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Original Article

Prevalence of Complete and Partial Edentulism in the Patients Visiting District Hospital of Kathua, Jammu, Jammu and Kashmir

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Abstract

Aim: The aim of the study was to evaluate the prevalence of complete and partial edentulism in the population of Kathua District, Jammu, Jammu and Kashmir visiting the OPD of District Hospital, Kathua.

Materials and Methods: Six hundred subjects aged between 15 and 85 years (300 males and 300 females) were included in the study. The intraoral examination was done visually by a single examiner trained for the specific study purpose.

Results: There was no statistically significant relationship between age and gender of the patient with edentulousness. However, with an increase in age, there was greater trend toward partial edentulousness followed by complete edentulousness of the patients in the groups of above 45 years of age.

Conclusion: From the findings of the present study, it can be concluded that the prevalence of edentulousness increases with age which results in various long-term effects of tooth removal on patient's facial structure and general well-being, thereby increasing the need for prosthodontics rehabilitation. More awareness and proper dental education regarding proper dental hygiene and timely replacement of the missing teeth need to be taken care of.

Key words: Complete edentulism, Edentulism, Extraction, Partial edentulism

INTRODUCTION

Tooth loss has an impact on an individual's oral health-related quality of life at biologic, psychological, and social levels. The prevalence and extent of tooth loss have decreased significantly in many countries during the recent decades.[1-3]

Tooth loss is identified by an edentulous space, which is a gap in the dental arch normally occupied by one tooth or more. It could be partial or complete. A person may lack a few teeth (partially edentulous) or all the teeth in one or both upper and lower jaws (completely edentulous) for various reasons.[4]

Partial edentulousness is a dental arch in which one or more but not all natural teeth are missing. In general, it occurs by caries, periodontal problems, traumatic injuries, impactions, supernumerary teeth, and neoplastic and cystic lesions.[5-8]

Partial edentulism leads to clinical challenges and lifestyle compromises. Clinically, it results in drifting and tilting of adjacent teeth, supra-eruption of opposing teeth, altered speech, changes in facial appearance, and temporomandibular disorders.[5,6] Furthermore, the loss and continuing degradation of the alveolar bone, the adjacent teeth, and also the supporting structures will influence the difficulty to achieve an adequate restoration in a partially edentulous patient.[9-13] Pattern of tooth loss is a clear indicator of levels of oral hygiene, dental health awareness, the magnitude of dental problems, and the management.[4]

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Mundt *et al.* 2011 reported that perceived need and attitudes toward dental care had an important influence on the use of care. The older people prompted to have a fatalistic attitude and were least likely to attend the dentist.[14] In Jammu and Kashmir, very limited data are available regarding the complete and partial Edentulism, and thus, the present study is conducted to evaluate its prevalence.

MATERIALS AND METHODS

Six hundred subjects aged between 15 and 85 years (300 males and 300 females) who visited the District Hospital Kathua were included in the study. The intraoral examination was done visually by a single examiner trained for the specific study purpose and was choosen only on the basis of clinical examination. The questionnaire was prepared including the duration and various reasons for edentulism. The questionnaire was filled up by the patient and subjected to evaluation and correlation with the clinical examination.

Inclusion Criteria

- The subjects with permanent dentition were included in the study
- The subjects with age range between 15 and 85 years were also included.

Exclusion Criteria

- Third molar was excluded from the study.

The written informed consent was obtained before the clinical examination and filling up of questionnaire by the patient.

RESULTS

Of 600 subjects, 300 (50%) were males and 300 (50%) females, and 19% of males and 17.6% of females were in the age group of the 15-25 years. 15.6% of males and 16.3% of females were in the age group of 26-35 years. 16% of males and 15.6% of females were in the age group of 36-45 years. 16.3% of males and 17% of females were in the age group of 46-65 years. 17.6% of males and 17.3% of females were in the age group of 56-65 years. 15.3% of males and 16% of females were above 65 years of age (Table 1).

In the age group of 15-25 years, 29.8% of males and 26.4% of females were completely dentulous. In the age group of 26-35 years, 29.8% of males and 24.5% of females were completely dentulous. In the age group of 36-45 years, 18.7% of males and 14.9% of females were dentulous. In the age group of 46-55 years, 12.2% of males and 7.8% of females were dentulous. In the age group of 56-65 years, 5.6% of males and 3.8% of females were dentulous. There was no completely dentulous patient above 65 years of age (Table 2).

There was no edentulous patient in the age group of 15-25 years. In the age group of 26-35 years, 14.8% of males and 18.4% of females were partially edentulous. In the age group of 36-45 years, 47.9% of males and 55.3% of females were partially edentulous. In the age group of 46-55 years, 32.6% of males and 33.3% of females were partially edentulous. In the age group of 56-65 years, 58.5% of males and 63.5% of females were partially edentulous. Above 65 years of age, 34.8% of males and 35.4% of females were partially edentulous (Table 3).

There was no completely edentulous patient in the age group of 15-25 years and so as in the age group of 26-35 years. In the age group of 36-45 years, 33.3% of males and 29.8% of females were completely edentulous. In the age group of 46-55 years, 55.1% of males and 58.8% of females were completely edentulous. In the age group of 56-65 years, 54.7% of males and 32.6% of females were completely edentulous. Above 65 years of age, 65.2% of

Table 1: Age and gender distribution

Age group (years)	Males (%)	Females (%)	Total
15-25	57 (19)	53 (17.6)	110
26-35	47 (15.6)	49 (16.3)	96
36-45	48 (16)	47 (15.6)	95
46-55	49 (16.3)	51 (17)	100
56-65	53 (17.6)	52 (17.3)	105
>65	46 (15.3)	48 (16)	94
Total	300 (99.8)	300 (99.8)	600

df=10, P=1.0000

Table 2: Distribution of dentulous subjects

Age group (years)	Males (%)	Females (%)	Total
15-25	17 (29.8)	14 (26.4)	31
26-35	14 (29.8)	12 (24.5)	26
36-45	9 (18.7)	7 (14.9)	16
46-55	6 (12.2)	4 (7.8)	10
56-65	3 (5.6)	2 (3.8)	5
>65	0 (0)	0 (0)	0
Total	49 (55.7)	39 (44.3)	88

df=8, P=1.0000

Table 3: Distribution of partially edentulous subjects

Age group (years)	Males (%)	Females (%)	Total
15-25	0 (0)	0 (0)	0
26-35	7 (14.8)	9 (18.4)	16
36-45	23 (47.9)	26 (55.3)	49
46-55	16 (32.6)	17 (33.3)	33
56-65	31 (58.5)	33 (63.5)	64
>65	16 (34.8)	17 (35.4)	33
Total	93 (47.7)	102 (52.3)	195

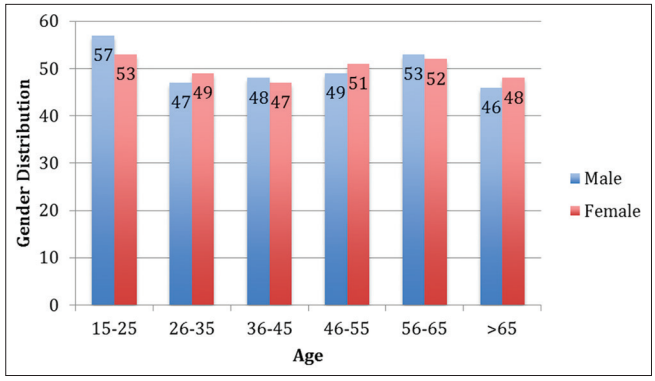
P<0.005

males and 64.5% of females were completely edentulous (Table 4).

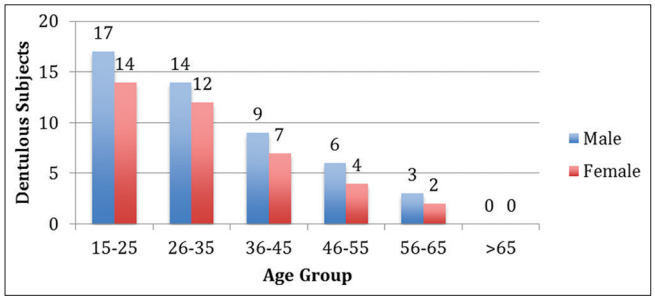
There was no statistically significant relationship between different genders of the patient and edentulousness. However, with the increase in age, there was greater trend toward partial edentulousness followed by complete edentulousness of the patients in the groups of above 45 years of age (Graphs 1-4).

DISCUSSION

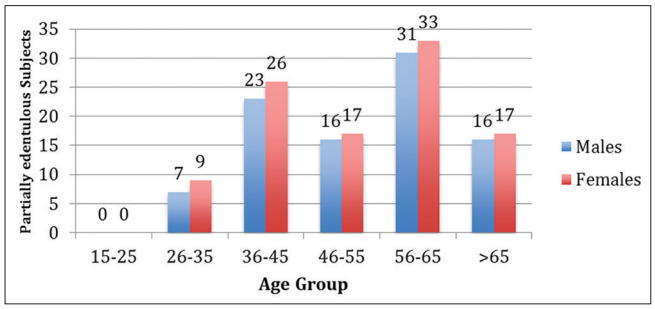
The loss of the teeth instills a major public health problem in many of the countries.[15] Edentulism has a significant impact on health and also affects the overall quality of life.[16] Numerous studies on self-perception have shown that tooth loss is significantly associated with esthetical, functional, psychological, and social impacts on individuals.[17-20]



Graph 1: Age and gender distribution



Graph 2: Distribution of dentulous subjects



Graph 3: Distribution of partially edentulous subjects

Periodontal disease and dental caries proved to be the main determinants for the high occurrence of tooth loss and for the high percentage of edentulism.[21,22] The failure to visit the dentist regularly was also found to be a major reason.[23] Several studies also concluded that age was strongly associated with edentulism.[12,22]

The combined effects of dental caries and periodontal diseases as well as the treatment decisions associated with dental caries and periodontal disease were found to increase with the age.[10-12]

The results of our study showed that there is no significant relationship between gender distribution and edentulism which is not in agreement with the studies done by Suominen-Taipale *et al.*;[21] however; in 1997 the gender differences were not found to be statistically significant in the future studies which is also in agreement with the findings of our study. The findings of our study related to age predisposition affecting partial and complete edentulousness is in agreement with the studies done by Sonkesariya *et al.*[24]

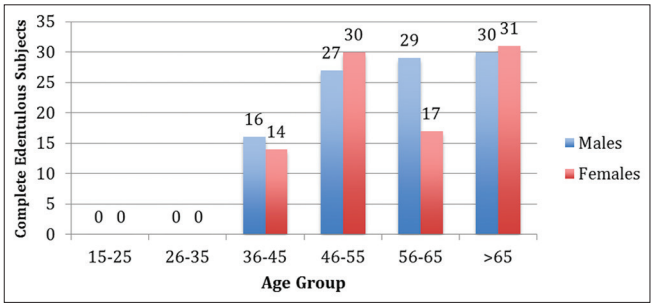
CONCLUSION

From the findings of the present study, it can be concluded that the prevalence of edentulousness increases with age which results in various long-term effects of tooth removal on patient's facial structure and general well-being, thereby increasing the need for prosthodontics rehabilitation. More awareness and proper dental education regarding proper

Table 4: Distribution of complete edentulous subjects

Age group (years)	Males (%)	Females (%)	Total
15-25	0 (0)	0 (0)	0
26-35	0 (0)	0 (0)	0
36-45	16 (33.3)	14 (29.8)	30
46-55	27 (55.1)	30 (58.8)	57
56-65	29 (54.7)	17 (32.6)	46
>65	30 (65.2)	31 (64.5)	61
Total	102 (52.6)	92 (47.4)	194

P<0.005



Graph 4: Distribution of complete edentulous subjects

dental hygiene and timely replacement of the missing teeth need to be taken care of.

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