Assessment of Dentition Status in Elderly Population of Delhi, India

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Abstract

Context: -Oral health status of the elderly represents an important means not only to identify oral problems but, also to determine social interventions for promotion, prevention and recovery of oral health. So, the present study was conducted to assess the dentition status of elderly residing in old age homes of Delhi. Aims: - To assess the dentition status of 65-74 year old elderly residing in old age homes of Delhi, India. Settings and design: - A cross-sectional study was conducted among a total 464 residents of 20 old age homes of Delhi, India. Subject and methods: - Residents with age group of 64-75 were included in the study. The dentition status was recorded using WHO oral health assessment form (1997). Statistical analysis used: - Chi square test and t test were used to find significance of variables. P value <0.05 was considered significant. Results: - Mean number of decayed teeth in 65-69 years and 70-74 years was 6, 5 respectively. Mean number of missing teeth in the present study was 16. Statistically significant difference was seen among both the age groups for missing and filled teeth Conclusion: - The present study underlines a considerable need for dental treatment in elderly as there were more number of decayed and missing teeth and less number of filled teeth in the study subjects which reflects less utilization of oral health care services by these elders residing in old age home.

Introduction

an has tried to increase life span and enhance health using various scientific innovations. The average life span in most parts of the world continues to increase. Hence it has become the mission of health professionals to work not merely to increase the life span but also, more importantly to make later years of life more productive and enjoyable¹.

Oral health is an integral component of general health and is essential for well-being. Oral health means more than just good teeth; it also means being free from chronic pain in oro-facial region, dental caries, oral cancers, birth defects, periodontal diseases, oral sores and all the diseases that affect the mouth. There is evidence to prove the interrelationship between oral and general health. Dental diseases, although not life threatening, can affect the quality of life of the elderly².

Management of oral diseases is important as it ensures that they can eat and talk

comfortably, improve their appearance, maintain their confidence and self esteem. Dental diseases such as coronal and root caries reflect the accumulation of oral diseases over time.

The oral health conditions may be indicative of systemic conditions. Thus, knowing the oral health status of the elderly represents an important means not only to identify oral problems but, also to determine social interventions for promotion, prevention and recovery of oral health³.

Because the homebound elderly typically do not see a dentist for long time, therefore their oral health deteriorates in the absence of care. This results not only in pain and infection, but also a compromised ability to eat and socialize. Hence, the already existing compromised overall physiological functioning and quality of life gets even more deteriorated⁴.

High prevalence rate of coronal and root caries are found among old age population worldwide. The severe dental caries are main

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reason for tooth extraction. Dental caries which is also known to be linked to social and behavioral factors is described as major public health problem among elders⁵.

So in order to properly identify and assess the current dental needs of the homebound elderly, larger and current studies of the dentition status and needs of this population are required. This will also help in appropriately planning oral health care services for this growing and vulnerable population. As of today, there are no records available regarding oral health of elder population in the state of Delhi. So the present study was conducted to assess the dentition status of elderly residing in old age homes of Delhi.

Materials and methods

An observational study was conducted to find out the dentition status among elderly aged 65-74 years residing in old age homes of Delhi. There are 38 old age homes in Delhi as per the information collected from municipal office. Four old age homes from each region

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were selected by cluster randomized sampling. A total number of 464 elders were examined after fulfilling the inclusion and exclusion criteria.

Elders who were in the age group of 65-74 years, who were inmates of the elders' homes and those who were present on the day of the examination were considered for the study. Whereas those subjects, who had not given the consent and those who were bed-ridden were excluded from the study.

Ethical clearance was obtained from ethical committee of SGT Dental College, Gurgaon. Prior to the study, permission was taken from the concerned authorities after explaining the purpose and procedure of the study. As per the classification given by American Dental Association in 1970, Type III clinical examination which includes inspection using a mirror and explorer under natural illumination, was carried out by the investigator himself⁶.

Informed consent was obtained from the subjects before starting the examination procedure. The examiner was trained and calibrated prior to the study. A survey performa was prepared with the help of Oral Health Assessment Form, WHO (1997)⁶ which was used to collect the information regarding the dentition status.

Results

The study group was divided into two age groups i.e. 65-69 years and 70-74 years (Table1). Mean number of decayed teeth in 65-69 years and 70-74 years was 6, 5 respectively. No statistical significant difference was seen among genders (Table 2). Mean number of missing teeth in the present study was 16. Mean number of 15 missing teeth were seen in 65-69 years elderly and mean number of 17 missing teeth were seen in 70-74 years elderly. Statistically significant difference was seen among both the age groups for missing and filled teeth (Table 2). However, no statistical significant difference was seen among males and females for missing and filled teeth (Table 3). 138 elders had mean number of one root caries in majority. But there was no statistically significant difference seen among both the age groups and genders. The overall mean DMFT of subjects was 22.5

 Table 1 Distribution of sample by age group and mean age

Age Group	No. of Subjects	Mean Age
65-69 Years	243	69.446
70-74 Years	221	

 Table 2. Distribution of DMF in total sample by age group

	Sex	Ν	Mean	Std. Deviation	Std. Error Mean	T Test	P Values
D	Male	291	5.8557	3.74899	0.21977	0.207	0.926
	Female	173	5.7803	3.84712	0.29249	0.207	0.030
М	Male	291	16.1684	10.13134	0.59391	0 207	0 759
	Female	173	16.4682	10.2552	0.77969	-0.307	0.100
F	Male	291	0.8454	2.2484	0.1318	0.864	0.388
	Female	173	0.6879	1.08141	0.08222	0.004	
DMF	Male	291	22.8694	7.01354	0.41114	-0.1	0.92
	Female	173	23.9364	6.89215	0.524	-0.1	0.02

Table 3. Distribution of DMF in total sample by

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	Age Group	N	Mean	Std.	Std.	T Test	P Values
	• •			Deviation	Enormean		
D	<70 yrs	243	6.0864	3.7401	0.23993	1.548	0.122
	>=70 yrs	243	5.5430	3.81554	0.25666		
М	<70 yrs	243	15.2263	10.06888	0.64592	-2.353	0.019 Significant
	>=70 yrs	243	17.4389	10.17225	0.68426		
F	<70 yrs	243	1.0576	2.46227	0.15795	3.256	0.001 Significant
	>=70 yrs	243	0.4887	0.86661	0.05829		
DMF	<70 yrs	243	22.3704	7.07944	0.45415	-1.704	0.89
	>=70 yrs	243	23.4706	6.79808	0.45729		0.00

Discussion

In national oral health survey and fluoride mapping of Delhi⁷, it was seen that mean DMFT of 65-74 year elderly was 17.9. Mean DMFT in the present study was 22.5. Similar mean DMFT was reported in the study done by Gaiao et al $(2009)^8$, Corchero et al $(2008)^4$ and Wyk C W (1977)9. Mean number of decayed teeth in the present study was 5.7 which was more than the mean number of decayed teeth in the study done by Bansal V et al (2010)¹⁰, Steele et al (1996)¹¹, Corchero et al $(2008)^4$ and Strayer et al $(1993)^{12}$. Reason could be that, present study and all these studies were conducted on oral health status of institutionalized elderly so there is lack of dental facilities, unawareness and decreased access to dental care services in these elders. In contrast to the present study, is the study done by Goel P et al where mean DMFT was 9.56 as these elders were not institutionalized so they have access to dental care and further their family members can also take care of their oral health.

Mean number of missing teeth in the present study was 16.2 which is similar to the mean number of missing teeth seen in National oral health survey Delhi⁷ and less than the mean number of missing teeth seen in study done by Corchero et al $(2008)^4$ and Gaiao et al $(2009)^8$. The reason can be that that study subjects in present study were 65-74 year age and in other studies it is above 60-65 years of age. So, in other studies due to more number of subjects with increased age, missing teeth were more.

Mean number of filled teeth in the present study was 0.76 which was similar to the study done by Corchero et al (2008)⁴. Both these elders which make them less accessible to oral health care services.

studies were conducted on institutionalized

Mean number of root caries in the present study was 1 which is similar to the study done by Steele et al (1996)¹¹ and Strayer et al (1993)¹². Root caries is a common problem in elderly and it is likely to become a disease of significant public health interest as more and more people retain their teeth.

It has been seen that elders have majority of dental diseases but they still have poor oral health as they have decreased physical mobility, dependency on help, general tiredness that makes their oral hygiene poor and it becomes difficult for them to visit dental clinic.

Conclusion

There were more number of decayed and missing teeth and less number of filled teeth in the study subjects which reflects less utilization of oral health care services by these elders residing in old age home. Many subjects had grossly decayed and root stumps which indicates their poor awareness about oral health. So, dental health education programs should be conducted in these old age homes to increase the awareness of oral hygiene among subjects. Due to grossly decayed teeth and root stumps, many subjects had suffered from pain and infection which has further worsened their quality of life.

References

References are available on request at editor@healtalkht.com

