

Prevalence and severity of periodontal disease among institutionalized elderly in Baghdad-Iraq

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Abstract:

This research analyzes data from dentate institutionalized elderly in Baghdad city. The study population comprised (100) dentate elderly ranging in age from 50-100 years (72 males and 28 females). Results showed that Prevalence of gingivitis was 100% among the elderly in both sexes and that the severity is higher among females for score 3 and 2 of plaque index.

Keywords:

Periodontal disease- institutionalized elderly- gingivitis- plaque index.

Introduction:

Many studies have been conducted over seas to determine the periodontal condition and health status of the elderly^(1,2,3). But no such studies done in Iraq to the institutionalized elderly. It was therefore decided to conduct this study for all the institutionalized elderly in Baghdad city to determine the prevalence and severity of periodontal disease. The results of this study would then enable an assessment to be made of the dental services for them and the need for further treatment.

Material and methods:

The present study was conducted in the only institution for the elderly in Baghdad city. This institution which is controlled by the Ministry of labour and Social Affairs, receives the elderly who are socially helpless and physically weak from all parts of Baghdad. The sample consisted of all dentate elderly (72 males and 28 females) with an age ranged from

50-100 years old. Using dental mirrors and periodontal probe for clinical examination.

While the old person sitting on a chair or a wheel chair under daylight. Periodontal condition was measured by means of Plaque Index system "PLI"⁽⁴⁾, Gingival Index (GI)⁽⁵⁾ and Pocket depth which were calculated to the deepest millimeters using periodontal probe.

Questionnaires were taken from the elderly people contained two types of information;

-General information including age, sex, and level of education.

-Information regarding dental health behavior included tooth brushing and dental attendance.

Results:

The distribution of all dentate elderly resident in the institution according to age and sex is shown in table (1), the mean age of elderly was 66.6 years old.

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Table (1): distribution of individual examined according to age and sex.

Age	Men	Women	Total
50 – 74	52	18	70
75 – 100	20	10	30
Total	72	28	100

The prevalence of gingivitis among the total sample was found to be 100% (table2) .Its revealed that the mean GI for the total sample was 1.26 ± 0.646 and that females had a higher mean of GI

than males for both age groups with no significant differences between them.

Also there was no statistically significant difference between males and females in both age groups.

Table(2): The prevalence of gingivitis for both age groups

Age group	Sex	Mean	±S.D	Sig.
50-74	Male	0.91	0.43	N.S
	Female	1.23	0.80	
	Both	1.017	0.58	
75-100	Male	1.72	0.623	N.S
	Female	1.98	0.042	
	Both	1.80	0.65	
All ages	Male	1.17	0.64	N.S
	Female	1.5	0.603	
	Both	1.268	0.646	

N.S. non significant difference

Table 3 shows the percentage of site frequency distribution of each PL, I scores. It shows that for the first age group score 3 get the higher percentage 65.2% for females and 53.5% for males

respectively. While for the second age groups score 1 get the higher percentage for males 56% and score 2 for females 77.3%. From the total sample only 24.2% of the sites get score 0 of PL.I.

Table (3): Percentage frequency distribution according to each PL, I scores by age and sex

Age	Sex	PL.I scores			
		0%	1%	2%	3%
50-74	Males	32.14	47.5	42.2	53.5
	Females	4.4	70.8	27.5	65.2
	Both	24.2	53.5	37.9	56.2
75-100	Males	0	56	37	39.4
	Females	0	12.5	77.3	54.3
	Both	0	50	48.7	44.6
Total		24.2	53	39.6	53

Table 4 shows the percentage distribution of subject having pocket depth 4-6 mm and 7-9 mm. It shows that from the first age group most of the individuals have a pocket depth between 4-6mm. Females show more percentage than males (57.14% females; 55% for males). While for the second age group

both males and females have no pocket depths more than 6mm and that 22.2% of males have a pocket depth 4-6mm while that for females it is 21.4%. Generally, 78% of subjects having pocket depth 4-6mm and That only 12% of them having pocket depth 7-9 mm.

Table (4): Percentage distribution of pockets 4-6,, and 7-9mm by age and sex

Age	Sex	% pocket depth	
		4-6mm	7-9mm
50-74	Male/ Female	55.5/57.14	11.1/14.2
75-100	Male / Female	22.2/21.4	0/0
Total		78	12

The results showed that from males only 44.4% of them brush their teeth while 55.5% non and 22.2%:- of men visit the dentist regularly while 77.7% of them either visit the dentist on emergency or did not visit the dentist at

all From females 43% brush their teeth and 57% non . And only 21.4% visit the dentist regularly while a high percentage of them 78.5% did not visit the dentist (table5).

Table (5): Percentage subject with tooth brushing and dental attendance

Sex	Brushing		Visit the dentist	
	% yes	%No	% yes	%No
Males	44.4	55.5	22.2	77.7
Females	43	57	21.4	78.6

Discussion:

A survey of this type is subject to a number of limitations as the inability to radiograph the teeth and the accuracy of the examinations of patients at the bed side was subject to the ability of patient to cooperate ⁽²⁾.

In comparison with other studies one must keep in mind the differences in sample size , degree of disabilities, type of institution and the different clinical criteria which could account for the differences in the prevalence of the

diseases ⁽⁶⁾. The present study agrees with the study of Burt et al, ⁽¹⁾ in the finding that the prevalence of gingivitis, is high and this finding is related to neglect oral hygiene among elderly in this institution in addition to negative dental attitude held by old person as show in table-5- and this result is in agreement with the findings of other national surveys done ;n Finland ⁽⁷⁾ and in Denmark ⁽⁸⁾.

Data analysis showed that most of the examined sites get score 2 and 3 of plaque index and this poor oral hygiene among the old person reflects their

negative attitudes for good oral hygiene and this also reflects the destructive periodontal disease in old age as increased gingivitis.

This increased gingivitis and pocketing among old age people does necessarily, equate with tooth loss as long as oral hygiene is not maintained where excellent oral hygiene is maintained age does not seem to be an important independent variable in periodontal disease status⁽⁹⁻¹⁰⁾.

In conclusion, the goal for oral health care for elderly should be to meet not only the demand for treatment but also include assistance in oral hygiene procedures through the improvement of dental and periodontal health service programs for them.

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