ⁽¹⁴⁾. Recording patient's CC and the treatment he/she is seeking consider as a pivotal step that largely define the type of therapy and treatment plan⁽⁸⁾.

In the current study, the highest percent of CC reported was "I want to scale my teeth", followed by referral from prosthodontic department. These findings were consistent with results from previous studies ⁽⁷⁾ that indicated that the main reason for

seeking periodontal treatment was in response to motivation by dental staff members or esthetic reasons to get rid of stains and deposits on their teeth. Third most common CC in our study was due to acute painful periodontal condition. Further, record of female patients showed that pain as the first CC which could be due to intolerance of female to pain when compared to male (15, 16). This finding is also consistent with previous study (5) that showed pain is one of the most common reason that motivate patient to seek periodontal treatment. Other periodontal-related CC such as bleeding, halitosis, hypersensitivity and pathologic mobility showed the lowest percent of complaints reported by the patients. It is well-known that mobility of teeth appear at the very late stages of periodontal disease where destruction of alveolar bone reaches considerable level ⁽¹⁷⁾ and the same explanation can be applied to hypersensitivity which is related to recession of gingiva and exposure of root surfaces. In addition, most of patients were convinced that bleeding gingiva was due to brushing and they prefer to stop mechanical cleaning which reflects real misunderstanding about the nature of periodontal disease.

Furthermore, PLI and GI showed significantly higher difference between younger and older age groups; however, the CC mostly were not related to periodontal disease. For example, most of patients aged more than 50 year attended periodontics clinics after being referred from prosthodontic department to improve oral hygiene level prior to insertion of fixed or removable prosthesis. This indicate that the main CC was to replace missing teeth which probably were lost due to progressive form of periodontal disease (18, 19) without being aware about the main reason for losing teeth. Similarly, younger patients also were referred from orthodontic department to ensure good oral hygiene before placement of orthodontic appliance. Data from PLI and GI were logic with cumulative effect of periodontal disease that show more deterioration with time when not properly managed at earlier stages ⁽²⁰⁾. In general, the present study suggested that small percentage of population reported true periodontal-related CC despite poor oral hygiene level. This indicates the actual need to educate the community about the signs of periodontal disease to motivate individuals to seek periodontal treatment at early stage. In addition, the current study was conducted in Baghdad city where number of educated people is expected to be the highest among other cities, which may indicate that the condition could be worse in rural and other less civilized regions in the country. Further studies on larger scale are required to determine the exact public awareness and the need of governmental programs to educate and motivate people about nature and consequences of periodontal disease.

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المستخلص

المقدمة: مثل الشكوى الرئيسية للمرضى الذين يرتادون عيادة الأسنان الخطوة الأولى نحو خطة العلاج. ومع ذلك ، فإن معظم المرضى ليسوا على دراية بمدى شدة أمراض اللثة. ان الهدف من الدراسة كان للتحقيق فيما إذا كانت الشكوى الرئيسية المبلغ عنها نتفق مع حالة نظافة الفم.

الطريقة: تم استخدام سجلات 1102 مريضًا ممن تمت معالجتهم في عيادات اللَّنة في كلية طب الأسنان / جامعة بغداد ، لتحديد عشر شكاوي رئيسية يتم الإبلاغ عنها بشكل شائع كما تم تقسيم المرضى حسب الجنس والعمر. بالإضافة إلى ذلك ، تم تسجيل البلاك ومؤشر التهاب اللثة لتحديد حالة نظافة الفم. النتائج: يحضر المرضى في الغالب إلى عيادة اللثة استجابة للتحفيز من المختصين أو يتم إحالتهم من قسم أخر. علاوة على ذلك ، تمثل إز الة البقع أو الرواسب من أسنائهم أعلى شكوى رئيسية (22٪). نادراً ما تم الإبلاغ عن علامات أخرى حول اللثة على الرغم من ارتفاع البلاك ومؤشر التهاب اللثة مع زيادة العمر.

االاستنتاج: هناك حاجة إلى برامج تعليمية على مستوى البلاد بسبب التناقض بين الحالة الصحية اللثة والاعراض المبلغ عنها من قبل المرضى.