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Factors related to tooth loss among population: A cross sectional study

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Abstract
Background: Tooth loss is one of the leading problem in population. The present study was conducted to determine cases of tooth loss in study population.
Materials & Methods: The present study was conducted on 1044 cases reported to the department. All were provided with questionnaire to report the causes of tooth loss. Patients were provided with either RPD, FPD or complete denture depending upon number of tooth loss.
Results: Males were 544 and females were 500. Common causes of tooth loss were caries (425), periodontitis (360), malocclusion (155) and tooth trauma (104). The difference was significant (P< 0.05). Age group 20- 40 years consisted of 342 patients and 40- 60 years had 702 patients. 580 were uneducated, 244 had education upto primary school while 220 had upto high school. The difference was significant (P< 0.05). 594 patients had partial loss of teeth and managed with RPD (254) and FPD (340) and 450 were completely edentulous managed with complete denture. The difference was significant (P< 0.05).
Conclusion: Tooth loss is the major dental problem among population. The common age group is 40- 60 years and slightly females prevalence was observed.

Keywords: caries, periodontitis, tooth

Introduction

Among various oral health related ailments, tooth loss is one of the leading problem. Common occurring conditions are caries, periodontitis, malocclusion etc. Caries if is restored within time can save the tooth. However, if it progresses may eventually results in tooth loss. Similarly, periodontitis is the reason for tooth mobility. Excessive tooth mobility leads to tooth loss and poses problem to patients. Malocclusion is the leading dental problem demands early intervention. It has been observed that teens are possessive about their look especially girls. 70% of school going girls undergoes orthodontic treatment before tenth standard [1].

Loss of tooth is threat to various problems. Long standing missing non restored area tends to occupied by adjacent teeth or there can be migration of adjacent teeth in edentulous area. Similarly opposite arch tooth tends to supraeruption leads to malocclusion. Sometimes due to malocclusion, tooth extraction is desired in order to achieve sufficient area for the management of the cases as well as for the tooth rotation [2].

Other common cause of tooth loss is trauma especially in road side accident. Face is prone to get traumatized. In most of the cases, teeth are lost. Maxillary front teeth are common followed by mandibular anterior teeth. Preservation of dental arch is of paramount importance. Early understanding of the condition may eventually prevent further complication [3]. The present study was conducted to determine cases of tooth loss in study population.

Materials & Methods

The present study was conducted in the department of Prosthodontics, Bridge & Crown. It comprised of 1044 cases reported to the department for the replacement of missing teeth. Males were 544 and females were 500. All were informed regarding the study. Ethical approval was obtained prior to the study. Consent was taken from all patients.
General information such as name, age, gender etc. was recorded. Patient's education status and knowledge about oral health was recorded.

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All were provided with questionnaire to report the causes of tooth loss. Patients were provided with either RPD, FPD or complete denture depending upon number of tooth loss. Results thus obtained were subjected to statistical analysis using chi- square test. P value less than 0.05 was considered significant.

Results

Table 1: Factors related to tooth loss

Factors	Number	P value
Caries	425	0.01
Periodontitis	360	
Malocclusion	155	
Tooth trauma	104	

Table I shows that common causes of tooth loss was caries (425), periodontitis (360), malocclusion (155) and tooth trauma (104). The difference was significant (P< 0.05).

Table 2: Parameters in patients

Parameters	Number	P value
Age group		
20-40 years	342	0.01
40- 60 years	702	
Education level		
Uneducated	580	
Primary level	244	0.01
High level	220	

Table II shows that age group 20- 40 years consisted of 342 patients and 40- 60 years had 702 patients. 580 were uneducated, 244 had education upto primary school while 220 had upto high school. The difference was significant (P< 0.05).
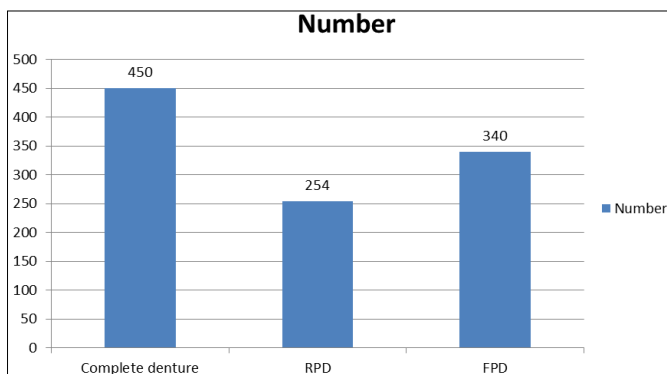

Fig 1: Management of cases

Figure I shows that 594 patients had partial loss of teeth and managed with RPD (254) and FPD (340) and 450 were completely edentulous managed with complete denture. The difference was significant (P< 0.05).

Discussion

The major complaint nowadays is loss of teeth due to various reasons. In today's fast growing world though the awareness about dental or oral health has increased, the use of junk and fast food has significantly raised. Previous studies found a number of factors were associated with tooth loss, such as age, gender, income, education, occupation, marital status, lack of health insurance and other socioeconomic factors [4]. In the present study we determined cases of tooth loss in study population.

In present study, out of 1044 patients, 594 patients had partial loss of teeth and 450 were completely edentulous. We found that 544 were males and 500 were females. The equal number of males and females involvement may show the adaptance of life pattern. However, the findings that females experienced slightly greater number of teeth loss may be due to infrequently visit to dentist. Similar results were observed in the study of Douglas et al. [5].

Jeera et al. [6] in their study found that 621 males and 879 females had tooth loss. They aged between 16-27 years. The major reason for tooth loss was dental caries (60%). The overall prevalence of tooth loss was 62.2%. Authors found that common cause of tooth loss was dental caries, periodontal disease, eating snacks and candy daily, orthodontic treatment.

We found that common causes of tooth loss were caries (425), periodontitis (360), malocclusion (155) and tooth trauma (104). This is in agreement with Harshit et al. [7] We found that 254 patients were managed with RPD and 340 with FPD whereas 450 were managed with complete denture. This is in agreement with Bhatia et al. [8].

Chatrchaiwiwatana et al. [9] in their study found that tobacco smoking is significantly associated with periodontal disease and tooth loss. It was common for people to wear dentures after they lost teeth. But Nguyen et al. [10], in their study found that wearing removable dentures is associated with a significantly greater risk for periodontal disease progression leading to tooth loss.

Gaio EJ et al. [11] in their study of oral health status in elders from South Brazil found that 67% patents had partial tooth loss followed by 32% completely edentulous patients. Authors found that most of the patients desired fixed prostheses either in the form of implants or FPD followed by RPD. Other causative factor in their study was periodontitis which led to teeth loss in 72% patients. Mai X et al. [12] in their study of associations between smoking and tooth loss according to the reason found that smokeless tobacco in the form of zarda, mawa, chain khaini was the leading cause of tooth loss while in smoking tobacco bidi was the major reason for tooth loss. Most of patients were uneducated which depicted role of education in developing awareness towards oral health.

Patil VV et al. [13] in their study found that tooth loss is the major problem among industrial workers in Belgaum. The reason for tooth loss was dental caries, periodontitis and trauma. In 67% population partial loss of tooth was common followed by complete loss of teeth. Most of the patients desired removable partial denture followed by fixed partial denture and complete denture.

Conclusion

Tooth loss is the major dental problem among population. The common age group is 40- 60 years and slightly females prevalence was observed.

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