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ANALYSIS OF TOOTH LOSS PATTERN AND MANAGEMENT IN PARTIALLY DENTATE PATIENTS

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Abstract:
Aim: *The aim of this study was to discover the pattern of tooth loss and the type of treatment offered to partially dentate patients.*
Place and Duration: *In the Dental department of Nishtar Hospital Multan for one year duration from January 2019 to January 2020.*
Methods: *This cross-sectional study was performed on partially dentate patients. Patients were interviewed and intraoral examinations were carried out in accordance with a specially designed form to gather information on age, sex, type of saddle, type of missing tooth and treatment given. The interviews and studies were conducted with seven hundred and eighty patients. Of the 786 patients, 378 are men and 408 are women aged 18-70.*
Results: *Of 786; 466 patients had Class III Kennedy saddle. One hundred fifty-eight patients are of Kennedy II class. There was room for chairs in the classroom. One hundred patients took the IV-class Kennedy chair. 62 patients were found to have Kennedy's class I saddle area.*
Conclusion: *Of the 786 patients, 74 received the fixed partial dentate prosthesis (FPDP) and 712 was the removable partial prosthesis (RPDP).*
Key words: *Removable partial dental prostheses (RPDP), Saddle area, Kennedy's classification, fixed partial dental prostheses (FPDP, tooth loss.*

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INTRODUCTION:

Teeth loss has been a problem for people since ancient times. Common consequences of missing teeth are cosmetic problems, chewing failure, speech problems, and TMJ dysfunction syndrome, appearance of aging and low self-esteem.

The ineffectiveness of chewing forces the patient to switch from a balanced diet to a high carbohydrate diet. This causes an increase in dental diseases (caries and periodontitis) and nutritional deficiencies. After tooth loss, adjacent teeth are bent and pulled, which can promote plaque formation. This further improves periodontal problems. Tooth loss is a general indicator of the severity of oral disease that a person or population is experiencing. All these problems can have a significant impact on the quality of life. Of course, dentists often recommend treating removable or removable dentures to prevent or improve some of these reductions in the quality of life associated with oral health. The percentage of seniors is growing faster than in other age groups around the world. By 2050, two billion people will be 60 years old or older. 80% of them will be residents of developing countries. Worldwide, poor oral health in older people is seen as a high level of tooth loss that affects overall health, especially in terms of weight loss, eating problems and adverse social effects related to appearance and communication. Tooth loss is associated with an increased risk of vascular diseases such as coronary artery disease, cerebrovascular disease and peripheral arterial disease. The tooth loss model was evaluated in selected populations in different countries. In developing countries, oral disease data is primarily collected to help plan the healthcare system. Bailyn, Cummer, Skinner and others classified partially dentate arches.

The most popular classification currently is Kennedy's classification. Edward Kennedy classified different classes according to decreasing frequency. The most common is the binary free area of the saddle, shown as Class I. Location of Class IV Kennedy is the least common area of the saddle. The goal of our research is to register the pattern of tooth loss and treatment of partially dentate patients.

METHODS:

This study is cross-sectional in which 786 partially dentate patients reporting to Dental Department of Nishtar Hospital Multan for one year duration from January 2019 to January 2020. Patients were examined and information on patient age, gender, saddle type, missing tooth type, and available treatment was collected. Before the survey, the examiners who participated in the study were informed about the history and method of examining patients. The study was statistically analyzed using the chi-square test.

RESULTS:

Of the 786 patients, 378 are men and 408 are women aged 18-70 (Table 1). The average age is 45 years. Mandibular molars were the most frequently missing teeth.

TABLE 1: AGE -SEX –KENNEDY CROSS TABULATION COUNT

AGE	SEX	KENNEDY'S CLASSIFICATION				Total
		Kennedy-I	Kennedy-II	Kennedy-III	Kennedy-IV	
	Male	0	00 20 36			56
18-30 yrs.	Female	0	00 15 16			31
	Total	**0**	**00 35 52**			**87**
	Male	1	05 47 15			68
30 -40 yrs.	Female	5	04 58 15			82
	Total	**6**	**09 105 30**			**150**
	Male	3	07 59 17			86
40 -50 yrs.	Female	0	20 99 00			119
	Total	**3**	**27 158 17**			**205**
	Male	4	38 59 00			101
50 -60 yrs.	Female	3	44 96 00			143
	Total	**7**	**82 155 00**			**244**
60 years	Male	22	34 11 00			67
and above	Female	24	06 02 01			33
	Total	**46**	**40 13 01**			**100**

Absence of mandibular molar in 610 of 786 patients. The mandible canine was the least missing tooth in 23 patients (Table 2). The most common saddle area is Kennedy III class (466 patients). The number of men and women was 196 and 270, respectively. The second most common saddle area is Kennedy Class II (158 patients), with the number of boys and girls 84 and 74, respectively. Kennedy Class IV was the third common saddle area, including 100 men and 32 women.

TABLE 2: NUMBER OF PATIENTS WITH MISSING TEETH IN UPPER AND LOWER JAWS.

Teeth	Number of patients with missing teeth in maxilla	Number of patients with missing teeth in mandible
Molars	344	610
Pre Molars	490	401
Canines	103	23
Incisors	151	98

The least common area of the saddle was Kennedy Class I (62 patients). The number of men and women is 30 and 32, respectively (Table 3).

TABLE 3: PATIENT DISTRIBUTION IN TERMS OF GENDER AND KENNEDY'S CLASSIFICATION.

Kennedy's Types	Male	Female	Total
Kennedy I	30	32	62
Kennedy II	84	74	158
Kennedy III	196	270	466
Kennedy IV	68	32	100
Total	378	408	786

Patients were divided into five age groups (Table 1). They were men and women of all ages. The age group 18-30 had only Kennedy Class III and Kennedy Class IV saddles. Other age groups had all kinds of Kennedy classes. While Kennedy class I and class IV predominated in patients under 60 years of age, patients older than 60 years more often presented class Kennedy I and class II (Table 1). There was a significant difference in the sex of patients 60 years and older (p-value 0.001), Table 1. In this age group, men were twice as tall as women. Most patients in the age groups under 60 years of age did not show significant sex differences, except for the age group 40-50 years. This age group (40–50 years) had a very significant difference between men and women with female dominance (p-value 0.000), (Table 1). All these results were statistically analyzed using the Chi-square test. 74 of 786 patients received FPDP and 712 received RPDP.

DISCUSSION:

The most common area of the chair is Kennedy III class (466 patients). The number of men and women was 196 and 270, respectively. The second most common area of the chair is Kennedy Class II (158 patients), with the number of boys and girls 84 and 74, respectively. Kennedy Class IV was the third common chair area, including 100 men and 32 women. The least common area of the chair was Kennedy Class I (62 patients). The number of men and women is 30 and 32, respectively (Table 3).

Patients were divided into five age groups (Table 1). They were men and women of all ages. The age group 18-30 had only Kennedy Class III and Kennedy Class IV saddles. Other age groups had all kinds of Kennedy. While Kennedy class I and class IV predominated in patients under 60 years of age, patients older than 60 years more often presented class Kennedy I and class II (Table 1). There was a significant difference in the sex of patients 60 years and older (p-value 0.001), Table 1. In this age group, men were twice as tall as women. Most patients in the age groups under 60 years of age did not show significant sex differences, except for the age group 40-50 years. This age group (40–50 years) had a very significant difference between men and women with female dominance (p-value 0.000), (Table 1). All these results were statistically analyzed using the Chi-square test. 74 of 786 patients received FPDP and 712 received RPDP. The molar loss can lead to distal expansion. Incomplete lower canine teeth were less common, which was consistent with other studies. RPDP was administered to seven hundred and twelve patients. Most of them received plain acrylic RPDP. The reason for providing RPDP to patients was low financial status and poor oral hygiene. A large number of patients arrived within three months (intermediate period) after extraction, unfavorable periodontal status and time of excretion of abutments were also important factors in providing RPDP. A small number of patients were provided with FPDP, so they are retaining teeth with good periodontal condition, proper arch positioning and meticulous oral hygiene. Patients can cover the costs of FPDP.

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