INCIDENCE OF VARIOUS KENNEDY’S CLASSES IN PARTIALLY EDENTULOUS PATIENTS VISITING DENTAL OPD HYDERABAD/JAMSHORO

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ABSTRACT

The purpose of this study was to evaluate the incidence of various Kennedy’s classes in partially edentulous patients visiting dental OPD Hyderabad/Jamshoro.

A Descriptive study was conducted at Department of Prosthodontics, Liaquat University of medical and health sciences Jamshoro/Hyderabad, Sindh from Jan 2013 to June 2013. Three hundred patients who were fulfilling the inclusion criteria were included in the study. Detailed Clinical examination of the patients were done and recorded in proforma.

Out of 300 patients included in this study 173 were male (57.66%) and 127 patients were female (42.33%); with male to female ratio of 1.3:1. There was wide variation of age ranging from a minimum of 15 year to 75 years. The mean age was 47 ± 7.8 years. Clinical examination of patients revealed mostly teeth missing in mandibular arch 180 (60%) patients, while in maxillary arch 120 (40%) patients. The most common site of missing teeth in our study was left side in 128(42.66%) cases, followed by right side in 144(38%) cases and anterior site in 58(19.33%) cases. Our study revealed class-I in 97(32.33%) cases, class-II in 47(15.66%) cases, class-III in 99(33%) cases and class-IV in 57(19%).

In conclusion, the partially edentulous condition exists common incidence in the in the mandibular as compared with maxillary arch. Kennedy’s Class I & III remains the most common (33% & 32.33%) classification.

Key Words: Incidence, kennedy’s classes, partially edentulous.

INTRODUCTION

Tooth loss is the absence of teeth from the jaws (maxilla or mandible), and condition resulting, this is called edentulousness. There are number of causes, responsible for tooth loss, nevertheless, dental caries and periodontal problem proved to be the most common causes of tooth loss. It has proved that mandibular arch tooth loss is more common prevalent than maxillary arch and first molar was found to be the most commonly missing tooth due to its early eruption in the jaw. Similarly, females have higher tooth loss tendency than males.

Partially Edentulous patients exhibit a wide range of physical variations and health conditions. Therefore, many investigators have attempted to classify the partially edentulous arches. However, according to Miller, the most popular classification is that proposed by Kennedy classification.

Most of the studies have been done in different countries on partial edentulousness, so aim of this study is to evaluate different schemes of edentulous state based on Kennedy’s classes of partial edentulousness, to assess the gender difference and socio economic parameters in partial edentulousness and their poor replacement.

METHODOLOGY

This study consisted of 300 patients admitted through the Out Patient Department of Prosthodon-
Incidence of various Kennedy's classes

In our study, gender ratio showed predominance of males. Out of 300 patients 173 were male (57.66%) and 127 patients were female (42.33%); with male to female ratio of 1.3:1 (Table 1). There was wide variation of age ranging from a minimum of 15 years to 75 years. The mean age was 47±7.8 years (Table 2). Clinical examination of patients revealed mostly teeth missing in mandibular arch 180 (60%) patients, while in maxillary arch 120(40%) patients.

The most common site of missing teeth in our study was left side in 128(42.66%) cases, followed by right side in 144(38%) cases and anterior site in 58(19.33%) cases (Table 3). According to this classification this study revealed class-I in 97(32.33%) cases, class-II in 47(15.66%) cases, class-III in 99(33%) cases and class-IV in 57(19%). (Fig 1)

**DISCUSSION**

The prevalence of various patterns of partial edentulism differs from country to country. Such patterns can be explained by differences in socioeconomic status, education, attitudes toward dental health, and the importance of dental health compared with other concerns. No data on frequency of different patterns of partial edentulism in various dental arch of our local population is available. Therefore, data was collected from the various patients who visited the department of Prosthodontics for the replacement of lost teeth to make prosthetic dentists aware with the most common patterns of partial edentulism.

In our study gender ratio showed predominance of males. Out of 300 patients 173 were male (57.66%) and 127 patients were female (42.33%); with male to female ratio of 1:3.1. However, in the study of Zaigham AM reported 43% (157) male and 57% (210) females. A reason for more males presenting with partial edentulism in the present study is the local tradition and

**DATA ANALYSIS PROCEDURE**

Data was analyzed through SPSS 14.0. The quantitative variables, age of the patients, presented as mean and standard deviation (SD). The qualitative variable like gender was presented as frequency and percentage. Frequency and percentage of Kennedy’s classes was calculated P-value ≤ 0.05 were considered for significance.

**RESULTS**

Out of 300 patients included in this study 173 were male (57.66%) and 127 patients were female (42.33%); with male to female ratio of 1.3:1 (Table 1). There was wide variation of age ranging from a minimum of 15 years to 75 years. The mean age was 47±7.8 years (Table 2). Clinical examination of patients revealed mostly teeth missing in mandibular arch 180 (60%) patients, while in maxillary arch 120(40%) patients.

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**TABLE 1: GENDER DISTRIBUTION**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>%age</td>
<td>No. of patients</td>
</tr>
<tr>
<td>173</td>
<td>57.66%</td>
<td>127</td>
</tr>
</tbody>
</table>

Male, female ratio = 1:3.1

**TABLE 2: AGE DISTRIBUTION**

<table>
<thead>
<tr>
<th>Age of patients years</th>
<th>No. of patients (n=300)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-25 years</td>
<td>2</td>
<td>0.66%</td>
</tr>
<tr>
<td>26-35 years</td>
<td>67</td>
<td>22.33%</td>
</tr>
<tr>
<td>36-45 years</td>
<td>72</td>
<td>24%</td>
</tr>
<tr>
<td>46-55 years</td>
<td>133</td>
<td>43.33%</td>
</tr>
<tr>
<td>56-65 years</td>
<td>22</td>
<td>7.33%</td>
</tr>
<tr>
<td>66-75 years</td>
<td>4</td>
<td>1.33%</td>
</tr>
</tbody>
</table>

Means age 47±7.8 years

**TABLE 3: SITES OF MISSING TEETH**

<table>
<thead>
<tr>
<th>Site</th>
<th>No. of patients (n=300)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right side</td>
<td>114</td>
<td>38%</td>
</tr>
<tr>
<td>Left side</td>
<td>128</td>
<td>42.66%</td>
</tr>
<tr>
<td>Anterior</td>
<td>58</td>
<td>19.33%</td>
</tr>
</tbody>
</table>

Fig 1: Kennedy’s classification
cultural values. In less developed countries, females seek treatment less frequently; like dental restorations, especially if these are to be provided by male dentists. The reason for this is the lack of awareness in subjects having poor socioeconomic status.\textsuperscript{13}

A recent national survey of a United States population estimated that the mean tooth loss in subjects aged 30-34 years and 60-64 years was 2.6% and 13.2% teeth, respectively. A national survey of a United Kingdom population found 6.6% and 9.5% missing teeth among 35-44 and 45-54 years old, respectively. Comparisons with other studies show that tooth loss is higher than that reported for the populations of Brazil, China and Kenya.\textsuperscript{14} In our study age ranged from 15 year to 75 years. The mean age was 47±7.8 years. The peak age groups in our study were 4th and 5th decade of life.

The clinical parameters were further supported by clinical examination which revealed mostly teeth missing in mandibular arch 180 (60%) patients, while in maxillary arch 120 (40%) patients. Clinical findings described by Naveed H\textsuperscript{15} in their study show higher frequency of mandibular arch partial edentulism being 67.4%, as compared to 63.2% in maxillary arch.

In a study carried out on a Saudi population, Sadig and Idowu concluded that out of the 422 partially dentate arch examined, Kennedy’s Class III was the most commonly encountered pattern of partial edentulism in both upper and lower arches and Kennedy’s Class IV was the least common pattern encountered.\textsuperscript{16} In our study according to Kennedy’s classification most commonly occurred class-III in 99(33%) followed by class-I in 97(32.33%) cases, class-II in 47(15.66%) cases and class-IV in 57(19%). Another study of Charyeva OG\textsuperscript{17} described by Naveed H\textsuperscript{16} in their study show higher frequency of mandibular arch partial edentulism being 67.4%, as compared to 63.2% in maxillary arch.

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The limitation of this study is that the patient group (sample) size was too small, majority of patients belong to middle or low socioeconomic status and no consideration was given to educational status. Randomized clinical trials with equally large patient groups would better help our understanding of the prevalence of various patterns of partial edentulism and for drawing firm conclusions.

CONCLUSION

From the results of this study, the following conclusions were drawn:

- Left side is the most common site of missing teeth (128 (42.66%) cases)
- Kennedy’s Class I & III is the most common (33% and 32.33%) classification.

REFERENCES