

PERVASIVENESS OF PROSTHESIS AMONGST THE PATIENTS OF GADAP VISITING BAQAI DENTAL COLLEGE HOSPITAL

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ABSTRACT

Edentulism is consistently shown to increase with age, gender and socioeconomic status. This study was done to assess the occurrence of complete and partial edentulousness in relation to age and gender amongst the low socio-economic population of Gadap area in suburb of Karachi.

In this cross-sectional study, subjects of both the genders irrespective of their ages were included. The subjects were divided into Group 1: 17-35 years, Group 2: 36-55, Group 3: 56-75, Group 4: 75 and above. The data of one year was collected from Baqai Dental College Hospital records and evaluated using SPSS version 23. The significance level was set at $p < 0.05$.

A total of 319 subjects reported for seeking treatment of their missing tooth / teeth. 123(38.6%) patients were females and 196 (61.4%) were male. For comparison of frequencies between the groups, chi-square test was employed. It was found that male predilection for complete denture and group 3 (56-75 years) indicated highest number subjects suffering from complete edentulism.

Though a lot of advancement has been made regarding treatment options and in generating awareness amongst the population regarding oral health, prevalence of edentulism still prevails due to socioeconomic and cultural constrains.

Key Words: Complete denture need, edentulism, tooth loss

INTRODUCTION

It has been demonstrated that within a population, the decision of the patients to become edentulous reflects not only on their caries status and periodontal disease but also on the effect of multiple non-diseases factors like attitude, behaviour, dental attendance history, the health care system and cost concerns associated with low socioeconomic status.¹ Acknowledging the heterogeneity of edentulism, dental clinicians have tackled the condition on wider extent with a great improvement in reduction of the cases.² Though reports indicate marked decline in edentulism but there is still vast variation in prevalence between various countries, geographical backgrounds and communities among the same region.³ It has been noted that men suffer from partial or complete edentulousness more than women and people of rural areas are affected more than urban population.⁴ In a number of European countries elderly

patients have been reported to have a comparatively high prevalence of edentulism; such as the Netherlands 83%, Denmark 68%, England 74–79%, Scotland 85%, Ireland 72%, Northern Ireland 69%, Finland 67% and Norway 57%. In Australia, 68% of people aged 65 or above were found edentulous.⁵ Malaysia, in Far East was no exception as far as edentulism is concerned. A study reveals statistically significant association between sociodemographic variables and edentulism with 56% edentulism.⁶ Partial edentulism was found as high as 70% in fifth and sixth decades of life in Saudi Arabian population.⁷ Situation of edentulism in Iraq also matches the findings of other studies.⁸ A study done in Pakistan on edentulism shows that 55% population of 40-80 years suffers from partial edentulism.⁹ Findings of another study reveal that partial edentulism in patients of age group 50-70 years is around 58%.¹⁰ Many studies are available in dental literature done on the issue employing urban population in the country but to the best of our knowledge, no study in this regard has been done exclusively for rural population. This study has therefore, been planned to evaluate the prevalence of edentulism amongst the patients from Gadap – a low socioeconomic community situated in the outskirts of Karachi; visiting Baqai Dental College Hospital over a period of 1 year, in order to identify the prevalence of complete and partial edentulism in relation to age and gender.

MATERIAL AND METHOD

This retrospective cross-sectional study was con-

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ducted on the clinical records of the patients of a low income population from Gadap, visiting Baqai Dental College Hospital during 15th Feb 2015 to 14th Feb 2016. The record of the 1357 patients who visited during the mentioned period was obtained from the register of the prosthodontics department of after the approval of the study by the ethical committee of the institution. The record forms were scrutinized thoroughly to exclude the records not meeting the inclusion criteria of the study. The demographic details on the forms showing age of the patient less than 17 years or non-residence of Gadap area were excluded.

Information about patients' presenting complaint with history of presenting complaint and treatment needs concerning prosthetic department were recorded on a separate sheet in a form of a table. The collected data analysed using a SPSS software version 23. For evaluation of age predilection with edentulism we further divided subjects into 4 groups. Mean & SD devoted used for variable age, frequency and percentage were used for descriptive categorical variable. Chi-square test was used to observe the difference of types of dental prostheses (CD & PD) between male and female.

RESULTS

The collected data were analyzed statistically using spss software version 23. For comparison of frequencies between groups, chi-square test was employed while the significance level was set at 0.05. A total of 319 subjects reported out of which 123 (38.6%) were females and 196 (61.4%) were males (table1). Males were found to have predilection of complete edentulism 47.4% when compared with prevalence of partial edentulism 42.3% (Table 2).

The groups according to age showed that group 3 (56-75 years) had highest percentage of reporting edentulous subjects and it was also this group which had highest percentage of reporting complete edentulism upto 60.2%. The group with lowest predilection was group 1 for complete 13.5% and group 4 for partial edentulous condition 7.7% (Table 3).

Statistical comparison between age and PD showed

a significant difference: $X^2(47)=72.76$, $p=0.009$. The difference between gender and PD however did not show significance. When age was compared with CD, a significant comparison was seen $X^2(47)=78.97$, $p=0.002$. Gender concurrently proved to be an insignificant variable in complete denture therapy too.

DISCUSSION

Complete edentulism is a global issue, especially in the people aged 65 years and older; and not only of developing countries, as the levels reported by Ireland (48.3%), Malaysia (56.6%), the Netherlands (65.4%), and Iceland (71.5%) are amongst the highest. Our study showed male predilection was higher almost about 61.4% whereas females were only 38.6% of the population that visited Baqai Dental College Hospital over a period of one year. What causes such big difference and what are its possible associated factors are still to be looked into. The difference may be an attribute of cultural values as females are not encouraged to leave homes. Lack of awareness and non-availability of dental treatment facilities in the community and poverty may be potential causes of marked edentulism in Gadap population. It has been reported in a study that due to financial constraints and lack of health facilities available in rural areas in Pakistan, population lives with various untreated or undiagnosed diseases and patients with general diseases have larger risk of poor oral hygiene, tooth loss and high DMFT scores.¹¹ One study done in Punjab discloses that prevalent untreated caries is the most found reason for tooth loss with periodontal ailments as second most harming disease.¹² These findings are consistent with the studies done in Iran¹³ Jordan¹⁴ and Ajaman.¹⁵ This study supports the findings of the mentioned Arabian Gulf studies. The present study also indicate that subjects become completely edentulous between ages 56-75 years, hence group 3 showed a high predilection of complete denture therapy (60.2%). Such tendency has been reported previously as well in the studies conducted in the age group 65-74 years of edentulous people by the National Health Interview Survey (1958), National health and nutrition examination survey (1974), survey in Iowa (1980) and Annette Thomas Weintraub (1985), it was found that the percentage varied by 55.4%, 45.4%, 33.8% and 35%, respectively. General National Survey also indicated that there is a higher prevalence of

TABLE 1: FREQUENCY OF EDENTULISM ACCORDING TO GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	123	38.6	38.6	38.6
	M	196	61.4	61.4	100.0
Total		319	100.0	100.0	

TABLE 2: FREQUENCY OF COMPLETE DENTURE PROSTHESIS VERSUS PARTIAL DENTURE PROSTHESIS

Gender	Complete Denture Present	Complete Denture Absent	Partial Denture Present	Partial Denture Absent
M	93 47.4%	103 52.3%	83 42.3%	113 57%
F	41 33.3%	82 66.7%	58 47.2%	65 52.8%

TABLE: 3 PREDILECTION FOR DENTURE PROSTHESES ACCORDING TO AGE

Age gp	Complete Denture Present	Complete Denture Absent	Partial Denture Present	Partial Dentures Absent
Grp 1	5	2	28	9
17-35	13.5%	86.2%	24.3%	75%
Grp 2	40	96	69	66
36-55	29.4%	70.6%	55.5%	48.5%
Grp 3	80	53	42	91
56-75	60.2%	39.8%	31.2%	68.4%
Grp 4	9	4	1	12
76 above	19.2%	30.8%	7.7%	92.3%

complete edentulism among females than males in all age groups. Survey in Iowa found that proportion of complete edentulous in men was higher only in 30–44 and 65–74 age groups.

The decision to extract a tooth depends upon several factors. This study showed that periodontal disease was the major factor responsible for edentulism followed by dental caries and lastly trauma.¹⁶ Various other studies have also shown similar significant finding. On the contrary, it has also been documented in the literature that dental caries was the most prevalent cause rendering the patients edentulism

CONCLUSION

Complete and partial edentulousness prevails in the population of Gadap affecting both genders.

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CONTRIBUTIONS BY AUTHORS

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| 1 Rafique Moosa: | Conceived the idea & write up. |
| 2 Zahid Akhter: | Manuscript reviewing. |
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| 4 Rida Sohail: | Data collection. |