Research Article

The prevalence of periodontitis in an Iraqi population using the 2017 classification

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Abstract: Background: To determine the prevalence and severity of periodontitis in an Iraqi population using the 2017 classification. Methods: Data on the periodontal status of patients were retrospectively collected from healthcare records. The information included demographics, clinical parameters including bleeding on probing (BOP), probing pocket depth (PPD), and clinical attachment loss (CAL). Descriptive and inferential statistical analyses were performed using SPSS (version 26, IBM, USA) software. Results: Out of 1578 records, the periodontal health, gingivitis, and periodontitis represented 26.4%, 37.1%, and 36.5%, respectively with males more affected by periodontal disease compared with females. Periodontitis cases were dominated by stage 3 and 4 which combined accounted for 77.3%, followed by stage 2 (21.3%), and stage 1 (1.4%). When looking at disease grade and levels of stability, localized pattern, Grade C, and unstable status were the most prevalent domains. Regression analysis suggested age, BOP, male, and positive family history as predictors for increasing extent and severity of CAL both in periodontal health and disease. Conclusion: The prevalence of periodontal disease (periodontitis, and gingivitis) was almost equally expressed. Severe periodontitis was the most dominant group whilst milder forms of disease were least prevalent. The data indicated that demographic variables and clinical parameters could predict severity of attachment loss.

Keywords: Periodontal health, Periodontal disease, Gingivitis, Periodontitis, Prevalence, Cross-sectional study, Epidemiology

Introduction

The classical presentation of periodontal disease is progressive inflammatory events leading to damage of periodontal soft and hard tissues in susceptible patients. Initial plaque accumulation leads to development of gingivitis, which is a self-limiting disease and can be reversed to health by eradicating the etiologic factor or remain as contained gingivitis. However, the subgingival microbiome could undergo "transient" then "frank" dysbiosis which triggers a shift to periodontitis in susceptible individuals and downstream destruction of periodontium [1]. Periodontitis is a highly prevalent disease affecting up to 50% of the populations and is ranked 11th among chronic diseases worldwide. Additionally, periodontitis is one of the leading causes of tooth loss [2] which negatively impacts masticatory function, esthetics, quality of life, and general wellbeing. In 2018, the estimated direct and indirect economic burdens of untreated periodontal disease were $154.06B in the US and €158.64B in Europe [3]. The continuous growth of aging populations and increased retention of natural dentitions are potential factors contributing to the increasing global prevalence of periodontal disease in the coming decades [4].

Prevalence of periodontal disease ranges between 20-50% of the worldwide population [5]. The variability of these figures is influenced by ethnic background, country, risk factors, availability of healthcare, and age [6-9]. Previous reports have demonstrated that severity of periodontal disease is modulated by increasing age, smoking, diabetes mellitus, body mass, and socioeconomic level. In fact, there have been many systemic diseases that have been associated with periodontitis including diabetes mellitus, cardiovascular disease, rheumatoid arthritis, low birth weight pregnancy outcomes, and Alzheimer disease. Additionally, differences in case definitions followed by different studies significantly influence reporting prevalence of periodontal disease [10, 11].

The roots of periodontal disease classification extend to 1723 when periodontal diseases were called "Scurvy" [12]. Many changes and new concepts have been applied to classification systems since then as our understanding of the disease process has improved. Work of Page and Schroeder clearly used age to distinctly classify periodontal diseases [13] which continued as the main factor to define periodontal diseases in subsequent classifications. American Academy of Periodontology (AAP) 1989 classification scheme introduced the association between periodontitis and systemic diseases but the definition criteria were extensively overlapped [14]. Ten years later, AAP 1999 classification considered that clinical loss of attachment (CAL) is microbially-triggered and modulated by an aberrant inflammatory response without age limit [15]. In the latest classification system of periodontal disease, healthy periodontium was included for the first time as a distinct category alongside gingivitis and periodontitis [16]. The classification differentiates health from gingivitis by a 10% bleeding threshold [17]. Periodontitis is defined by presence of detectable interdental CAL [18] at two or more nonadjacent sites. However, reduced periodontium can be also associated with healthy and gingivitis cases when CAL is attributed to reasons other than periodontitis [17] such as traumatic tooth brushing or crown-lengthening procedures.

Generally, there is a lack of consensus about epidemiologic data of periodontal disease due to lack of consistency in surveillance methods, case definitions, clinical examination protocols, and ethnic background. Therefore, knowing the exact prevalence of periodontal disease in a population is of prime importance from dental, systemic health, and economic perspectives for planning appropriate preventive and therapeutic programs. For these reasons, the current study was conducted to determine the prevalence of periodontal health and disease alongside disease severity using the 2017 European Federation of Periodontology (EFP)/AAP classification.

Materials and Methods

Study design and eligibility criteria

This retrospective cross-sectional study was designed to determine the prevalence of periodontal health and disease in the study population. This was conducted by collecting data from available periodontal records of patients attended the Teaching Dental Hospital, College of Dentistry, University of Baghdad from 2021 to 2023. Ethical standards and access to the records were granted before conducting this study (Ref #2340, Date: 30/04/2023). The records of all patients who attended the hospital to general dental care were included except for incomplete ones. According to regulations, only controlled diabetic patients with HbA1c <7% were introduced to clinic otherwise they were referred to physician unless emergency treatment was required.

Demographic and clinical variables

The collected data included demographic variables (age and sex) and clinical periodontal parameters including bleeding on probing (BOP), probing pocket depth (PPD), clinical attachment loss (CAL) which was recorded at 6 sites per tooth. The diagnosis, primary outcome, was based on the 2017 classification of periodontal diseases and conditions issued by the AAP and the EFP [16] with the following case definitions:

Healthy periodontium exhibits BOP <10%, PPD ≤3mm on intact or reduced periodontium [17].

Gingivitis cases either localized (BOP 10%-30%) or generalized (BOP >30%) on intact or reduced periodontium with PPD ≤3mm [17].

Cases were diagnosed as periodontitis [18] when interdental CAL was detected at two or more non-adjacent teeth. Alternatively, CAL >3mm on the facial or lingual surfaces associate with PPD >3mm was also diagnosed as periodontitis. These cases were further defined according to extent, severity (stage), rate of bone loss progression (grade), status, and presence/absence of risk factor(s). Extent of disease was either localized molar-incisor pattern (MIP) and generalized according to number of sites involved with CAL. The severity of periodontal tissues breakdown at the site exhibiting the greatest CAL. The range of CAL used was 1-2 mm, 3-4 mm, and ≥5 mm which defined stage 1, stage 2, stage 3 and 4, respectively which was further modified by number of lost teeth. While the grade was calculated by dividing the severity of bone loss by the age and the result was translated as slow (A, <0.25), moderate (B, 0.25-1), and rapid (C, >1.0) rate of bone loss. This domain was further modified by smoking and diabetes mellitus. Status was sub-classified into stable, in remission and unstable depending on the presence/absence of residual pockets and percent of BOP. Smoking and diabetes mellitus were considered the only risk factors of periodontitis. The records were screened, and data was entered using spreadsheet (Microsoft Excel, USA) by two investigators.

Statistical analysis

Descriptive statistic included frequency and percent for categorical variables while continuous variables were expressed as mean and standard deviation. Inferential analysis of categorical data was performed by Chi-square test. Continuous parameters were analyzed by Mann-Whitney U test for two groups comparison, while Kruskal Wallis test with adjusted by the Bonferroni correction was used for multiple comparisons. Binary logistic regression model was used to determine the predictors of intact and reduced periodontium in healthy and gingivitis patients. Multinominal logistic analysis was performed to predict the extent of periodontitis. Results were designated significant when p value was less than 5%. All analyses were conducted by SPSS (version 26, IBM, USA) software.

Results

The periodontal records of 1578 patients were included in the final analysis of this study. The mean age of the patients was 37 ±14.6 years and they had a mean percentage of BOP of 23.1 ±20.4. Most of the sample consisted of males (61.2%); while females represented 38% of the sample. The patients were diagnosed as gingivitis (37.1%) and periodontitis (36.5%), while the rest of the sample was diagnosed as having healthy periodontium (26.4%) (Table 1). There were no significant differences between male and female patients regarding the age and mean BOP ($p > 0.05$). Most of the females were diagnosed as gingivitis patients (n= 241, 15%), whereas males were mainly diagnosed as periodontitis (n=389, 24.7%). Significantly higher BOP mean was detected in periodontitis patients followed by gingivitis and healthy participants (Table 1). Prevalence of CAL ≥ 5 mm was the highest (68.3%) while sites exhibiting CAL between 1 to 2 mm was the lowest. For PPD prevalence, 1232 (40.5%) sites showed probing depth ≥ 6 mm, followed by 4 mm PPD (33.3%), and pockets with 5 mm depth (26.2%) (Table 1).

Superscript letter “a” represent the highest value, different letters indicate significant difference, shared letters indicate non-significant difference at p value < 0.05

The prevalence of reduced periodontium was 17.3% in periodontal health group. While the prevalence of gingivitis on reduced periodontium was found to be 33% among 585 gingivitis patients. Significantly higher (p <0.001) cases of reduced periodontium in gingivitis cases than periodontal health both in male and female patients. The latter exhibited higher chance of developing reduced periodontium (OR 2.873) than male (OR 2.055). However, no significant differences were detected in the distribution of intact and reduced periodontium according to sex (Table 2).

Periodontitis patients were mainly males, non-smokers, non-diabetes, and no family history of periodontitis. Majority of these patients presented with having unstable periodontitis (n=358, 61.7%) who exhibited significantly higher BOP, deeper PPD, and higher mean CAL than stable and in remission cases. Most stable and unstable periodontitis patients were stage 4 and grade C, while majority of in remission periodontitis patients were stage 3 and grade B. The most common pattern of periodontitis detected in this study was localized periodontitis (Table 3).

Table 1: Basic characteristics of the study sample (n=1578).

	n (%)	Age (mean ±SD)	% BOP (mean ±SD)
Diagnosis†			
Periodontal health	416 (26.4)	28.7 ±8.2[b]	4.7 ±3.2[b]
Gingivitis	585 (37.1)	31.1 ±10.4[b]	26 ±14.5[a]
Periodontitis	577 (36.5)	48.1 ±11.9[a]	33.4 ±23.7[a]
Sex‡			
Male	966 (61.2)	36.3 ±11.8[a]	23.7 ±21.0[a]
Female	612 (38.8)	39.6 ±14.2[a]	22.1 ±19.4[a]
Total	1578 (100)	37.4 ±14.6	23.1 ±20.4
CAL			
1 to 2 mm	568 (5.9)		
3 to 4 mm	2485 (25.8)		
≥ 5 mm	6570 (68.3)		
Total	9623 (100.0)		
PPD			
4 mm	1014 (33.3)		
5 mm	797 (26.2)		
≥ 6 mm	1232 (40.5)		
Total	3043 (100.0)		
Number of missing teeth	6.4 ±5.5		

BOP: bleeding on probing, CAL: clinical attachment loss, PPD: probing pocket depth, † Significant difference by using Kruskal Wallis H test with post-hoc analysis, ‡ Significant difference by using Mann-Whitney U test

Table 2: Prevalence of reduced periodontium in healthy and gingivitis patients.

Diagnosis	Total	Sex		P value*	OR	95% CI
Periodontal health		Female	Male			
Intact periodontium	344 (82.7)	159 (38.2)	185 (44.5)	0.09	1	
Reduced periodontium	72 (17.3)	25 (6.0)	47 (11.3)		1.616	1.024-2.488
Gingivitis						
Intact periodontium	392 (67.0)	166 (28.4)	226 (38.6)	0.47	1	
Reduced periodontium	193 (33.0)	75 (12.8)	118 (20.2)		1.156	0.853-1.55
P value*	<0.001	<0.001	<0.001			
OR	2.352	2.873	2.055			
95% CI	1.811-3.029	1.864-4.376	1.483-2.854			

OR: odds ratio, CI: confidence interval

* Significant difference by χ^2; p value < 0.05.

Table 3: Distribution and characteristics of periodontitis patients

		Total n=577, 100%	Stable n=72, 12.5%	In remission n=147, 25.5%	Unstable n=358, 61.7%	P value
Age[§]			50.0 ±11.8[a]	49.3 ±11.8[a]	47.2 ±11.8[a]	> 0.05*
BOP[§]			7.3 ±10.7[b]	35.2 ±21.5[a]	38.1 ±23.0[a]	< 0.05*
PPD[§]		4.1 ±0.9	3.1 ±0.5[b]	4.2 ±0.6[b]	4.7 ±0.8[a]	< 0.05*
CAL[§]		4.5 ±1.6	4.1 ±1.5[b]	4.3 ±1.4[ab]	4.7 ±1.6[a]	< 0.05*
Sex[¶]	**Female**	189 (32.8)	26 (34.7)	54 (36.7)	109 (30.7)	0.42**
	Male	388 (67.2)	49 (65.3)	93 (63.3)	246 (69.1)	
Stage[¶]	**Stage 1**	8 (1.4)	2 (2.7)	1 (0.7)	5 (1.4)	0.79**
	Stage 2	123 (21.3)	19 (26.0)	26 (17.8)	78 (21.9)	
	Stage 3	222 (38.5)	24 (32.9)	63 (43.2)	135 (37.6)	
	Stage 4	224 (38.8)	28 (38.4)	56 (38.4)	140 (39.0)	
Grade[¶]	**A**	27 (4.7)	8 (11.1)	5 (3.4)	14 (3.9)	<0.001**
	B	230 (39.9)	24 (33.3)	79 (53.7)	127 (35.4)	
	C	320 (55.5)	40 (55.6)	63 (42.9)	217 (60.7)	
Smoking[¶]	**No**	417 (72.3)	48 (66.7)	115 (78.2)	254 (71.1)	0.13**
	Yes	160 (27.7)	24 (33.3)	32 (21.8)	104 (28.9)	
Diabetic[¶]	**No**	515 (89.3)	64 (88.9)	126 (85.7)	325 (91)	0.24**
	Yes	62 (10.7)	8 (11.1)	21 (14.3)	33 (9)	
Family history[¶]	**No**	562 (97.4)	72 (100)	143 (97.3)	347 (97.2)	0.72**
	Yes	15 (2.6)	0	4 (2.7)	11 (2.8)	
Pattern[¶]	**MIP**	44 (7.6)	5 (6.9)	11 (7.5)	28 (7.6)	0.99**
	Localized	347 (60.2)	44 (61.1)	89 (60.5)	214 (59.6)	
	Generalized	186 (32.2)	23 (31.9)	47 (32)	116 (32.3)	

BOP: bleeding on probing, PPD: probing pocket depth CAL: clinical attachment loss, MIP: molar-incisor pattern, [§] Mean ±SD, [¶] n (%), * Significant difference by using Kruskal Wallis H test with post-hoc analysis. ** Significant difference by χ^2

Superscript letter "a" represent the highest value, different letters indicate significant difference, shared letters indicate non-significant difference at p value < 0.05

In this study, it was found that the occurrence of reduced periodontium in subjects with healthy periodontium was predicted with the increase of age (OR 1.042). While, increasing in age and BOP increased the probability of occurrence of reduced periodontium in gingivitis patients (OR 1.054 and 1.021, respectively) (Table 4).

Table 4: Binary logistic analysis to predict the occurrence of reduced periodontium in healthy and gingivitis patients

	Predictor [a]	ß coefficient	SE	P value	OR	Nagelkerke R^2
Periodontal health [b]	**Age**	0.041	0.011	< 0.05	1.042	0.083
Gingivitis [c]	**Age**	0.053	0.008	< 0.05	1.054	0.135
	BOP	0.020	0.006	< 0.05	1.021	

[a] Intact periodontium was the reference. [b] adjusted by sex and BOP. [c] adjusted by sex. BOP: bleeding on probing; SE: standard error, OR: odds ratio, BOP: bleeding on probing.

Multinominal logistic analysis indicated that increasing in age and BOP as well as positive family history of periodontitis could increase the probability of increasing the extent of periodontitis from MIP to localized pattern. Similarly, the probability of increasing the extent of periodontitis from localized to generalized pattern could be predicted by the same factors. Additionally, males were found to have a higher probability of having generalized periodontitis than females (Table 5).

Table 5: Multinominal logistic analysis to predict the extent of periodontitis

Pattern (reference)		ß coefficient	SE	P value	OR	95% CI
Localized (MIP)[a]	Age	0.043	0.015	0.004	1.044	1.014-1.075
	BOP	0.016	0.008	0.03	1.016	1.001-1.032
	Family history[d]	2.145	0.844	0.01	8.545	1.633-44.711
Localized (Generalized)[b]	Age	0.041	0.009	<0.001	1.042	1.025-1.060
	BOP	0.009	0.004	0.02	1.009	1.001-1.060
	Sex[c]	-0.502	0.207	0.01	0.605	0.403-0.909
	Family history[d]	1.383	0.676	0.04	3.986	1.060-14.998

[a] Adjusted by sex, diabetic and smoking. [b] Adjusted by diabetic and smoking. [c] Female was the reference. [d] Negative family history was the reference. MIP: molar incisor pattern; SE: standard error, OR: odds ratio, BOP: bleeding on probing.

Discussion

Worldwide, the evidence consistently supports the notion that periodontal disease is a highly prevalent health issue with negative impacts on both oral and general health, as well having a major financial impact consuming up to 10% of healthcare resources annually [19, 20]. In this study, periodontal health was diagnosed in about 26% of the study population while gingivitis and periodontitis affected 37.1% and 36.5%, respectively. Reduced periodontium was more common in gingivitis cases than healthy counterparts and in both cases, prevalence of reduced periodontium was higher in male than female patients. For periodontitis cases, stage 1 was diagnosed in 1.4% while stage 2, Stage 3, and 4 accounted for 21.3%, 38.5% and 38.8%, respectively. Periodontitis cases also exhibited high prevalence (55.5%) of grade C and localized extent (60.2%). Additionally, prevalence of periodontitis was higher in male (67.2%) in comparison to female.

In comparison the prevalence of periodontitis reported by the National Health and Nutrition Examination Survey was 42% among U.S. adults which is higher than the current study [21]. However, the former survey showed lower prevalence of patients suffering severe periodontitis (7.8%) in comparison to our results. This could mainly be attributed to different case definitions used by the US survey which followed the criteria of The Centers for Disease Control and Prevention (CDC) and the American Academy of Periodontology (CDC/AAP) [22]. A previous study compared periodontitis case definitions recommended by the CDC/AAP with the 2017 classification. The results also showed underestimation of periodontitis and severe cases when CDC/AAP criteria were applied [23]. According to the latter, CAL ≥6 mm is borderline discriminating severe periodontitis while in the present study presence of CAL ≥5 mm was used as a threshold to define severe forms of periodontitis as stated by the 2017 classification. This classification was followed by the HUNT study in Norway [8] which demonstrated higher prevalence (72.4%) of periodontitis which could be due to the use of radiographs in this study while the present survey relied on retrospectively recorded clinical parameters for diagnosis. Another survey in a Swedish population showed that moderate and severe periodontitis represented 29% and 11% of the sample [24]. while in this study mild/moderate periodontitis (stage 1 and 2) accounted for 22.7% and severe forms (stage 3 and 4) represented 77.3% of the cases. The Swedish study defined severe periodontitis when bone loss exceeds one third of root length associated with presence of intraosseous defect and furcation invasion (grade 2 and

3). While cases in this study were considered severe when CAL at the worst site was ≥5 mm which is further modified by the number of lost teeth (18) that was not accounted for in the Swedish study.

Stage 1 reflects the transitional stage from gingivitis to incipient bone loss and minimal CAL which is difficult to detect by conventional probing (18). This could be a factor in underestimating the prevalence of the mild form of periodontitis which mainly relies mainly on measuring CAL (25). Indeed, ethnic group, level of public awareness, and healthcare policies of each country have impact on the severity and prevalence of periodontal disease. This was supported by results from a previous report which showed general low level of knowledge and awareness about periodontal diseases which is confirmed by several national and international studies (26-29). Additionally, stage 4, stable and unstable periodontitis in this study were associated with the highest rate of bone loss (grade C) than other cases. This suggested that the patients seek periodontal treatment at later stages of the disease process when esthetic, functional , and quality of life are compromised (29).

Sites exhibiting PPD ≥6 mm were the most prevalent (40.5%) compared to shallow and moderately deep pockets, which is higher than results previously reported by Holde et al. (2017) and Stødle et al. (2021) (8). Apparently, this variation was due to conducting these studies in different populations with different oral hygiene standards. Additionally, multiple calibrated examiners, not specialists, were responsible for recording these parameters which could be responsible for overestimating pocket depth by including false periodontal pockets.

Localized disease was detected in 60.2% of the sample which is in line with other studies (8, 23). Regression analysis indicated that age and BOP could predict loss of attachment in periodontal health and disease. In addition to these variables, positive family history and sex could predict the conversion of localized disease into more generalized pattern. These results were consistent with findings of a previous report which showed increased number of teeth and sites affected by CAL with increasing age (23). Indeed, untreated periodontitis ends with tooth loss, with decreasing number of teeth; the pattern leans towards generalized form even if the number of affected sites remain the same. A previous cohort showed that loss of attachment associated with gingival recession is highly increased in patients with BOP ≥30% at baseline suggesting the use of this parameter for monitoring the stability of periodontium (30) which is consistent with this study. Patients with a positive family history showed a tendency for increasing loss of attachment over time which agrees with the premise that periodontitis is a genetically determined disease (31). Michalowicz et al., assumed that genetic factor is significantly responsible for 38% to 82% of variance in clinical periodontal parameters including PPD and CAL (32). Consistently, self-reported positive family history showed predictive potential for loss of attachment in patients with periodontitis and reduced periodontium. Additionally, males showed a higher predilection towards loss of attachment which could be attributed to a pattern of negligence of male patients to their oral/periodontal health together with poorer oral hygiene measures as compared to females (33, 34).

The results also demonstrated an association of aging with increased loss of attachment in periodontally healthy individuals and gingivitis cases. Over enthusiastic tooth brushing is amongst the leading causes of attachment loss in healthy sites which is strongly associated with age, sex (male), and combined vertical/horizontal brushing strokes (35, 36). Additionally, thin periodontal biotype is another important factor that increases vulnerability to loss of attachment in response to different types of trauma (37). Prevalence of reduced periodontium was significantly increased with gingivitis in comparison with periodontal health. This could also be attributed to the biotype, with thin biotype response to inflammation resulting in apical migration and recession. In contrast, thick biotype respond to inflammation by periodontal pocket formation (38).

Smoking and diabetes mellitus are profound risk factors responsible for aggravating the rate of periodontal/periimplant tissue destruction (39). However, these risk factors were not significantly associated with periodontitis in this study. This is mainly due to selection criteria in which all diabetic patients in this study were controlled before enrollment in treatment program as treating uncontrolled diabetic patients is contraindicated unless glycemic state is normal. This was also applied to smoking in which smoking cessation should be performed before delivering any treatment.

Lack of radiographic assessment and availability of other parameters that could improve the analysis which was based on retrospective data were the main limitations of this survey. However, the results showed the detailed and comprehensive information that could be provided by the latest classification system of periodontal disease in large-scale surveys. Additionally, to the best of our knowledge, this is the first cross-sectional study in Iraqi population that demonstrated the prevalence of periodontal health and disease using the 2017 classification scheme. Caution is advised when interpretating the findings of this study until repeated cross-sectional studies, considering the current limitations, are conducted.

Conclusion

The current study utilized 2017 World Workshop classification of periodontal disease for the first time in an Iraqi population estimated the prevalence of periodontal disease (periodontitis and gingivitis) were almost equally expressed (about 37% each) in 1578 cases. Severe periodontitis forms, stage 3 and 4, were the most dominant (77.3%) while milder forms, stage 1 and 2, were the least prevalent. Aging, sex, BOP, and positive family history were associated with increasing risk of attachment loss. This gives a unique insight into the periodontal health of the Iraqi population and will help in developing healthcare resources to help manage this prevalent disease.

Conflict of interest

The authors declare no conflicts of interest.

Author contributions

N.K.I. contributed to the conception or design of the work and was responsible for the acquisition of data. H.R.A. performed the statistical analysis. H.R.A. and M.R.M. contributed to the interpretation of results. N.K.I., H.R.A. and M.R.M. drafted the work. M.R.M. critically revised the work. All authors approved the final version of the manuscript and are responsible for all aspects of the work.

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مدى انتشار التهاب اللثة لدى السكان العراقيين باستخدام تصنيف 2017

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المستخلص:
الخلفية :هدفت هذه الدراسة لتحديد مدى انتشار وشدة التهاب اللثة لدى السكان العراقيين باستخدام تصنيف 2017 **.**المواد و الطرق: تم جمع البيانات عن حالة اللثة للمرضى بأثر رجعي من سجلات الرعاية الصحية. وشملت المعلومات التركيبة السكانية، والمقاييس السريرية والتي شملت مؤشر النزيف اللثوي (**BOP**)، وعمق الجيب اللثوي، وفقدان ارتباط الانسجة اللثوية (**CAL**) تم إجراء التحليلات الإحصائية الوصفية والاستنتاجية باستخدام برنامج **SPSS** الإصدار 26، **IBM**، الولايات المتحدة الأمريكية. النتائج: من بين 1578 سجلاً، تمثل صحة اللثة والتهاب اللثة والنساع 26.4% و37.1% و36.5% على التوالي، وكان الذكور أكثر تأثراً بأمراض اللثة مقارنة بالإناث. هيمنت المرحلتان 3 و 4 على حالات النساع والتي شكلت مجتمعة 77.3٪، تليها المرحلة 2 (21.3٪)، والمرحلة 1 (1.4٪). عند النظر إلى درجة المرض ومستويات الاستقرار، كان النمط الموضعي، والدرجة **C**، والحالة غير المستقرة هي الحالات الأكثر انتشارًا. اقترح تحليل الانحدار العمر، **BOP**، الذكور، والتاريخ العائلي الإيجابي كمتنبئين لزيادة مدى وشدة **CAL** سواء في صحة اللثة أو امراضها. الاستنتاج: الخلاصة: كان معدل انتشار أمراض اللثة (التهاب اللثة والنساع) متساويًا تقريبًا. كان النساع الشديد هو المجموعة الأكثر شيوعًا بينما كانت الأشكال الخفيفة من المرض هي الأقل انتشارًا. أشارت البيانات إلى أن المتغيرات الديموغرافية والمعلمات السريرية يمكن أن تتنبأ بخطورة فقدان الانسجة اللثوية.