EPIDEMIOLOGICAL SURVEY OF PERIODONTAL DISEASES AMONGST PATIENTS ATTENDING THE PERIODONTICS CLINICS AT THE COLLEGE OF DENTISTRY, AL-BAYAN UNIVERSITY, WEST OF BAGHDAD, IRAQ

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Abstract

Aims: A retrospective study was accomplished to evaluate the prevalence of periodontal diseases involving 2280 patients who were came the College of Dentistry, periodontics clinics, Al-Bayan University west of Baghdad, Iraq. During the period of 12th October, 2021 to 30th May, 2022.

Methods: Collection and evaluation of data from the patients' case sheets of the College of Dentistry who came from 1st October 2021 to 30th May 2022.

Results: The total number of patients were 2280, the mean age 36.74 (ranged 16~65) years, (966), 42.36% males and (1314), 57.63%, females, found 239 (10.48%) healthy patients, and (2041), 89.51% exhibit different forms of periodontal diseases. Gingivitis represents 1447 (63.46%), divided to 636 (27.89) males, and 811 (35.57) females. Total numeral of tested population smitten with periodontitis was 594 (26.04%), distributed to 243 (10.65) males, and 351 (15.39) females.

Conclusion: Using the findings of the study, more effort can be made to ensure that the public has healthy periodontal tissue.

Keywords: Epidemiology, gingivitis, periodontitis.

Introduction:

With a frequency of 20%–50% across the entire global society, it has been demonstrated that periodontal disease is one of the widely prevalent oral disorders affecting the human society. It is pervasive in both industrialized and less developed nations. (1)

The current global onus of disease researches refer that the global onus of periodontal disease went high level with 57.3% between 1990, 2010. (2,3,4) Additionally, research shows that advanced periodontitis is ranked with number 6 of most common disease in the globe, with a prevalence rate of 11.2% that affects roughly 0.743 billion individuals. (5, 6)

A large number of body systems, which threaten by atherosclerosis, coronary heart disease, heart muscle infarction, diabetes mellitus, low birth weight baby and premature labour, persistent pulmonary obstruction, acute infections of respiratory system, and others, are potentially impacted by periodontal diseases. (7, 8)

Existing research noting the frequency of periodontitis is necessary in various societies; this might begin further epidemiologic researches for public health obtrusion of periodontitis at regional levels to develop the health status of the community. Thus, the data according to the population is necessary to know the spread of diseases, their causes, and how to use this information in preventive measures. (9)

Surveying studies of periodontitis in different communities are therefore helpful for defining etiological risk factors for the illness, providing the condition's history, and measuring the prevalence, extent, and severity of the disease. (10) This retrospective study's objective was to estimate the prevalence of periodontal diseases in a particular community.

Material and method

Two thousand two hundred and eighty patients aged 16 to 65 who visited the College of Dentistry's dental clinics at Al-Bayan University in Baghdad between October 12, 2021, and May 30, 2022, for periodontal examination.

For periodontal diagnosis, the staff used bleeding on probing index by insertion William's periodontal probe in the bottom of the gingival sulcus and moved gently along the tooth (root) surface to check the bleeding, meanwhile clinical attachment level were used for measuring attachment loss.

A population's prevalence is the number of cases present at a specific time in that population. Any data on prevalence must be evaluated in the context of the population under study. 2,280 case sheets were examined for the existence of healthy status, gingivitis and periodontitis in order to ascertain Baghdad's prevalence of periodontal disease. By the Statistical Package for Social Sciences (SPSS), descriptive statistics including frequency, percent, mean and standard deviation were used.

Results

After taking the data from the patients' case sheets, the average of age to the patients was 36.74 years. Males were 966 (42.36%), and females, 1314 (57.63%), the age were among minimum 16 and maximum 65 years. (Table 1)

Table 1: Descriptive statistics of number and age

Number	Minimum	Maximum	Mean	Std. Deviation	Std. Error
2280	16.00	65.00	36.7447	13.78356	.28866

The result found 239 (10.48%) healthy patients, 87 (3.81%) males and 152 (6.66%) females, and (2041), 89.51%, 879 (38.55) males and 1162 (50.96) females who had various periodontal disorders, such as gingivitis and periodontitis. 1447 (63.46%) patients were had gingivitis, 636 (27.89%) males and 811 (35.57%) females; the patients had periodontitis were 594 (26.04%), 243 (10.65%) males and 351 (15.39%) females. (Table 2)

Table 2: Shows healthy, gingivitis and periodontitis status

	Male		Female		Total	
	Number	%	Number	%	Number	%
Number	966	42.36	1314	57.63	2280	100
Healthy	87	3.81	152	6.66	239	10.48
Gingivitis	636	27.89	811	35.57	1447	63.46
Periodontitis	243	10.65	351	15.39	594	26.04

Except 401 (17.58%), 211 (9.25) males and 190 (8.33%) females, the rest of patients 1879 (82.41%), 755 (33.11%) males and 1124 (49.29%) females were do brushing for their teeth.

The using of dental floss found by 178 (7.80%), 99 (4.34%) males and 79 (3.46%) females; and 2102 (92.19%), 867 (38.02%), males and 1235 (54.16%) females did not use; while 285 (12.50%), 191

(8.37%) male and 94 (4.12%) females were used interdental toothpicks; against 1995 (87.50%), 775 (33.99%) males and 1220 (53.50%) females did not.

Smoker patients were 624 (27.36%), 603 (26.44%) males and 21 (0.92%) females; and 1656 (72.63%), 363 (15.92%) males and 1293 (56.71%) females were non-smokers of total number of patients. (Table 3)

Table 3: Display brushing, flossing, toothpick and smoking statistics

		Male		Female		Total	
		Number	%	Number	%	Number	%
Brushing	Yes	755	33.11	1124	49.29	1879	82.41
	No	211	9.25	190	8.33	401	17.58
Flossing	Yes	99	4.34	79	3.46	178	7.80
	No	867	38.02	1235	54.16	2102	92.19
Toothpick	Yes	191	8.37	94	4.12	285	12.50
	No	775	33.99	1220	53.50	1995	87.50
Smoking	Yes	603	26.44	21	0.92	624	27.36
	No	363	15.92	1293	56.71	1656	72.63

The number of patients needed x-rays were 118 (5.17%), 49 (2.14%) males and 69 (3.02%) females. 485 (21.27%), 190 (8.33) males and 295 (12.93%) females referred from conservative department; while 214 (7.43%), 77 (2.67%) males and 137 (6.00%) females referred from other departments. (Table 4)

Table 4: present referring to, and for other departments

	Male		Female		Total	
	Number	%	Number	%	Number	%
Refer to x-rays	49	2.14	69	3.02	118	5.17
Refer from conservative	190	8.33	295	12.93	485	21.27
Refer from others	77	2.67	137	6.00	214	7.43

Discussion

To ascertain the prevalence and scope of periodontal disorders, were studied case sheets of the local population in the Baghdad region. In comparison to periodontal health, which had a prevalence of 10.48% in this study, healthy people had a prevalence of 24.5%, which founded by study in Portugal. (11)

Gingivitis prevalence (27.89% for men and 35.57% for women), the total was 63.46%, which is lower than Egyptian study on plaque-induced gingivitis, which had a 100% occurrence; women also had a lesser prevalence, which contrasted with the Egyptian finding (42.2%). (12) And resembled a study of adults from the Caribbean. (13)

The periodontitis findings were 26.04% (10.65% males and 15.39% females) lower than those of a Saudi Arabian study which showed that 33% of the patients under study had various forms of periodontitis (14); they were also lower than those of a Portuguese study which discovered that 48.6% of patients had periodontitis. (11) Both gingivitis and periodontitis were lower in males than females invert that showed in Al-Basrah city. (15)

In the current study, 82.41 percent of study participants brushed their teeth, regardless of how frequently they did so. This figure was greater than this in the study of Lisbon metropolitan (52.6%). (16) and the India (21.1%). (17) But lesser than that seen in Japanese research (87.5%). (18) Additionally, a statistically significant link has been shown between periodontitis and a lack of brushing or a low frequency

of brushing. (17, 18, 19) In this study, only 7.80% of participants reported using tooth floss as an additional hygiene measure, compared to 17.4% of participants in the study of Lisbon metropolitan. (16) Research of a Portuguese subgroup from Lisbon revealed a higher figure of 34.8%. (20) Also, it has been demonstrated that not using dental floss is statistically significantly associated with developing periodontitis. (17)

The using of toothpicks was (8.37%) by men, and by women was (4.12%), with total (12.50%) which about less than half of 28 percent which reported by Danish population′s study. (21) In comparison to the prevalence found in the research of the population of Northern Portugal in 2022 (21.7%), the smokers' prevalence in the current study was 27.36%. (11) Also, more than 192 (18.97%) which found in a study in Al-Basrah city. (15)

The study's findings offer fresh information that could support population-wide public oral health initiatives. It demonstrates the necessity of an extensive national oral health program for more accessible periodontal diseases.

Conclusions

Gingivitis prevalence was 63.46%, periodontitis prevalence was 26.04%, and periodontal health prevalence was 10.48%. It is essential to raise public awareness of periodontal disease, its warning signs, symptoms, and effects on overall health. The findings of the study can be used to increase efforts to provide periodontal health to the people in Baghdad city.

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