

PATTERN OF PARTIAL EDENTULISM AMONG FEMALE PATIENTS SEEN AT DENTAL DEPARTMENT OF SECONDARY CARE HOSPITAL, LAHORE

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ABSTRACT

Objective of this study was to determine of the frequency of occurrence of various patterns of partial edentulous in female patients reporting to dental department of secondary care hospital. Study was conducted on patients reporting to the dental Out Patient Department of Punjab Social Security Hospital, Manga Mandi, Lahore. Duration of the study was from January 2014 to January 2015. Kennedy's classification after applying Applegate's rules was used to record partial edentulism in females. It was implemented by visual examination. Most dominant pattern noted was class III in maxilla with class IV being the least in number. With an increase in age, there is an increase in the Class I and Class II dental arch tendency and a decrease in Class III and class IV both in maxilla and mandible.

Key Words: Partial edentulous, Kennedy's class, Applegate Rule.

INTRODUCTION

Access to medical care results in better general health, access to dental care results in both improved oral and overall health. Teeth are the key components of the stomatognathic system. Loss of teeth effects speaking abilities, chewing, biting evoking difficulty in mastication also has effects on aesthetics.

Good oral health of population is reflection of the effective health care system of the state or country that is taking preventive dentistry as serious modality also might indicate the failure of the population to consider preventive dentistry as some important treatment option in practice.¹ Regardless of whatever the preventive measures are offered by the government, in this era especially in teaching institutions preventive dentistry has flourished and prevention of natural teeth has been made possible. Changing trends in dentistry have made retention of natural teeth more feasible and a visible decline in the number of complete dentures with an increase in the number of removable partial denture (RPD).²

Women being mother plays integral part in any society. In most of the third world countries females

due to many social reasons do not have access to proper health facilities. Hindrances in availing preventive dentistry or conservative dentistry in female patients were no dental facility or transportation facility for multiple visits especially in case of endodontic treatment, socio economic reasons more dependence on home remedies, herbal or spiritual therapies as 1st line of treatment.

Either male or female patient classification system is used to evaluate or classify the edentulism. It is always logical to classify partially edentulous arches that share common attributes, characteristics, qualities or traits. A classification also allows a longitudinal comparison of various classes of Removable Partial Dentures (RPD) to determine whether the teaching of RPD design is consistent with the relative frequencies of RPD use several methods of classification of partially edentulous arches have been proposed and are in use e.g. by Beckett, Godfrey, Swenson, Friedman, Wilson, Skinner, Applegate, Avant, Miller and others.³ At present Kennedy's classification is probably the most widely accepted one.

The primary purpose for the classification of partially edentulous arches is to identify potential combinations of teeth to edentulous ridges in order to facilitate communication among dental colleagues, students, and technicians.^{4,5}

A classification also allows a longitudinal comparison of various classes of RPDs to determine whether the teaching of RPD design is consistent with the relative frequencies of RPD use.⁶

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The objective of the present study was to find out the pattern of tooth loss in females in a certain population seen at Dental Department of Secondary Care Hospital, Lahore.

METHODOLOGY

This study was carried out at the Dental Department of Punjab Social Security Health Management Company Hospital, Manga Mandi, Lahore, Pakistan which is affiliated with Azhra Naheed Medical College. 750 patients who fulfilled inclusion criteria were selected for present study. The inclusion criteria were only female patients, above the age of 15 years, having partially edentulous areas in either or both jaws. Completely edentulous patients, those with only missing maxillary and mandibular third molars and any mental or physical disability were excluded from the study. The selected patients were divided into five groups, according to age.

Group 1: 15-20 years

Group 2: 21-30 years

Group 3: 31-40 years

Group 4: 41-50 years

Group 5: 51-60 years and above.

Thorough clinical examination of both the dental arches of each patient was carried out after verbal consent. Patterns of partial edentulism were recorded after visual examination. The survey was based on visual examination by seating the patient on the dental chair, using the mouth mirror for determining the incidences of Kennedy's classification, the types and area (location) of missing teeth. Kennedy's classification system with Applegate's modification rules was used to determine pattern of partially edentulous arches. Modification areas were not included in analysis to avoid complexity and data collected was registered onto a Performa. Descriptive statistics was carried out using SPSS version 10.

RESULTS

Total Number of patients reported to the department in the time period from Jan 2014 to Jan 2015 were 5031 Out of the patients examined, age distribution, number of patients and percentages are shown in Table 1. Frequency of partial edentulism according to Kennedy's classification is shown in Table 2. Table 2 shows class III has more percentage in Maxilla as compared to other classes of Kennedy in maxilla. Above Table shows more percentage of class III in mandible as compared to all other Kennedy's.

TABLE 1

Group	Age distribution	No. of patients	Percentage
Group 1	15-20	18	2.4%
Group 2	21-30	428	57.06%
Group 3	31-40	107	14.26%
Group 4	41-50	82	10.93%
Group 5	51-60 years	115	15.33%

TABLE 2

Kennedys Class	Class I	Class II	Class III	Class IV
Total number	56	27	297	25
Percentage	7.46%	3.6%	39.6%	14%

TABLE 3: KENNEDY'S CLASSES IN MANDIBLE

Kennedys Class	Class I	Class II	Class III	Class IV
Total number	63	40	237	5
Percentage	8.4%	5.33 %	31.6%	0.66%

TABLE 4: PREVALENCE OF KENNEDY'S CLASSES

Arch	Class I	Class II	Class III	Class IV	Total
Maxilla	56	27	297	25	405
Mandible	63	40	237	5	345
Total	119	67	534	30	750
Percentage	15.86%	8.93%	71.2%	4%	

DISCUSSION

To the best of our knowledge this is the first study to report the prevalence of Kennedy's classes in partially edentulous female patients in any dental department of a secondary care hospital. Research, data analysis and clinical audits are not followed regularly in Pakistan in dental departments of General Hospitals as compared to the dental teaching institutions.

The primary purpose in using a classification for RPDs is to simplify the description of potential combinations of teeth to ridges. In the present study, the Kennedy classification was preferred to fulfill this purpose. One of the principal advantages of the Kennedy classification is that it permits the immediate visualization of the partially edentulous arch, and enables a logical approach to the problems of design. In addition, it makes possible the application of sound principles of partial denture design, and is therefore a logical method of classification.

Regardless of the gender most studies have reported unsalvageable dental caries and periodontal diseases as major cause of tooth loss these two diseases were noted as major causes of tooth loss in early childhood and adolescence in the present study and this result agrees with previous studies.^{7,8,9}

Pattern of edentulism that was found dominant in this study was Kennedy's Class III this was consistent with other studies which had considered both the genders.¹⁰ Kennedy's class III was the dominant pattern in both dental arches followed by class I, class II and class IV being the least among the other classes and this finding was consistent with other studies^{11,12} but disagree with studies of other authors these differences may be due to dietary habit, poor oral hygiene measures or higher sugar consumption in these societies. This study was specifically for female patients In this study Kennedy's class III was common in younger female age group but there was significant decrease in class III and significant increase in class I, II with increase in age as more teeth are extracted due to multiple causes and, this finding agrees with the result of other studies. But other studies were for both the genders.

A comparison between studies where age and gender distribution of the RPDs was indicated, reported that more Class I followed by Class II RPDs were found in a study with a higher proportion of older adults (>50 years) and females. On the contrary, in a study where there were higher proportions of younger adults (<50 years), and males, more Class III followed by Class II RPDs were found.¹³

CONCLUSION

Kennedy's class III is the most common RPD in both dental arches. The study specified to female to highlight the loss of dentition as major problem in oral health we could not identify any prominent gender effect.

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