



Survey of the Reasons for Dental Extraction in patients of Kashmiri Population

Shahid Farooq¹, Mohd Younis Bhat², Shahid Hassan^{3*}, Ajaz Ahamd Shah⁴

¹Department of Oral and Maxillofacial Surgery, Government Dental College and Hospital, Srinagar, Jammu and Kashmir, India.

Email: drshahid.533@gmail.com,

Orcid ID: 0000-0002-7092-7421

²Department of Oral and Maxillofacial Surgery, Government Dental College and Hospital, Srinagar, Jammu and Kashmir, India.

Email: younisuarez@gmail.com,

Orcid ID: 0000-0002-3166-7508

³Department of Oral and Maxillofacial Surgery, Government Dental College and Hospital, Srinagar, Jammu and Kashmir, India.

Email: shahidfaciomax@gmail.com;

Orcid ID:0000-0002-9838-1125

⁴Department of Oral and Maxillofacial Surgery, Government dental college and hospital, Srinagar, Jammu and Kashmir, India.

Email: drajazshah@gmail.com,

Orcid ID: 0000-0002-1261-796

*Corresponding author:

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Abstract

Background: Extraction of teeth is the commonest surgical procedure carried out in the dental surgery setting. The purpose of this survey was to identify the causes of teeth extraction in Kashmiri population.

Material & Methods: This study was done on the patients who were referred to Department of Oral and Maxillofacial Surgery Government Dental College Srinagar for tooth extraction for the period of 6 months from February 2019 to July 2019. Total of 3000 patients were included in this study. **Results:** There were 1680 (56%) extractions in males and 1320 (44%) in females with male- to- female extraction ratio of 1.2:1. In both male and female gender, there were more teeth extractions between the ages of 11 and 30 years. The commonest tooth to be extracted was 1st molar both in upper (27.2%) and lower (30.4%) arch. The commonest reasons for teeth extraction were caries (53.4%; 1602/3000). **Conclusions:** The result of this study shows that dental caries is the commonest reason for tooth extraction in Kashmiri population. It is hoped that the study will facilitate the development of treatment and preventive procedures relevant to the problems, thus minimizing the loss of teeth and its expected adverse consequences.

Keywords:- Dental Extraction, Dentistry.

INTRODUCTION

Extraction of teeth is the commonest surgical procedure carried out in the dental surgery setting by the practicing dental surgeon. From a historical perspective, dental extractions have been used to treat a variety of diseased conditions. Also, before the advent of antibiotics, chronic tooth infections were sometimes linked to a variety of health related problems and removal of such diseased tooth

was therefore a common treatment option for various medical conditions.^[1] Likewise, it was once a common practice to remove the front teeth of institutionalized psychiatric patients who had a history of biting.^[2] Tooth mortality, which is mainly a reflection of untreated dental caries and periodontal disease, is considered as a crude but useful measure for the dental status of a community.^[3] An understanding of the reasons why teeth are extracted is central to efforts to improve oral health and a large



number of cross-sectional studies have investigated reasons for tooth loss in different countries. However, few have examined changes in the reasons for extraction in a given country over time.^[4] Causes of tooth extractions had large geographical and cultural differences between various regions in a country and from one country to another.^[5] Surveys on the causes for tooth loss in many countries have been conducted and have produced some controversy regarding whether caries and /or periodontal diseases are the main reason for tooth loss. While other studies suggested the reasons to such extractions are the caries, periodontitis, orthodontics, trauma and prosthetic treatments.^[6,7] Therefore, the aim of this study was to investigate the causes of tooth extractions and its relation to gender and age among Kashmiri population.

MATERIAL AND METHODS

This study was done on the patients who were referred to Department of Oral and Maxillofacial Surgery Government Dental College Srinagar for tooth extraction for the period of 3 months from February 2019 to July 2019. Total of 3000 patients were included in this study.

The inclusion criteria were patients from both genders, above the age of 10 years and indicated for extraction of permanent tooth. The total number of 3000 subjects, 1680 males and 1320 females were included in the study. The selected subjects were divided into eight groups, according to the age, (11-20), (21-30), (31-40), (41-50), (51 -60), (61-70), (71-80) and (>81 years) respectively. All the causes of extracted teeth were recorded and data collected were registered onto a Performa. The

information recorded in the record form included patient's age, gender, tooth number, and the reasons for tooth extraction. The reasons for tooth extraction were assigned to eight groups: caries, periodontal diseases, orthodontic, prosthetic, impaction, trauma, aesthetic, and others

Descriptive statistics and statistical analysis for significance were performed with EPI Info 2008 version software.

RESULTS

The total number of extractions carried out, with reason for each extraction, was 3000. This averages 1 extraction per patient. The age of patients ranged from 11 to 87 years, with mean age of 40.3 ± 8.7 years. There were 1680 (56%) extractions in males and 1320 (44%) in females with male- to- female extraction ratio of 1.2:1. In both male and female gender, there were more teeth extractions between the ages of 21 and 50 years than in all the other age categories [Table 1]. Likewise, more extractions were done in the young age categories than the intermediate and older age groups. Caries and periodontal diseases were the more frequent reasons for extraction in both the male and female gender [Table 3]. Also, molar extractions were more frequently done than the other types of teeth [Table 2]. In the permanent dentition 44.5% (1335/3000) teeth were extracted from the lower jaw while 55.5% (1665/3000) from the upper jaw [Table 2]. The most common reasons for teeth extraction were caries (53.4%; 1602/3000) and periodontal diseases (25.2%; 756/3000), while the least reason were other extraction causes which include [deliberate, benign neoplasm, cystic lesion] (1.3%, 39/3000). [Table 4]



Table 1: Distribution of Teeth Extracted By Age and Gender

Age (years)	Gender				Total
	Male		Female		
	No.	%age	No.	%age	
11-20	188	11.2	136	10.3	324
21-30	341	20.3	359	27.2	700
31-40	356	21.2	268	20.3	624
41-50	442	26.3	214	16.2	656
51-60	158	9.4	141	10.7	299
61-70	91	5.4	95	7.2	186
71-80	61	3.6	70	5.3	131
>81	43	2.6	37	2.8	80
Total	1680	100	1320	100	3000

Table 2: Distribution of Teeth Extracted By Type

Upper jaw Type	No.	% age
1	118	7.1
2	103	6.2
3	120	7.2
4	188	11.3
5	162	9.7
6	453	27.2
7	286	17.2
8	235	14.1
Total	1665	100%
Lower jaw type	No.	%age
1	83	6.2
2	55	4.1
3	47	3.5
4	84	6.3
5	77	5.8
6	406	30.4
7	271	20.3
8	312	23.4
Total	1335	100%

Table 3: Distribution of reason for teeth extraction by gender

Reason	Gender				Total
	Male		Female		
	No.	%age	No.	%age	
Caries	894	53.2	708	53.6	1602



Periodontal disease	442	26.3	314	23.8	756
Impaction	106	6.3	107	8.1	213
Prosthetics	74	4.4	70	5.3	144
Trauma	76	4.5	29	2.2	105
Orthodontics	44	2.7	49	3.8	93
Aesthetics	20	1.2	28	2.1	48
Others	24	1.4	15	1.1	39
Total	1680	100%	1320	100%	3000

Table 4: Distribution of reason for tooth extraction

Reason	No.	%age
Caries	1602	53.4
Periodontal disease	756	25.2
impaction	213	7.1
prosthetics	144	4.8
Trauma	105	3.5
orthodontics	93	3.1
Aesthetics	48	1.6
Others	39	1.3
Total	3000	100%

DISCUSSION

Several authors worldwide have recorded reasons for teeth extractions in their different localities and countries.^[1,2,3,4,5,8,9] A critical scrutiny of these results shows that there have been considerable variations in their findings as regards the most important etiological factors responsible for teeth mortality. Also, one should be cautious in the extrapolation of results from these studies.

This study evaluated data from permanent dentition and revealed that both dental caries (53.4%) and periodontal diseases (25.2%) are the main causes of teeth extraction in Kashmiri population. This result is comparable to the studies of Adeyemo WL et al,^[10] Oggini FO,^[11] and other studies like of Chestnut JG,^[5] Murray H,^[8] Chukwu GA et al,^[12] and Hassan AK.^[13]

This may be due to transition from the customary fibrous diet to western diet.^[10,11,12] These researchers have shown from their studies that the incidence of dental caries and periodontal diseases are on the increase as refined sugar, fruit drinks, and sweet have become readily available. Other reasons identified for extraction of teeth in this study have been reported earlier by other researchers.^[2,5,8,14] The benign neoplasms encountered in the present study were ameloblastoma, fibrous dysplasia, ossifying fibroma, peripheral and central giant cell granuloma, and compound and complex Odontome. The cystic lesions recorded include periodontal, dentigerous, and calcifying odontogenic cyst. More extractions were carried out in the males (56%) population than females (44%). This is in accordance with the studies of Reich and Hiller,^[7] However it is in

contrast with the study of Anyanechi C, Chukwuneke F,^[1] where female is to male ratio is 1.2:1.

Extraction were recorded more in upper arch than in lower arch and it is in accordance with the study of Anyanechi C, Chukwuneke F and Reich and Hiller.^[1,7]

Regarding individual teeth the 1st molar was the most often extracted tooth both in upper (453, 27.2%) as well as lower arch (406, 30.4%). While the 2nd and 3rd molars were also extracted most often, there were no clear cut differences for the other teeth. It was in accordance with the study of Anyanechi C, Chukwuneke F.^[1]

In both dentitions, the molars and premolars were extracted more frequently than the anterior teeth. This is explained by the presence of pits and fissures in these sets of teeth, which cause more retention of plaque in them. The morphology, time of eruption, and positioning of tooth in the oral cavity confers an inherent disadvantage or advantage to the

various methods employed in the control of plaque, and hence teeth decay and loss.^[12] Also, the reason for decreased teeth mortality in the mandibular anterior region than in the maxillary component may be due to the close proximity of the submandibular and sublingual salivary glands duct in this part of the mouth, as their secretions help to buffer and cleanse the products of bacterial plaque. Retention of a complete dentition throughout life should be one of the main goals of the dental profession.^[4]

CONCLUSIONS

From this study, it can be concluded that: Caries is the major cause for teeth extractions, followed by periodontal disease and prosthetic reasons. It is hoped that the study will facilitate the development of treatment and preventive procedures relevant to the problems observed in the Kashmir, thus minimizing the loss of teeth and its expected adverse consequences.

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