

Original Article

Reasons Underlying the Extraction of Permanent Teeth in Patients Attending A.B.S.M.I.D.S

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Abstract :

Extraction of permanent teeth is very common surgical procedure for all oral and maxillofacial surgeons. The study was undertaken to know the reason for teeth extraction and its association with age, gender and type of teeth removed. A prospective cross sectional survey was carried out in patients attending the Department of Oral and Maxillofacial Surgery in A.B.S.M.I.D.S between July 2015 and August 2015. The data was collected and computer software SPSS 19 was used for statistical analysis. In this study a total of 372 extractions in 248 patients was included. The reasons for extraction were classified into caries, periodontal disease, orthodontic reasons, prosthodontic, trauma and others (patient request). Dental caries still remains the most common reason for teeth extraction followed by periodontal reasons. More number of teeth extractions is seen in the female patients as compared to the male.

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Introduction

In order to improve oral health, understanding the pattern and the causes for tooth loss in a population is of great importance. There are several studies investigating the reasons for tooth extraction in different countries. Most of these surveys were similar as they investigated the amount of tooth loss, the reasons behind tooth extraction, and the distribution of tooth loss according to age, gender, education, and tooth type. Dental caries and periodontal disease were the predominant reasons for tooth extraction¹⁻⁶. It is a commonly held view that older patients lose more teeth as a result of periodontal disease. Orthodontics is also increasing very rapidly as the one of the common reason for extraction in young populations, less than 20 years of age⁶. WHO states good oral health as an indicator of good health and one of the global goals to be achieved by the year 2000 is 85% of the population should have all teeth by the age of 18 years. Extraction due to periodontal reasons predominated in the age group above

40 years². Caries and its sequel remain the most important cause of tooth loss throughout adult life along with periodontal diseases at later stages³.

This survey aimed to determine the reasons for teeth extraction and its association with age, gender and type of tooth extracted in patients attending to the A.B. Shetty Memorial Institute of Dental Sciences over a period of 2 months.

Materials and Methods

All patients attended to the Department of Oral and Maxillofacial Surgery, A.B.S.M.I.D.S, for tooth extraction over a period of 2 months were included in this study. The age, gender, reasons for tooth extraction and the type of tooth extracted were recorded. The general indications for the procedure were caries that cannot be treated, severe periodontal diseases that has to be extracted, and infections that can be treated with tooth extraction, persistent teeth, orthodontic treatment, and

malocclusions. Third molar extraction was also performed in patients with dysfunction and for orthodontic treatment.

The study comprised a total of 372 extractions in 248 patients (111 males and 137 females). The reasons for extraction were classified into a) caries, b) periodontal disease, c) orthodontic, d) prosthodontic, e) trauma and f) other (pre-radiation therapy, tumour margin clearance etc).

The subjects were grouped into six age groups 20, 21-30, 31-40, 41-50, 51-60, 61-70 and 70. The type of teeth extracted were recorded, based on its location as maxillary and mandibular posterior.

The data were processed and analysed statistically to find the correlation with the variables using Statistical Package for Social Sciences (SPSS Inc., USA) version 19.0. Percentage distributions of the variables were used to interpret the data with the help of statistical tables and graphs. The Chi-square test was used for comparisons among male and female subjects. Differences were considered significant at p-values less than 0.05.

Results

The number of teeth extracted was different for the different age groups, and dental caries accounted for the majority of extractions (table 1). Periodontal diseases were found to be the second most common reason for extraction followed by prosthodontic and orthodontic. The highest number of extractions was observed in young females (diagram 1). Lower posterior were the most commonly extracted tooth followed by upper posterior, lower anterior and upper anterior respectively (table 2). Caries is the most common reason for tooth extraction in younger age groups (table 3). This survey result also shows that with advancement of age the periodontal diseases also increases and cause one of the common reason for extraction.

Discussion

The results of this study show that dental caries and its sequel is the principal reason for extraction of teeth

Table1 : reasons for extraction in male and female patients.

Reason for extraction	Male		Female		Total
	Number	% age	Number	% age	
Caries	64	35.96	71	36.60	135
Periodontal	39	21.91	52	26.80	91
Orthodontic	14	7.86	16	8.25	30
Prosthodontic	22	12.36	24	12.37	46
Trauma	13	7.30	11	5.67	24
Others	26	14.61	20	10.31	46
Total	178		194		372
Chi Square value(df) = 2.71(5), p=0.75(NS)					

Chi square test

*P<0.05 statistically significant

p>0.05 non-significant, NS

Table 2 : Type of tooth (sextant) extracted in males and females.

Tooth type	Male		Female		Total
	Number	% age	Number	% age	
Upper Anterior	20	11.24	21	10.82	41
Upper Posterior	65	36.52	74	38.14	139
Lower Anterior	21	11.80	23	11.86	44
Lower Posterior	72	40.45	76	39.18	148
	178		194		372
Chi Square value(df) = 0.12(3), p=0.99(NS)					

Chi square test

*P<0.05 statistically significant

p>0.05 non-significant, NS

Table 3: Extracted teeth in different age groups and the reasons for tooth extraction.

AGE RANGE	CARIES	PERIO	ORTHO	PROSTHO	TRAUMA	OTHER
20	12	03	14	02	06	04
21-30	21	08	10	05	09	07
31-40	29	11	06	07	06	06
41-50	26	19	00	10	02	10
51-60	23	20	00	12	01	08
61-70	17	17	00	07	00	06
70	09	13	00	03	00	05
	135	91	30	46	24	46

followed by periodontal disease. About half of the teeth were extracted due to dental caries and its sequel and the periodontal disease was the second most common reason for tooth extraction. Previous reports in several countries also have shown that the main reasons of tooth extraction were dental caries and periodontal disease; however, dental caries appears to be the principal cause of tooth extraction¹⁻⁶. Few studies have recorded that periodontal disease was the main reason for tooth extraction, whereas other investigators have found that dental caries². The

Diagram 1: Showing reasons for extraction in males and females.

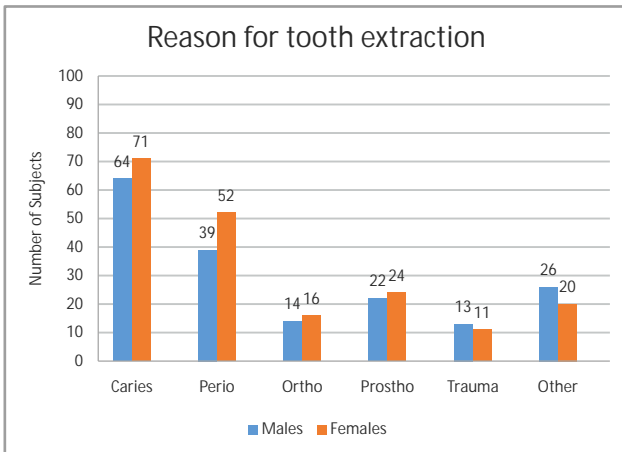


Diagram 2: Shows gender distribution

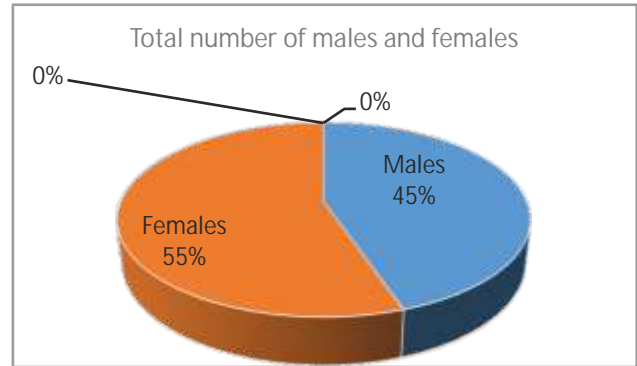
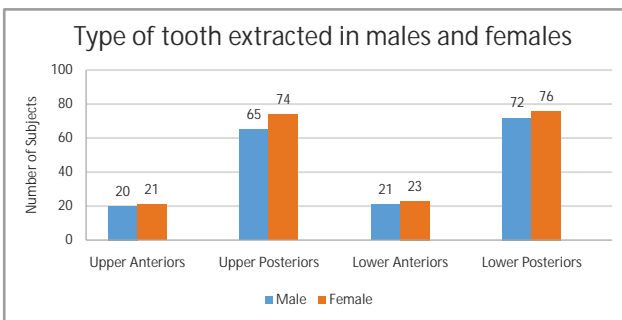


Diagram 3: Shows the quadrant wise distribution in males and females.



increasing age and is common in older age groups. Lower posterior tooth were the most commonly extracted tooth, followed by upper posterior, lower anterior and upper anterior tooth. The number of female patients in this study was more than the male patients that means more caries in the female patients than male patients.

Conclusion

The results of this survey revealed that dental caries is still the main cause for tooth extractions with periodontal disease being the next most common cause. The number of patients who want orthodontic correction also increased and this increase in number, also increased in extraction of teeth for correction as compared to the past. Dental problems are more common in females than males. Lower posteriors tooth are the most commonly extracted tooth than the upper posteriors.

mentioned studies have recorded low frequencies for other reasons of tooth extraction, such as orthodontic treatment, prosthodontic reasons and trauma.

Prevalence of periodontal diseases is associated with

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