FREQUENCY AND TYPES OF PARTIALLY EDENTULOUS MAXILLARY ARCHES AMONG THE PATIENTS REPORTING AT RAKCODS CLINICS

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ABSTRACT

For the enha*nced quality of life among the individuals or patients, oral hygiene is the most momentous approach. The general health status of the patients gets affected, if the oral health status is compromised, particularly in condition of tooth loss.*

The purpose of this study was to evaluate the types and frequency of partial tooth loss (Partially Edentulous) of the maxillary arches in the patients who reported at RAKCODS clinics.

The study applied cross section approaches for gathering data and by using random approaches, total 450 patient's files were selected from the record. A proforma was used in order to collect data of the participants.

Out of 450, 110 females and 340 males' files were used for this purpose. Results revealed that the tooth loss was most prevalent in the age group of 21-30 years. A considerable number of patients had gone through partially tooth loss and no modification was observed. The maxillary loss was not much common in comparison with the mandible loss.

According to this study the occurrence of maxillary partially edentulous arches was higher among the age group of 21-31 years.

This study was clinically relevant as it adds information that Kennedy's class 3 is the most common in the patients reported at the RAKCODS clinics, and mandibular tooth loss is more common than maxillary tooth loss.

Key Words: *Tooth, Mandible, Dentate, Arches, Maxillary, Oral hygiene.*

INTRODUCTION

Tooth loss is a terminal event in the life of a tooth and is a frequent episode in individuals with uncared and neglected oral cavity.[1] It diminishes the quality of life, often substantially, and tooth loss is also related to poor general health.[2] Tooth loss is also an important measure for assessing the standard, availability and utilization of both curative and preventive dental care in a given population.[3] The impacts of tooth loss include decreased functions of speech and mastication especially in the elderly.[4,5] It may affect their nutritional choices, their oral and ultimately systemic health and thereby diminish the quality of life.[6] It also decreases self-esteem and psychological status of individuals.[7,8]

The etiology of tooth loss is complex; it includes factors such as existing diseases, hygiene habits and use of dental clinics.[9] The major causes of tooth loss are periodontal disease and dental caries, which are common in older and younger age groups respectively. Other causes of tooth loss are trauma and orthodontic treatment.[3] Phipps et al have reported markedly higher numbers of teeth have been lost due to periodontal reasons compared to dental caries in United States and Canada.[10] Dental caries was reported to be the most frequent reason for tooth extraction in Japanese[11] Chinese[12] and Sri Lankan population.[13]

The perception of oral health was positively associated with tooth loss as more people who had lost teeth perceived their oral health to be poor.[14] Furthermore, oral hygiene is considered as a 'determinant of Health

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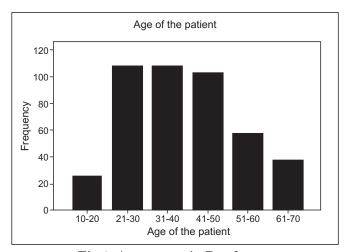Email: danish.haroon@gmail.com

Fig 1: Age groups in Bar format

TABLE 1: GENDER OF THE PATIENTS

	Fre-quency	Per-cent	Valid Percent	Comulative percent
Valid	1	2	2	2
Female	109	24.2	24.2	24.4
Male	340	75.6	75.6	100.0
Total	450	100.0	100.0	

wellbeing' in an individual's life. Oral health refers to maintaining health conditions related to the oral cavity. Through maintaining oral hygiene, one can easily avoid certain lethal infections and diseases. Life continuing systems like respiration and digestion are directly connected with the oral cavity. Unhygienic food will ultimately lead to acquiring infectious diseases of the human body. Moreover, microorganisms like viruses and bacteria can carry on their life processes in the oral cavity, which can cause severe diseases. For this reason, oral hygiene is of utmost importance for the health and wellbeing of an individual.[15] The condition of edentulousness is increasing among the adults day by day. It is a fact that various adults are suffering from the condition of being toothless, because the young generation neglects the hygienic conditions related to oral cavity. On the other hand, there are some other issues which have a direct impact on the health status of teeth; including improper knowledge, variation in the treatment options, reduced access to the dental services, inappropriate attitudes, cost of treatment, and limitations for dental services.[16,17]

Therefore the purpose of this study is to evaluate the causes and extent of partially dentate arches and to establish a relationship between the prevalence

TABLE 2: AGE GROUPS

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	10-20	26	5.8	5.9	5.9
	21-30	108	24.0	24.5	30.5
	31-40	107	23.8	24.3	54.8
	41-50	103	22.9	23.4	78.2
	51-60	58	12.9	13.2	91.4
	61-70	38	8.4	8.6	100.0
	Total	440	97.8	100.0	
Missing	System	10	2.2		
Total		450	100.0		

TABLE 3: AGE AND MODIFICATIONS

		Modification number				
		No modification	1	2	3	Total
Age of the patients	10-20	19	6	1	0	26
	21-30	67	37	4	0	108
	31-40	84	17	6	0	107
	41-50	62	34	7	0	103
	51-60	35	17	5	1	58
	61-70	21	8	7	2	38
Total		288	119	30	3	440

5: TYPE OF DENTAL ARCH

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	Maxillary	199	44.2	44.2	44.2
	Mandibular	251	55.8	55.8	100.0
	Total	450	100.0	100.0	

and types of tooth loss in different age groups of both genders reporting at RAKCODS clinics to generate a base line data.

METHODOLOGY

This cross sectional study was conducted at the RAK College of Dental Sciences, Ras Al-Khaimah. Total 450 patient's files were selected from the record randomly. The information from each file was collected by filling a performa that comprised of name, gender, age, and number of missing teeth. Prior to the survey, the examiners who participated in the study were calibrated and method of filling Performa was standardized. All of the selected data was analyzed by descriptive statistics and Chi sqare test by using SPSS version 15, software for Windows.

RESULTS

Out of 450 patient's file, 340 males and 110 females, age ranging from 10 to 70 years (Fig 1). The study has divided the selected participants into different age groups. Frequency of missing teeth was obtained between different age groups and the frequency of various Kennedy's classifications was also found. The most tooth loss was seen between age ranges of 21-30 years (108 of 450). Kennedy's class 3 was the most commonly occurring class, a total of 226 cases of 450 (50.2%), and the least occurring class was class 4, having only 21 cases (4.7%) (Fig 2, 3, 4). Most of the patients had partially dentate arches with no modifications (288 of 440) with the most cases of no modification being between ages 21 to 40 (84 of 288). The least was 3rd modification; a total of only 3 out of 440 patients had it. The mandible (55.8%) was more commonly involved as compared to the maxilla (44.2%) from the aspect of tooth loss. (Fig 5)

DISCUSSION

Edentulism refers to a medical condition, in which an individual suffers from the condition of tooth loss. Different studies have identified that younger adults are more prominent to the risk of partial edentulism as compared to the older individuals. Loss of tooth will also affect the general wellbeing of the individuals. The findings of this study have shown that most of the tooth loss has been observed in the age groups of 21-30 years.

In this study 5.8% of patients were under the age of 20 years. This figure increased to 24% by the age ranging from 21-30 years. As the age is increasing the number shows decline upto 8% in 61-70 years old patients. Naeem, S (2003) found that edentulusinm was also increased in the age group of 21-30 i.e. 10.2%. So this figure is nearest to the result of the study. In this study males have high frequency of tooth loss in comparison to female. This in contrast to Naeem, S, who found exactly the opposite to it.[18]

The findings of current research study have further shown that the mandible region was mostly affected through oral conditions as compared to maxillary region. Shalish, et al, (2013) have shown that the affected structures of mandible is extremely common among the population of because of either physical trauma or personal factors. The study has clearly indicated that the maxillary arches and related structures have enough strength to deal with any unusual oral conditions. On the contrary, direct contact of mandible arches and structures with trauma or other causative agents will certainly result in the increased prevalence rate of mandible related diseases.[19]

CONCLUSION

Loss of the tooth is considered as a common medical condition that has a close relationship with the poor quality of life (QOL). The findings of this study have mentioned that the condition of tooth loss was extremely common among the patients, aged between 21-30 years. Moreover, the study has identified that Kennedy's Class 3 was the most prevalent type of tooth loss among the selected patients. Therefore, the teenagers should use basic and advanced hygienic strategies to improve the quality of life. The findings have also shown that maxillary tooth loss was extremely low among the participants as compared to the mandible loss. Thus, the study has clearly indicated that adults especially young adults, were extremely prominent to the Kennedy's Class 3 of tooth loss from mandible region. Advanced studies are further required for deriving out effective outcomes.

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3	**Feroze Ali Kalhoro:**	Helped in designing of study, introduction and discussion writing and lterature search.
4	**Mohammad Danish:**	Helped in data collection.