

PATTERN OF PARTIAL EDENTULISM SEEN AMONG PATIENTS AT LAHORE MEDICAL & DENTAL COLLEGE

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ABSTRACT

The purpose of this study was to evaluate the pattern of partially edentulous patients seen at Prosthodontics Department of a tertiary care center.

A Cross sectional (Descriptive study) was conducted at Department of Prosthodontics, from July 2015 to Dec 2015. Two hundred patients who were fulfilling the inclusion criteria were included in the study. Detailed Clinical examination of the patients were done and recorded in the proformas.

Out of 200 patients included in this study 100 were males (50%) and 100 patients were female (50%); with male to female ratio of 1:1. There was wide variation of age ranging from a minimum of 18 years to 60 years. The mean age was 45±1.8 years. In conclusion, Kennedy's Class III remains the most common in maxilla (29%) and mandible(40%).

Key Words: Patterns, partial edentulism, Kennedys Classification.

INTRODUCTION

Irrespective of the reason for their loss, the replacement of missing teeth by patient is sought to restore and maintain a perfect balance of form and function.¹ Tooth loss or absence when not restored has a direct impact on occlusal forces, chewing efficiency, swallowing, food selection, nutritional status and physical ability all leading to adverse impact on quality of life of the subject.²

Literature shows a decreasing trend for total tooth loss and an increase in number of partial denture wearers which not only reflects improving clinical trends and successful preventive measures but also indicates an increased awareness among population regarding significance of maintaining oral hygiene and retention of natural dentition.³ Some of the partial edentulous states are more challenging to treat successfully. There is also a significant variation in tooth loss distribution.⁴ This distribution of pattern of partial edentulism has been

investigated in many selected populations of different countries with the Kennedy's classification system as the most commonly applied in all studies.

A study in Mumbai reported that out of 678 subjects 44.5% were partially edentulous.⁵ Different studies in Pakistan have reported that the most common Kennedy class seen was class III (47%) in maxilla and (45%) in mandible and that was more common in young individuals as compared to the figure of 11.9% in the elderly.^{6,7} Another study was undertaken at Baqai Dental Hospital, Karachi in which 500 subjects were evaluated for establishing pattern of partial edentulism. This study concluded that partial edentulism was more common in mandible (30%) than in maxilla (22.4%) with Kennedy class III (40%) most common. Second highest was class I (8.7%) as compared with class IV (6%). Class II (5.3%) was the least common.⁸ Tooth loss has been associated with many socio-demographic, behavioral and medical factors.^{9,10}

The aim of this study was to document the frequency of common patterns of partial edentulism. This study will provide a fresh insight into the relevant data in the topic and will provide an update that would help practitioner of the partially dentate patient in addressing the relative management needs of patient presenting with these conditions.

METHODOLOGY

This descriptive study was carried out at the Department of Prosthodontics of a tertiary care center at Lahore. Convenience sampling technique was utilized

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for sample collection of 200 patients. The inclusion criteria consisted of patients from both genders, above the age of 18 years. The selected patients were divided into five groups, according to age. Group A consisted of patients between 18-30 years of age; Group B had patients of age 31-40 years. Patients in Group C were between 41-50 years, while those in Group D were between the ages of 51-60 years.

The inclusion criteria consisted of patients seeking consultation for treatment of their partially edentulous state age between 18-60 years and patients having remaining permanent teeth with some missing permanent teeth in one or both jaws. The exclusion criteria consisted of subjects with the third molar as the only missing tooth, tooth loss occurred congenitally or because of trauma.

Approval of hospital ethical committee was taken. Subjects referred from OPD, fulfilling the inclusion criteria were invited to participate in the study. The purpose, risks and benefits of the study were explained to patients and informed written consent was taken regarding their willingness and participation in the study. They were assured of maintaining confidentiality of their personal and other data collected from them. Complete history was taken. Clinical examination that is inspection with naked eye and radiographic examination (when needed) of the teeth that have lesions leading to their potential for extraction was performed to document as the acquired pattern of tooth loss and distribution of different Kennedy's classification. Data regarding the mentioned pattern of partial edentulism, Kennedy's classification in each subject was recorded in the structured data collection sheet. Data were analyzed by SPSS version 23. Mean and standard deviation was calculated for quantitative variables like age. Frequencies and percentages are shown in Table 1-3.

RESULTS

Details of the results are presented in Table 1-3.

TABLE 1: AGE DISTRIBUTION (n=200)

Age	Frequency	Percentage
18-30 years	10	5%
31-40 years	60	30%
41-50 years	70	35%
51-60 years	60	30%
Total	200	100%

Mean age was 45 years with SD ±1.26

TABLE 2: GENDER DISTRIBUTION (n=215)

Gender	Frequency	Percentage
Male	100	50%
Female	100	50%
Total	200	100%

TABLE 3: COMMON PATTERNS (N=200)

Common Patterns	Frequency	Percentage	
Maxilla	Class I	10	5%
	Class II	5	2.5%
	Class III	57	29%
	Class IV	10	5%
Mandible	Class I	10	5%
	Class II	24	12%
	Class III	79	40%
	Class IV	5	2.5%
Total	200	100%	

DISCUSSION

In this study mean age of patients was 45 years with SD 1.26. Fifty percent patients were males and fifty percent patients were females. In maxilla (5%) patients had Kennedy's Class I, (2.5%) patients had Kennedy's Class II, (29%) patients had Kennedy's Class III, (5%) patients had Kennedy's Class IV where as in mandible (5%) patients had Kennedy's Class I, (12%) patients had Kennedy's Class II, (40%) patients had Kennedy's Class III, (6%) patients had Kennedy's Class IV.

Different studies in Pakistan have reported that the most common Kennedy class seen was class III (47%) in maxilla and (45%) in mandible and that was more common in young individuals as compared to the figure of 11.9% in the elderly which is very similar to our study.^{6,7}

Another study was undertaken at Baqai Dental Hospital, Karachi in which 500 subjects were evaluated for establishing pattern of partial edentulism. This study concluded that partial edentulism was more common in mandible (30%) than in maxilla (22.4%) with Kennedy class III (40%) most common. Second commonest was class I (8.7%) as compared with class IV (6%). Class II (5.3%) was the least common⁸.

The results of this study are in accordance with the results of Hassan Naveed et al i.e. occurrence of partial edentulism in mandible was higher than in maxilla; an overall greater turnover of males than females; and the frequency of Kennedy's Class III as the most common classification which is also similar to the study of Ehikhamenor et al⁸ and Asif Ullah Khan et al⁹ and in contrast to the research of Berta L¹⁰ which reports Class I to be the commonest.

CONCLUSION

Kennedy's class III was found the most common pattern in both maxilla and mandible.

REFERENCES

- 1 Chandki R, Kala M. Natural tooth versus implant: a key to treatment planning. *J Oral implantol* 2012; 38:39-42.
- 2 Ghani F, Khan M. Missing teeth, edentulous areas and socio-demographic status adversely affect the quality of life: *J Pak Dent Assoc*;2010; 19:5-14.
- 3 Khare A, Makkar S, Roshna T. Full mouth rehabilitation with fixed and removable prosthesis using Extracoronary Attachments: A clinical report. *People's J Sci Res* 2011; 4:47-52.
- 4 Judy J.AL.H. The incidence of frequency of a various removable partial edentulism cases: *Malaya Dent J* 2009; 6; 172-75.
- 5 Nadgere J, Gala-Doshi A, Kishore S. An evaluation of prosthetic status and prosthetic need amongst people living in and around Panvel, Navi Mumbai- A Survey. *Int J Prostho Dent* 2010;1:6-9
- 6 Zaigham AM , Muneer MU . Pattern of partial edentulism and its association with age and gender. *Pak Oral Dent J* 2010;30: 260-70.
- 7 Naveed H, Aziz M S, Hassan A, Khan W U, Azad AA. Pattern of partial edentulism among armed forces personnel reporting at Armed Forces Institute of Dentistry Pakistan. *Pak Oral Dent J* 2011;31:217-21.
- 8 Muneeb A, Mohsin B, Jamal B. Causes and pattern of partial edentulism/exodontias and its association with age and gender: semi-rural population ,Baqai Dental College ,Karachi Pakistan. *Int Dent Journal of Student's Res* 2012; 1:13-18.
- 9 Ehikamenor EE, Oboro O H, Onuora I O, Umanah AU, Chukwumah NM , Aivboraye IA. Type of removable prosthesis requested by patients who were presented to the University of Benin Teaching Hospital Dental Clinic. *J Dent Oral Hygiene* 2010;2:15-18.
- 10 Khan A, Ghani F. Factors influencing the type of prosthetic restoration for partially dentate adults. *J Postgrad Med Int.* 2010; 24: 3-21.
- 11 Berta L, Silva DD. Dental Caries in early population in Brazil; *J Appl Oral Sci.*2009 ; 17(1):8-12.

CONTRIBUTIONS BY AUTHORS

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| 2 Muhammad Waqar Hussain: | Discussion, editing and proof reading. |
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