



PREVALENCE OF MISSING TEETH IN AN ADULT POPULATION OF HYDERABAD: A CROSS SECTIONAL STUDY

Dental Science

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ABSTRACT

Background: Missing tooth is a deterrent to good oral health and adversely affects the dietary intake and nutritional status of individuals compromising their general health. **Aim:** The aim of the study is to determine the prevalence of missing teeth in the region of Hyderabad. **Materials and Methods:** This study was conducted by OroGlee Solutions Private Limited. A total of 1019 subjects aged 18-60 years were examined. Oral examination was done using intraoral camera, mouth mirror and torch. **Results:** Prevalence of missing teeth in the population of Hyderabad is 23.06%. **Conclusion:** Tooth loss is mainly due to dental caries and periodontal diseases. Missing tooth causes the shift of adjacent teeth, bone resorption and in elderly people it affects their mastication which leads to their poor nutritional status. Measures should be established to increase awareness and negative impact of tooth loss.

KEYWORDS

Missing teeth, Intra oral camera.

INTRODUCTION

Tooth loss is the major public health problem in developing countries. Tooth loss is a definite measure of oral health status of a population. The most common causes of tooth loss are dental caries, periodontal disease and the other factors like socioeconomic status, access to dental care etc.^[1]

Tooth loss is the ultimate fate of the tooth if it is not cared for and is the result of neglected oral cavity. Tooth loss has impact not only on the masticatory functions but also on the aesthetic part and personal life of the individuals.

The prevalence of tooth loss is defined as the percentage of individuals with one or more missing teeth and the extent is defined as the number of missing teeth per person.^[1] An edentulous space is a gap in the dental arch normally occupied by one or more teeth. It could be partial or complete.^[2]

Missing teeth can interfere with the ability to speak, aesthetics and affect the quality of life. It hampers the person's social life and creates low self esteem which hinders individual growth and daily work activities.^[1] It is emotionally hard and painful to have missing teeth.

Missing teeth have negative impacts like mesial shift of neighbouring teeth, supra occlusal movement of upper tooth if lower tooth is missing and in some cases bone resorption if missing teeth are more. In the elderly the loss of teeth affects their mastication, dietary intake and nutritional status, affects the shape of the face and jawline which leads to jawbone loss and facial collapse. If there is loss in jawbone, then there is loss of support to other teeth also and if severely weakened then, dental implants or dental bridges cannot get support.

In Asian population both dental caries and periodontal diseases are the most common causes of tooth loss.^[2] The aim of the study is to assess the prevalence of tooth loss in an adult population in the city of Hyderabad.

MATERIALS AND METHODS:

A cross-sectional survey was conducted by OroGlee Solutions Private Limited among the staff (aged between 18 and 60 years) of 21 different cafes and corporate offices in the city of Hyderabad in the duration of 8 months from November 2021 to June 2022. A total of 1019 adults were examined at their respective places of work. A survey questionnaire was prepared to acquire personal details such as age, gender, occupation, hometown, relevant dental and medical history and habits.

Oral examination was carried out by a dentist using mouth mirror, torch and intraoral camera. Intraoral camera is very helpful to record the minute details in the oral cavity. Informed oral consent of the participants was obtained before examination.

Inclusion Criteria

Participants from the age group of 18 to 60 years were included in the study.

Cases included subjects who had missing tooth/teeth. Controls were subjects who were completely dentulous.

Exclusion Criteria

Participants above the age of 60 years were excluded from the study. Participants who had prosthesis were excluded from study.

RESULTS:

In this study, 1019 adults aged 18-60 years were examined. Among these 48 subjects having prosthesis were excluded from the study. Total study population was hence 971. A total of 23.06% (224) people have missing tooth/teeth.

Table 1: Distribution of study subjects according to gender showing the prevalence of tooth loss

Variables (Gender)	Total Subjects	Subjects with tooth loss (n)	Subjects with tooth loss %
Male	891	190	21.32%
Female	80	34	42.5%
Total	971	224	23.06%

DISCUSSION:

Oral hygiene is important for good and healthy life. Tooth loss is an indicator of the oral health. One of the most important functions of the dentist is to prevent tooth loss.^[3] Mostly tooth loss may be due to poor oral hygiene, lack of awareness and not visiting the dentist. Dental caries and periodontal disease are the main reasons for tooth loss.

Other common causes include accidents, orthodontic treatment, impaction, supernumerary teeth, attrition, supraeruption, neoplastic and cystic lesions. It can be due to poor socio-economic status and lack of education also.^[4]

Our study was conducted to assess the prevalence of missing tooth in the adult population of Hyderabad. According to this study 23.06% of population in the city of Hyderabad has missing teeth.

There may be several other causes of missing teeth such as multiple chronic diseases, side effects of medications and psychological factors such as depression and isolation (because of loss of spouse, friends, and feeling of being unwanted by family) leading to neglect of personal and oral hygiene resulting in higher tooth loss among the older age group people.^[1]

According to the study conducted by Ashraf J et al the most common reason for tooth loss was dental caries which accounted for 50% followed by periodontal reasons 30% and other causes accounted for 10% of the patients with tooth loss.^[4]

Missing teeth in elderly people not only have impact on oral cavity but have impact on their general health. Tooth loss creates a problem in chewing food that directly impacts the nutritional level of the individual. The study conducted by Esetlla Musacchio et al found that difficulties in chewing and in swallowing were reported by 47.6% and

13.7% respectively in older people.^[5]

Gender is also a predisposing variable which is associated with tooth loss. The present study shows that the prevalence of tooth loss in females is 42.5% compared to 21.32% in males. The findings were in accordance to study conducted by George B et al in a suburban population of Chennai. They found Females (47.9%) had greater tooth loss compared to males (42.9%).^[3]

When there is a loss of tooth, there are severe consequences such as jawbone deterioration, gum recession and periodontal disease. Once a tooth (or teeth) goes missing, the bone is in danger of degrading and becoming weaker. Once jawbone recession sets in, it is common for the gums to begin to recede. Proper distance between the nose and the chin is dependent on the teeth. If missing teeth in certain areas are not replaced, it could lead to facial collapse. Patients can go through depression and anxiety.

The study conducted by Daniel et al stated that, the majority of patients lost 1 millimeter or less of the distance between teeth adjacent to the space, extrusion of the opposing tooth was ≤ 1 mm in 99 percent of the cases, and the amount of alveolar bone loss next to the adjacent teeth was ≤ 1 mm in 83 percent of the cases.^[6]

CONCLUSION:

Tooth loss is an irreversible oral health condition. Missing teeth can cause structural and functional changes that cause negative impact on oral and general health. Tooth loss causes decreased masticatory efficiency, poor facial appearance that adversely affects the mental health of the individual. Preventive methods to protect the tooth from dental caries and periodontal diseases must be incorporated. There are many prosthesis available to replace the missing teeth. Regular visit to dentist is advisable to prevent tooth loss.

Conflict of Interest: There is no conflict of interest

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