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Prevalence of Edentulism and Crowding in Subjects of a Known Population

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ABSTRACT

Background: This study was conducted to assess the Prevalence of Edentulism and Crowding in Subjects of a Known Population.

Material and methods: This study comprised of 100 subjects. The individuals had been informed about the procedure and were asked for consent. All the participants underwent oral clinical examination and the prevalence of crowding and edentulism was noted and the findings were tabulated. Statistical analysis had been conducted using SPSS software.

Results: In this study, there were 64 males and 36 females. It was observed that edentulism was seen in 23 patients and crowding was observed in 11 patients.

Conclusion: From the findings of this study, it can be concluded that prevalence of edentulism and crowding was 23% and 11%, respectively.

Keywords: *Prevalence, Edentulism, Crowding*

1. INTRODUCTION

Edentulism is the state of being edentulous, or without natural teeth.[1] Complete edentulism is an oral cavity without any teeth. Adequate dentition is quite essential for well-being and life quality. Edentulism is one of the public health burdens for elderly people and effects clearly the practice of primary care.

Edentulism is a devastating and irreversible condition and is described as the "final marker of disease burden for oral health."[2] Patients who are suffering from edentulism exhibit a wide range of physical variations and health conditions. Teeth loss affects mastication, speech, and may result in poor esthetics which in turn affect the quality of life.[3]

Crowding is the most frequent malocclusion in orthodontics, with a strong hereditary tendency. It already occurs in pediatric age and is mainly hereditary. It is a sign of a lack of space in the arches, and is not self-correcting, but can worsen over time. The main cause of the worsening of this malocclusion is a progressive and physiological decrease in the arch perimeter.[4]

This study was conducted to assess the Prevalence of Edentulism and Crowding in Subjects of a Known Population.

2. MATERIAL AND METHODS

This study comprised of 100 subjects. The individuals had been informed about the procedure and were asked for consent. All the participants underwent oral clinical examination and the prevalence of crowding and edentulism was noted and the findings were tabulated. Statistical analysis had been conducted using SPSS software.

3. RESULTS

Table 1: Gender-wise distribution of subjects

Gender	Number of subjects	Percentage
Males	64	64
Females	36	36
Total	100	100

In this study, there were 64 males and 36 females.

Table 2: Prevalence of Edentulism and Crowding

Condition	Number of cases	Percentage
Edentulism	23/100	23
Crowding	11/100	11

It was observed that edentulism was seen in 23 patients and crowding was observed in 11 patients.

4. DISCUSSION

Crowding is a common orthodontic malocclusion with a strong hereditary tendency. It is caused by a variety of factors, including the impact of environmental and genetic factors on dental arch dimensions.[5]

Dental crowding is defined as an inconsistency between tooth size and arch dimension that results in malocclusion; it occurs because of a lack of coordination between tooth size and arch dimensions.[6,7] The lower incisors are the teeth most frequently involved.

This study was conducted to assess the Prevalence of Edentulism and Crowding in Subjects of a Known Population.

In this study, there were 64 males and 36 females. It was observed that edentulism was seen in 23 patients and crowding was observed in 11 patients.

Borg Bartolo R et al[8] analyzed data collected from studies worldwide on the prevalence of edentulism and dental caries, in community-dwellers aged ≥ 45 years. The quality assessment tool by The National Heart, Lung and Blood Institute for Observational Cohort and Cross-sectional studies was used. Meta-analysis using the random-effects model (95% confidence interval) was done with data on participants who were edentulous and/or had active dental caries and stratified by regions of the world, age and Gross National Income per capita. Limitations in the data arose from several factors such as design of the studies included differences in socioeconomic status and access to health care among different countries. Eighty-six papers and seventeen NOHS were selected for data extraction. Majority of the studies (n = 69) were cross-sectional and of fair quality. 1.1%-70%, 4.9% - 98% prevalence of edentulism and dental caries, respectively. 22%, 45% estimated random-effects pooled prevalence of edentulism and dental caries, respectively. Within the limitations of this study, the findings indicate that untreated dental caries and tooth loss are prevalent on a global level with wide variations among different countries, age groups and socioeconomic status.

Kaur H et al[9] recorded the prevalence of malocclusion among 2,400 adolescents in Karnataka state, India and to define difference in malocclusion status in urban and rural population. Each individual was assessed for occlusal traits - sagittal occlusion, overjet, overbite, crowding, midline diastema, and crossbite. Examinations were computerized and analyzed using Statistical Package for Social Sciences version 16. Chi-square test was used for computing statistical significance. 87.79% of population had malocclusion. Out of which 89.45% had class I, 8.37% had class II, and 2.14% had class III malocclusion. Normal overjet and overbite was seen in 48.22 and 49.87% of subjects, respectively. Frequency of crowding was 58.12% and 15.43% of subjects had midline diastema. Anterior crossbite was present in 8.48% and posterior crossbite in 0.99%. Urban population had twice the class II sagittal occlusion, and increased overjet as compared to rural population. Malocclusion is widely spread among population of Karnataka state, with greater prevalence in urban population. Early exfoliation of deciduous teeth and refined diet can be considered as viable etiological factors.

5. CONCLUSION

From the findings of this study, it can be concluded that prevalence of edentulism and crowding was 23% and 11%, respectively.

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