Partial edentulosity prevalence in Kashmiri population

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Abstract
The aim of this study was to estimate the prevalence of tooth loss in Kashmiri population. Pattern of tooth loss was studied using Kennedy’s classification which is the most widely accepted and universally followed classification of the partial edentulous state. This study was conducted in the department of prosthodontics, Government Dental College and Hospital Srinagar. Convenience sampling technique was utilized for data collection, and 400 patients were selected. The study sample were divided into two groups, comprised 200 men and 200 women. The selected patients were grouped according to their age. The results showed highest class IV partial edentulosity in age group I and lowest in group III. Class I and class II partial edentulosity is found to be highest in age group II and lowest in age group I. Class III partial edentulosity is highest in age group III and similar in group I and group II.

Keywords: Kashmiri population, edentulosity, fluorosis

Introduction
The presence (or) absence of teeth is a good predicator of oral health of an individual. The reasons for tooth loss may be due to dental caries, periodontal disease, traumatic accidents, impaction, orthodontics, supernumerary, preparation for radiotherapy, or even due to congenital and developmental disorders. The dental caries and periodontal disease are two most common causes of tooth loss in Asian population. Secondary reasons for tooth loss are restricted access to dental services, health systems, and lack of oral health care. Tooth loss affects the overall health and quality of life of an individual, causing reduced efficiency and function of the masticatory system and the appearance of the individual. By reduced chewing ability in individuals with tooth loss, diet and nutritional intake could probably be reduced. An edentulous space resulting from loss of tooth causes a gap formation in the dental arch. 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. Bruce observed that the major reason for tooth loss across all the ages were due to dental caries (83%) followed by periodontal disease (17%).

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Materials and methods
This study was conducted in the department of prosthodontics, Government Dental College and Hospital Srinagar. Convenience sampling technique was utilized for data collection, and 400 patients were selected.

Inclusion criteria
1. Age: 20-60 years,
2. Both genders,
3. Partially edentate.

Exclusion criteria
1. Patients with only missing third molars
2. Complete dentate arches,
3. Complete edentate arches,
4. Patients younger than 20 years.

The study sample were divided into two groups, comprised of 200 men and 200 women. The selected patients were grouped according to their age. The subjects are divided into three groups depending on their age:
- Group I – 18 to 30 years,
- Group II – 31 to 50 years, and
- Group III – 51 to 80 years.

The subjects were screened for missing teeth, tooth loss pattern, abutment evaluation, and treatment based on clinical examination and affordability was recorded.

Results
Data were analyzed by using IBM SPSS 19.0 version, the Pearson Chi-square analysis test was conducted and P < 0.05 was considered to be statistically significant.

The results showed highest class IV partial edentulousness in age group I and lowest in group III. Class I and class II partial edentulousness is found to be highest in age group II and lowest in age group I. Class III partial edentulousness is highest in age group III and similar in group I and group II.

Table 1: The age-wise distribution of various classes Kennedy’s classifications

<table>
<thead>
<tr>
<th>Age</th>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
<th>Class IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-30</td>
<td>10 (11.1%)</td>
<td>15 (16.6%)</td>
<td>25 (27.7%)</td>
<td>40 (44.4%)</td>
<td>90</td>
</tr>
<tr>
<td>30-50</td>
<td>77 (42.7%)</td>
<td>33 (18.3%)</td>
<td>25 (13.8%)</td>
<td>45 (25%)</td>
<td>180</td>
</tr>
<tr>
<td>50-70</td>
<td>47 (36.1%)</td>
<td>24 (18.4%)</td>
<td>29 (22.3%)</td>
<td>30 (23.07%)</td>
<td>130</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>72</td>
<td>79</td>
<td>115</td>
<td>400</td>
</tr>
</tbody>
</table>

Table 2: Grouping of selected subjects

<table>
<thead>
<tr>
<th>Age group</th>
<th>Age(years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>18-30</td>
</tr>
<tr>
<td>Group II</td>
<td>30-50</td>
</tr>
<tr>
<td>Group III</td>
<td>50-70</td>
</tr>
</tbody>
</table>

Discussion
It is increasingly recognized that the impact of the disease on quality of life should be taken into account when assessing health status. It is likely that tooth loss, in most cases being a consequence of oral diseases, which affects the oral health related quality of life.

Partially edentulous state was again more prevalent in group II subjects compared with groups I and III. This shows that tooth loss increases with age. This is in accordance with studies done by Madlēna et al. [4] who reported that tooth loss is directly proportional to age. This could be due to systemic disease, poor oral hygiene, lack of education and awareness, and due to low socioeconomic status.

In all the three groups, Kennedy’s class III partially edentulous state was the most prevalent type of tooth loss irrespective of the arch. The most common missing tooth is the mandibular first molar. The reason for this is due to dental caries.

Many studies have conclusively reported that the mandibular molars were the most severely affected teeth in the entire dentition due to dental caries since it is the first tooth to erupt. This could be the possible reason why mandibular molars are the most commonly missing tooth.

Conclusion
The loss of teeth was directly proportional to age. The main reason for tooth loss was caries and the most common tooth lost was mandibular first molar. By bringing about awareness of tooth loss, its sequelae, and available treatment options in a rural population, the dental needs of the community could be met leading to an overall improvement in their quality of life.

References