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Expert Opinion Article

Prevalence Of Missing Tooth Among Patients Visiting Opd Of Dental College

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Abstract
Introduction - One of the most common disorders that significantly affects oral health is tooth loss. It presents a significant obstacle for the patient as well as the medical professional. It has an impact on the patients' overall health and quality of life. When a comparison shows a relationship between the prevalence of tooth loss and oral hygiene level, the number of extracted teeth in a population can be used as a measure of oral hygiene status.
Aim - To assess the risk factors for tooth loss and provide baseline information regarding missing teeth among patients who visit the outpatient department of, Mithila Minority Dental College and Hospital, Bihar, India.
Material and methods - The research was performed among 1200 subjects admitted from August 1st, 2024, to December 30, 2024, using dental college outpatient database.
Results – According to the medical status, 840 patients (70%) were in good health, but only 360 patients (30%) had diabetes, hypertension, asthma, and cancer diagnosed and under control.

Keywords: Tooth loss, Tooth extraction, Age, Gender

Introduction

One of the most common disorders that significantly affects oral health is tooth loss [1–3]. It presents a significant obstacle for the patient as well as the medical professional. It has an impact on the patients' overall health and quality of life. When a comparison shows a relationship between the prevalence of tooth loss and oral hygiene level, the number of extracted teeth in a population can be used as a measure of oral hygiene status. Numerous factors, including people's attitudes, habits, and capacity to carry out everyday tasks, have an impact on people's quality of life. In summary, the most significant factor that contradicts oral health-related quality of life is tooth loss, whether it be a continuous or categorical variable.

Additionally, in both personal and professional interviews, the social presentation exhibits a notable communication constraint in terms of speaking, smiling, and confidence in relation to the aesthetic component. It is particularly linked to the loss of anterior teeth and how it affects a person's look, which in turn affects his ability to speak clearly with appropriate letter exits, articulate, and interact with others. Nutrition is negatively impacted by tooth loss from a functional standpoint.

The two main causes of tooth loss are periodontal disorders and dental caries. However, not all factors associated with tooth extractions have a dental origin. Edentulousness and having few surviving teeth are linked to rural residence, low family income, and low educational attainment. Although microbes are the cause of dental caries and periodontitis, age, gender, socioeconomic status, tobacco use, dental hygiene practices, and routine dental checkups patterns could alter how these illnesses develop. Additional characteristics linked to missing teeth have been reported to include smoking, marital status, income, education level, and oral hygiene habits.

Additionally, malocclusion and tooth impaction were two of the most significant documented causes of tooth extractions in the literature, particularly in patients under the age of twenty.

Adults are susceptible to dental caries, which has an incidence rate like that of children and adolescents. Caries is a chronic, cumulative, and progressive disease that gets worse as people age. The prevalence of periodontal disease varies during a person's lifetime. Adolescent patients were 9.1% more likely to have periodontitis, which manifests as a 4-5 mm deep periodontal pocket, than adults, who had a prevalence of 27.7% and senior patients, 30.6 percent. Being progressive, severe periodontitis gets worse with age, reaching its peak around age 40, and then stabilizing as people mature.

In contrast to healthier patients in the same age group, it has been hypothesized that a person with a high caries incidence, advanced periodontal disease, poor oral hygiene, smoking habits, and systemic medical conditions with oral manifestations like diabetes will eventually be more likely to experience tooth loss earlier due to the combined multifactorial outcome.

The aim of the present study is to assess the prevalence and risk factors for tooth loss and provide

baseline information regarding missing teeth among patients who visit the outpatient department of, Mithila Minority Dental College and Hospital, Bihar, India.

Material and Methods

The present study was done in Mithila Minority Dental College, Bihar, Uttar Pradesh. The total number of sample size was 1200 and the study duration period August 2024 to December 2024.

All adult patients attending the outpatient department of Mithila Minority Dental College & Hospital who were at least 18 years old were screened for tooth loss as part of this cross-sectional descriptive study. 1200 patients were chosen as the sample size. The study population gave their prior informed permission. Participants with tooth loss who were at least 18 years old were included in the study.

Patients with systemic disorders, missing third molars, and dental caries and periodontal problems were excluded from the study population.

A validated questionnaire with questions on demographics, socioeconomic status, prior medical and dental histories, and clinical examinations served as the basis for the survey. Age groups were divided into three categories: 18–35, 35–55, and 55 and older (Table 1). A structured questionnaire, in-person interviews, and a clinical examination were used to gather baseline data. Name, age, gender, sociodemographic and socioeconomic variables, marital status, smoking habits, dental visitation patterns, usage of dental services and procedures, self-perceived oral health status, and dental treatment were all covered in the comprehensive baseline interview.

To identify the missing teeth using the DMFT index, a clinical examination was conducted in the oral medicine department's outpatient department. After the patient was seated in the dentist chair, the results were self-entered into a pretested questionnaire with the use of artificial lighting, sterile mouth mirrors, probes, cotton rolls, mouth masks, and examination gloves. The SPSS for Windows application was used to record the data on a single sheet and enter it into a computer file.

Version 26 of the Statistical Package for the Social Sciences (SPSS) was used to statistically analyze the gathered data. Descriptive mean ± SD and the chi-square test were used to represent both quantitative and qualitative variables.

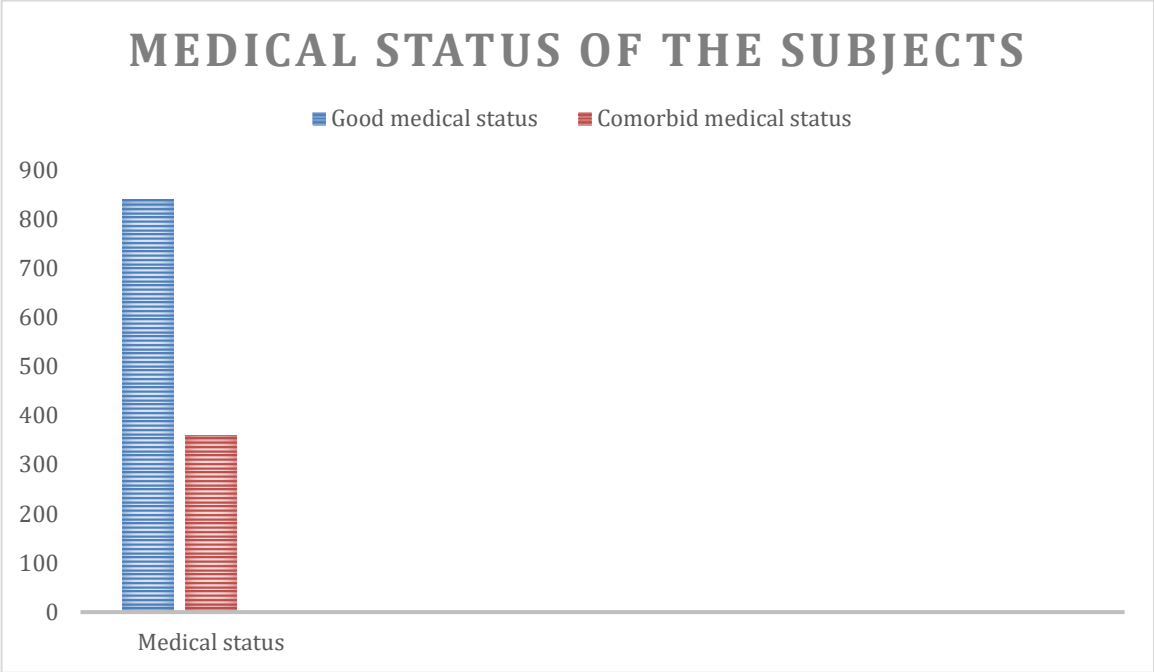
Results

Age groups were divided into three categories: 18–35, 35–55, and 55 and older (Table 1).

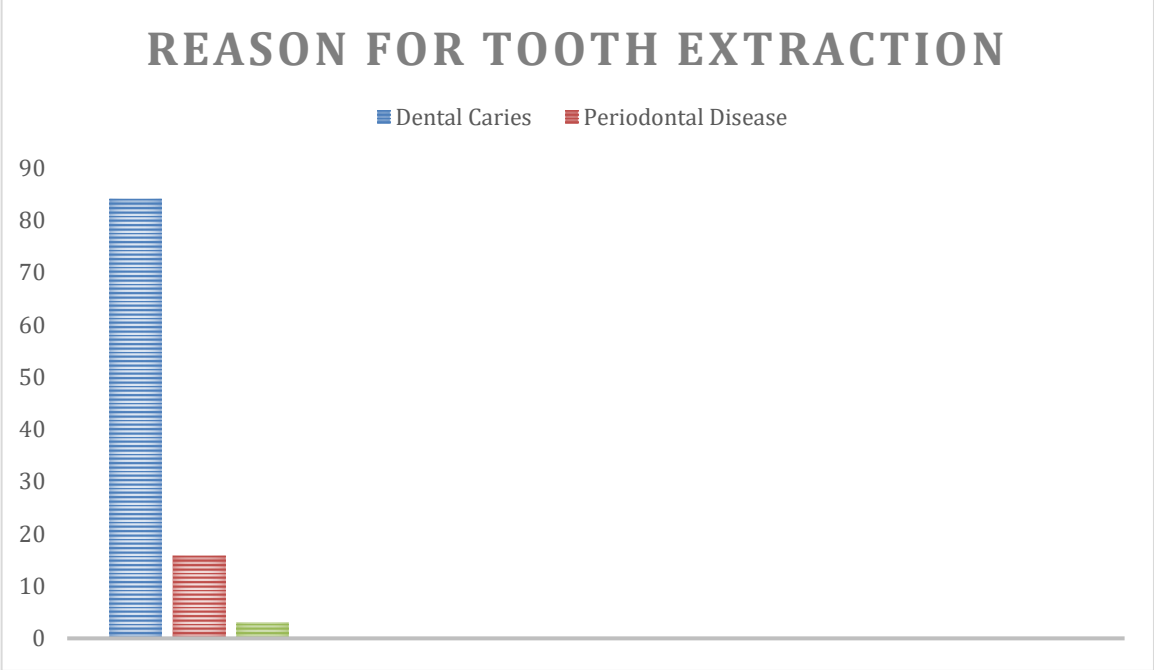
Age in years	Males	Females	Overall
18-35	121	178	299
35-55	244	439	683
>55	82	136	218
Total	447(37.3%)	753(62.75%)	1200

Table 1- Shows the subjects' age and gender distribution. The study population included 1200 participants, 447 (37.3%) of whom were male and 753 (62.75%) of whom were female.

The prevalence was higher among men (53%). According to the medical status, 840 patients (70%) were in good health, but only 360 patients (30%) had diabetes, hypertension, asthma, and cancer diagnosed and under control (Graph 1). A total of 384 patients (32%) smoked in a variety of ways, including vaping and various cigarette varieties. Many patients who received treatment reported having low incomes (21.8%) and average incomes (78.2%). Most patients (41.9%) said they brushed twice a day. Only 13% of respondents said they used water floss and floss, though. Most patients (56.2%) requested that only one tooth be pulled every session. Dental caries accounted for 83.2 percent of tooth extractions, with periodontal disease coming in second (13.8%) and others for 3% (Graph 2). According to the data, 77.6% of the patients had prior extractions done when they were clinically examined. The maxillary posterior teeth (56.3%) and mandibular posterior teeth (43.7%) were the most frequently extracted teeth.



Graph 1 – Depicting the medical status of the subjects. 840 patients (70%) were in good health, but only 360 patients (30%) had comorbidities.



Graph 2 – Depicting the Reason for tooth extraction. Dental caries accounted for 83.2 percent of tooth extractions, with periodontal disease coming in second (13.8%) and others for 3%.

Discussion

Dental health is multifaceted, and numerous research have investigated the risk factors for tooth loss in various global locations. Dental status is correlated with several social and socioeconomic aspects, and indices of tooth loss and retention suggest oral impairment and health, respectively. [4] People from lower socioeconomic strata and those with less education have been observed to have a larger percentage of edentulous people and fewer teeth left among dentulous subjects. [5] Since aging is the most often mentioned factor linked to tooth loss, older adults have fewer natural teeth left and more missing teeth. [6]

At the tooth level, caries appears to be the main cause of tooth loss across all age groups, but both caries and periodontal disease characteristics appear to be significant predictors of tooth loss occurrence. [7]

The present study was done in Mithila Minority Dental College, Bihar, Uttar Pradesh. The total number of sample size was 1200 and the study duration period August 2024 to December 2024. 447 (37.3%) of the study population were male and 753 (62.75%) of were female.

The findings show the relationships between the causes of tooth extractions. Caries accounted for more tooth extractions in men than in women, with periodontal disease, residual roots, impacted teeth, and prosthodontics following. The most frequent reasons for extractions were dental caries and periodontal disease; 136 teeth (83.2%) were extracted because of dental caries, and 18 teeth (13.8%) were extracted because of periodontal disease. Only 1% of the teeth were extracted for orthodontic treatment, and 2% were third molars with various issues like caries, pericoronitis, or overeruption.

Those with chronic illnesses, including diabetes and hypertension, were far more likely to have their teeth extracted for periodontal disease in the current group. The recent findings linked the reason for tooth extraction to the patient's overall health. In the healthy population, tooth extractions for dental caries were more common. However, in the unhealthy population, periodontal involvement was more common. According to earlier findings, patients' periodontal problems were associated with their overall health. Periodontal disease was the primary cause of tooth loss in chronically ill patients; diabetic patients were more likely than healthy people to have their teeth extracted for this reason.

Amarasena N, et al in 2003 found that the mean number of teeth lost in the sample was 5.17 +/- 5.43. Tooth loss increased significantly with age. [11]

Susin C et al in 2006 observed that subjects with gender, marital status, self-rating of oral health status, regular dental visiting pattern had less number of missing teeth. [12]

In their study, Lopez R et al. demonstrated a correlation between low socioeconomic level and tooth loss, which the current study likewise found. [13]

More studies with a bigger sample size are required from an epidemiological standpoint, considering periodontal disease and dental caries as risk factors for tooth loss.

Conclusion

The study found that dental caries and periodontal disease were the most frequent causes of tooth extractions. The maxillary and mandibular posterior teeth were the most often extracted teeth. The frequency of extractions rose as patients grew older. The primary goal of oral healthcare systems should be to monitor an efficient preventative mechanism and robust treatment services for the most prevalent oral illnesses in order to reduce the burden of tooth extractions and enhance patient quality of life. Raising patient knowledge of dental care should occur more frequently to help the public comprehend the causes and contributing factors of early extraction and devise strategies to enhance oral and body health, stop tooth loss, and improve quality of life.

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