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ORIGINAL ARTICLE

Prevalence of complete edentulism among Udaipur population of India



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KEYWORDS

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Abstract *Objective:* To study the prevalence of complete edentulism among rural and urban population of Udaipur district of Rajasthan in relation to age and gender.

Materials and methods: A cross-sectional questionnaire based study was conducted among 524 completely edentulous subjects who reported for the first time for a complete denture treatment, to the Department of Prosthodontics, Darshan Dental College and Hospital, Udaipur were selected over a period of 1 year.

Results: The collected data were analyzed statistically using the chi-square test at the significance level of $p \leq 0.05$. Chi square test is used to evaluate the statistical significance of differences in frequencies between subgroups using spss software nu 10. The following results were obtained, according to gender, 323 subjects were male and 201 subjects were female. According to region, out of 323 male subjects, 169 subjects were from rural region and 154 subjects were from urban region. Edentulous males and females were found maximum from rural and urban region, respectively. More male subjects were present in group II (51–70 years) in both rural and urban regions. Female subjects were found maximum in group I (30–50 years) and group II (51–70 years) in rural and urban region, respectively. According to duration of complete edentulousness maximum number of male subjects were found edentulous in category of up to 6 months and 6 months–1 year in rural and urban region, respectively as compared to female subjects which were found edentulous in category of 6 months–1 year and up to 6 months in rural and urban region, respectively. Periodontal disease was the main cause of edentulism both in male and female subjects of rural and urban region.

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Conclusions: Periodontal disease can be prevented by stopping the habit of smoking and maintaining proper oral hygiene by giving the instructions of brushing twice daily and visiting to the dentists every 6 months so the prevalence of complete edentulousness may be reduced.

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1. Introduction

Loss of teeth is mainly attributed to dental caries and periodontal diseases. Factors leading to tooth extraction are not however dental in origin. Edentulousness and a small number of remaining teeth are associated with low education level and family income.¹ Edentulism is defined as the loss of all permanent teeth and is the treatment outcome of a multifactorial process involving biologic process (dental caries, periodontal disease, trauma and others) as well as non-biologic factors related to dental procedures (access to care, patient preferences).² The prevalence and patterns of tooth loss have been studied to a certain extent in western countries and a few such studies have been carried out in India.³ Dental caries and periodontitis are caused by microorganisms but age, gender, oral hygiene and lifestyle (dietary habits, tobacco smoking, and alcohol intake) may modify the progression of these disorders. People have preferred extractions to conservative treatment due to long distance between home and dental services. The influence of socioeconomic and the socio-demographic factors on edentulousness has been well documented.^{1–7}

The distribution and prevalence of complete edentulism between developed and less developed countries may be associated with a complex interrelationship between cultural, individual and socioeconomic factors and health. World health organization databanks indicate that dental caries is prevalent in the majority of countries internationally with some reporting 100% incidence in their populations, severe periodontal disease is estimated to affect 5–20% of the population and the incidence of complete edentulism has been estimated between 7% and 69% internationally.¹ Several cross-sectional studies on the prevalence of edentulousness show consistently that edentulousness is associated with age, gender and living areas in most countries.^{1,2,4–6}

Edentulism rates among the elderly have been reported as relatively high in a number of European countries such as England (74–79%), Scotland (85%), Ireland (72%), Northern Ireland (69%), the Netherlands (83%), Denmark (68%), Finland (67%) and Norway (57%). In Australia, 68% of people aged 65 or more were edentulous. Edentulism is consistently shown to increase with age, with females having higher rates of edentulism than do males.⁵

We do not have the statistics of either the cause of edentulism, proportion of loss of teeth or percentage of population of India who are completely edentulous, so this study was carried out in both rural and urban populations of Udaipur district of Rajasthan.

1.1. Aims and objectives

The present study was conducted with the following aims and objectives.

1. To evaluate the percentage of complete edentulousness in relation to age and gender.
2. To determine the duration of complete edentulousness in relation to age and gender.
3. To determine the reasons of complete edentulousness.

2. Materials and methods

An analytical, cross sectional, epidemiological study to determine the prevalence of complete edentulous in relation to age and gender among rural and urban population of Udaipur district of Rajasthan was conducted. 524 completely edentulous subjects, who reported for the first time for a complete denture treatment, to the Department of Prosthodontics, Darshan Dental College and Hospital, Udaipur were selected over a period of 1 year (January 2010–December 2010). Subject's were selected on the basis of clinical oral examination only not by radiographic examination. Subject's age was divided into the following groups.

Group I – 30–50 years.

Group II – 51–70 years.

Group III – 71 years and above.

The patients were informed of the nature of the study and gave their consent.

2.1. Questionnaire proforma

A questionnaire which sought inquiries related to socio-demographic factors which included name, age, sex, occupation was prepared. Next part of the questionnaire elicited information regarding the duration of edentulousness and reasons of edentulousness.

2.2. Procedure for collection of data

The questionnaire was completed personally for each of the patient who agreed to participate in the study, in the form of an interview which appeared like normal conversation to allow for introduction and exploration of ideas and probe more deeply.

Following the completion of the interview, the patients signed at the end of the questionnaire to mark their consent.

3. Results

For the present study, 524 completely edentulous subjects who reported for the first time for a complete denture treatment, to the Department of Prosthodontics, Darshan Dental College and Hospital, Udaipur were selected over a period of 1 year.

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