



ROLE OF PERIODONTITIS IN EXTRACTION OF PERMANENT TOOTH - A PROSPECTIVE STUDY CONDUCTED IN DEPARTMENT OF ORAL AND MAXILLO FACIAL SURGERY OF GOVT DENTAL COLLEGE & HOSPITAL, HYDERABAD, INDIA.

Dental Science

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ABSTRACT

Periodontitis normally known as gum diseases or periodontal diseases usually begins with bacterial growth in the form of plaque around tooth & if oral hygiene is not maintained it may result in tooth loss due to destruction of periodontium that surrounds tooth. Now a days periodontitis is becoming more frequent among people. **AIM& OBJECTIVES:** this study is conducted to evaluate the extent of permanent tooth extracted due to periodontal problems & its relation to age & position of tooth in patients attending department of oral & maxilla facial surgery. **MATERIALS AND METHODS:** study population consisted of 1200 members aged between 18-50 yrs. of age, attending department of oral and maxilla facial surgery in govt dental college and hospital. the reason for extraction of tooth were recorded for over a period of 45 days. **RESULTS:** Total numbers of extracted tooth were 1600 out of them 45.1% were extracted due to periodontal diseases, 44.8% due to dental caries & remaining 10 % were extracted for different reasons like impactions, trauma etc. **CONCLUSION:** periodontal diseases still remain major cause for extraction of permanent tooth while an extraction due dental caries is reducing due to more advanced diagnostic and treatment procedures are available recently to reduce dental caries.

KEYWORDS

INTRODUCTION

Dental extraction or exodontia is usually referred to as removal of tooth from alveolus of alveolar bone. Despite many innovations, extraction still remains a major problem to both clinician and patient as it causes occlusal imbalance which in turn cause serious dysfunction of masticatory system. Number of teeth present in the oral cavity explains the oral hygiene level and socio economic status of the patient. As more number of teeth is being extracted it becomes more difficult for patient to eat food which results in poor diet and deterioration of quality of life. Periodontitis normally known as gum diseases or periodontal diseases usually begins with bacterial growth in the form of plaque around tooth & if oral hygiene is not maintained it may result in tooth loss due to destruction of periodontium that surrounds tooth. Now a day's periodontitis is becoming more frequent among people. many studies have concluded that periodontal diseases is becoming major cause for extraction of permanent tooth while extractions due to dental caries is reduced due to advances in diagnostic and treatment procedures.

As a dentist it is mandatory to know the reasons for extraction of permanent tooth so we can come up with extensive diagnostic and treatment procedures to decrease the number of extractions of permanent tooth. The main reasons that lead to extraction of permanent tooth are dental caries, periodontal problems, endo perio lesions, trauma, orthodontic and prosthodontics extractions, impactions etc.

OBJECTIVES OF THIS STUDY

1. To determine the extent of periodontitis among various reasons of tooth extraction in patients who are undergoing permanent tooth extraction
2. Its relation to age of patient, gender and site of tooth in oral cavity.

MATERIALS AND METHODS

This study was conducted among 1200 apparently healthy patients attending department of oral and maxillofacial surgery in govt dental college and hospital Hyderabad, India. This study was conducted for over a period of 45 days from Jan 1st - Feb 15th. Complete case history of patient including name, age, gender, chief complaint, intra oral examination is conducted and site of the tooth which is to be retracted and reason for extraction is recorded.

INCLUSION CRITERIA:

1. Healthy patients' b/w 18-50 yrs. of age.
2. Patients with minimum of 20 teeth in oral cavity.

EXCLUSION CRITERIA:

1. Patients with systemic diseases
2. Pediatric patients.
3. Patients who received scaling and root planning in past 6 months.
4. Uncooperative patients.

CLINICAL EXAMINATION

A case history was taken from patients who are willing to participate in the study which included age gender inspection of tooth to be extracted and reason for extraction of tooth is recorded.

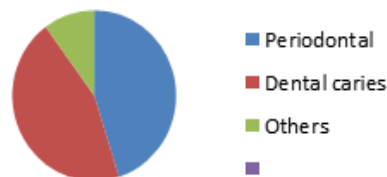
Periodontal prognosis of tooth is assessing by following criteria:

- When distance b/w CEJ and depth of gingival sulcus exceeds 5mm it is considered clinical attachment loss.
- Tooth is held firmly between handles of two metallic instruments and moved in all directions and tooth which are mobile in all directions are recorded.
- Furcation involvement is recorded using Glickman's classification.

RESULTS

A total of 1200 between age group 18-50 yrs. of age attended the clinical department of oral and maxilla facial surgery to get their extracted during study period. 613 people among them were females and 587 were males. Total of 1600 tooth were extracted from 1200 patients. among them 45.1% were extracted due to periodontal diseases, 44.8% were extracted due to dental caries and remaining 10% were extracted for different reasons like impactions, trauma, orthodontic and prosthodontics purposes, severe attrition and cervical abrasion, failed root canal therapies and miscellaneous reasons.

Various extractions of tooth

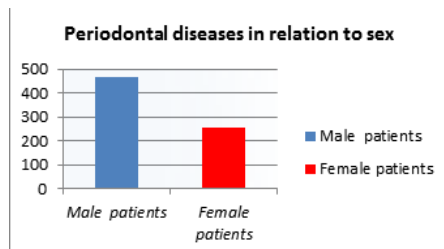


Among extraction due to periodontal diseases 53.1% of them are posterior tooth and 46.9% of tooth are anterior tooth. Which shows posterior tooth are more prone to periodontal diseases. Among posterior periodontal extractions majority of tooth belong to mandible with 68.9% i.e. 264 teeth and remaining 31.1% of tooth belong to maxillary posterior tooth.

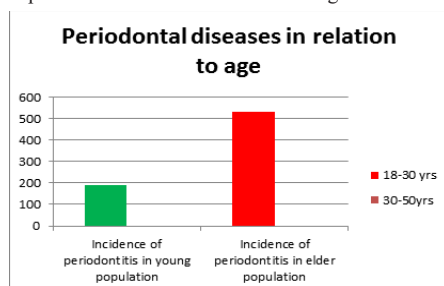
Position in oral cavity	Posterior tooth(384)	Anterior tooth(339)
Maxilla	120(31.1. %)	74(21.8%)
Mandible	264(68.9%)	265(78.2%)

Even though more number of female patients attend during study period, percentage of female patients who got their tooth extracted due to periodontal diseases is considerably less compared to male patients i.e. among total of 723 extractions due to periodontal diseases 64.8%

i.e. 468 tooth belong to male patients and remaining 35.2% i.e 255 tooth belong to female patients. This shows incidence of periodontal diseases in male patients than in female patients.



Among total patients of 1200 who belong to age group of 18-50yrs. 723 tooth were extracted due to periodontal reasons among them 73.6% i.e.532 teeth belonged to patients between 30-50yrs of age and remaining 26.4% i.e. 191 tooth belonged to patients between 18-30yrs. This shows periodontal disease increased with age.



DISCUSSION

Extraction of tooth is considered when no other treatment can preserve the tooth. Extraction causes problems like occlusal imbalance which in turn causes severe dysfunction of masticatory system. In this study different reasons for extraction of tooth are presented in patients between 18-50yrs of age. Previous studies concluded that periodontal diseases is major reason for extraction of tooth followed by dental caries which is quite similar to our current study where 45.1% of tooth were extracted due to periodontal diseases while 44.8% of tooth were extracted due to dental caries. In current study tooth extracted due to periodontal diseases exceeds tooth extracted due to various other reasons.

Various studies noticed that more number of males is affected due to periodontal diseases than females. Theoretical reason for this variation is still unknown but it is thought to be due to poor oral hygiene in males than in females. The connection between loss of attachment in males and females is found out by Albandar¹, that males are highly prone to periodontal diseases than females but it is not explained in detail but is more related to oral hygiene and dental visit behavior. Habit history like smoking and chewing of betel quid was positive in more number of males than in females this shows attitude of males towards oral health. While females are more concerned about oral health.

In present study periodontally affected posterior tooth were indicated by clinical attachment loss of <5mm, G-III tooth mobility, G-IV furcation involvement and anterior tooth were indicated by clinical attachment loss of < 5mm, G-III tooth mobility. According to Morita⁶ caries was common reason was extraction in age group 16 and older and periodontal diseases were common in age group 46-65, which is similar to our result where periodontal diseases were common patients between 30-50 yrs. of age. These show periodontal diseases aggravated with age. In our present study it shows that posterior mandible was most commonly affected by periodontal disease followed by posterior maxilla, which is similar to various other previous studies^{[2][3][4][5]}, which is due to chewing of food by posterior tooth and minimal activity of tongue in posterior region than in anterior region which leads to pocket formation.

CONCLUSION

Periodontal diseases were the most common causes of tooth extraction and increased with age, followed by caries. The more frequently extracted teeth due to periodontal disease were the posterior teeth of the mandible, followed by the maxilla and the number is more in male than female. Severity of clinical LAT, tooth mobility, and FINV were reliable criteria to indicate extraction in periodontally affected teeth.

REFERENCES

1. Albandar JM, Rams TE. Global epidemiology of periodontal diseases: An overview. *Periodontol* 2000 2002; 29:7-10.
2. Quteish Taani DS. Periodontal reasons for tooth extraction in an adult population in Jordan. *J Oral Rehabil* 2003; 30:110-2.
3. Chestnutt IG, Binnie VI, Taylor MM. Reasons for tooth extraction in Scotland. *J Dent* 2000;28:295-7.
4. Aida J, Ando Y, Oosaka M, Niimi K, Morita M. Contributions of social context to inequality in dental caries: A multilevel analysis of Japanese 3-year-old children. *Community Dent Oral Epidemiol* 2008; 36:149-56.
5. Da'ameh D. Reasons for permanent tooth extraction in the North of Afghanistan. *J Dent* 2006; 34:48-51.
6. Morita M, Kimura T, Kanegae M, Ishikawa A, Watanabe T. Reasons for extraction of permanent teeth in Japan. *Community Dent Oral Epidemiol* 1994;22:303-6