

Denture Hygiene Knowledge and Practices among Complete Denture Wearers Seen at Dental Hospital

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ABSTRACT

Introduction: Edentulism is an important public health issue globally for its high prevalence (exceeding 10% in adults aged ≥ 50 years). Therefore, demand for complete denture have been increased in recent past decades, unfortunately, patients have not proper knowledge on the daily and long-term care and maintenance of prostheses. Various oral pathologies are Consequences of Improper denture and oral cleanliness habit.

Objective: The objective of this study was to evaluate denture hygiene practices and techniques of cleaning their denture in complete denture patients according to their age and duration of denture wearing.

Materials and Method: A cross-sectional study which was conducted in the department of Prosthodontics at Punjab Dental Hospital, Lahore, Pakistan. Patients with self-care ability and adequate overall health who were using either single or full complete dentures for more than six months were included in the study. A total of 250 patients were asked about denture care practices. They were subdivided according to age groups as 55-64 years (Group I) and 65-75 years (Group II). All this information recorded in a predesigned proforma. Data was interpreted by using the Statistical Package for the Social Sciences software for windows, version 23.

Result: This study revealed that out of 250 patients, 148 (59.2%) patients cleaned their dentures once daily. About 130 (52%) patients used only water for cleaning their prosthesis.

Conclusion: This study emphasizes the need for improvement in patient education and awareness. They should be guided about the maintenance of denture hygiene.

Keywords: Acrylic dentures; denture hygiene; oral habits.

INTRODUCTION

Oral health is a basic constituent of the overall systemic health, self-confidence and quality of life.¹ Dental caries and periodontitis are common reasons of tooth loss.² Edentulism not only compromises eating abilities but also effect the phonetics and may compromise esthetics.³ Removable dentures

are common and affordable replacements for missing teeth in our community.⁴ Maintenance and care of prosthesis by patient have a significant role for the success and prognosis of the treatment.⁵ Ill-fitting and unclean dentures lead to oral mucosal pathologies and/or improper mastication.⁶ Improper denture wearing habits and inadequate denture hygiene have led to traumatic ulcer, denture

stomatitis, denture irritation hyperplasia, angular cheilitis and oral carcinoma.^{4,7,8} Post insertion instructions must be given to the patients about hygiene of prosthesis, ill-fitting denture features, rebasing methods, and requirement of a new denture after some years.⁹ Dental professionals must have proper information of denture cleansing strategies to maximise the services offered to their denture patients.¹⁰ The objective of this study is to evaluate denture hygiene habit among patients according to their age and various denture cleaning methods that are commonly practiced in our population. This may be helpful for dental practitioner to highlight the need of denture hygiene by improve patient knowledge.

MATERIALS AND METHOD

This cross-sectional descriptive design was carried out in complete edentulous patients attending at department of Prosthodontics, Punjab Dental Hospital, Lahore. Two hundred and fifty patients having age between 55-75 years were selected for this study. Patients were categorised into two groups according to their age, group I (55-64) and group II (65-75). After taking informed consent from patients, data collection was carried out from 10th April 2019 to 10th July 2019.

Questions about age, gender, duration of denture wearing, and few questions to check the level of

awareness of prosthesis hygiene, frequency of denture cleansing, knowledge of various techniques to clean dentures, storage and habit of denture wearing at night were asked. All collected data were noted in predesigned proforma. Data was analyzed using the Statistical Package for the Social Sciences software for windows, version 23.

RESULT

Out of 250, 155 (62%) were male and 95 (38%) were female. One hundred and fifty (60%) belonged to age group of 55-64 years of age and one hundred (40%) patients were of 65-75 years of age. Subjects mostly in the age group of 55-64 years cleaned their dentures once daily, that is, 98 (65%) and 43 (43%) once/twice in a week in the age group of 65-75 years (Table 2). Mostly patients used only water to clean their denture 130 (52%) whereas 62 (25%) kept their denture clean with soap, toothbrush and water. Only 18 (7%) patients, maintained hygiene with cleansing tablets and water (Table 1). The majority of participants belonged to age group of 55-64 years had more than two years of experience of denture wearing. Majority of the patients acknowledged that they did not memorise and understand all instructions provided by the clinician at the time of insertion of denture and follow up 175 (70%). Only 75 (30%) admitted that they were provided all directions related to the denture hygiene.

Table 1: The method of denture cleansing.

Denture cleansing	Number and percentage of patients, n (%)
Water only	130 (52)
Water, soap and tooth brush	62 (25)
Water and brush only	40 (16)
Water and cleaning tablets	18 (7)

Table 2: Denture cleansing among patients of different age groups.

Age groups (years)	No. of patients, n	Once daily, n (%)	Once or twice in a week, n (%)	Occasional, n (%)
55-64	150	98 (65)	42 (28)	10 (6.6)
65-75	100	50 (50)	43 (43)	7 (7)

DISCUSSION

Status of the denture helps to access the oral health condition. Prosthesis should be cleaned to prevent biofilm development. In our study 50% patients having age group II (65-75) cleaned their denture once daily, this result is less than described by Kosuru et al (81.6%)⁴ but higher than that conducted by Jandial et al (24%).¹¹ The percentage of participants who reportedly clean their denture once daily is also higher in study reported by Peracini et al (99.06%).⁸ Majority of subjects in this study cleaned their denture with water only (52%) but these results are lower than that conducted by Patel et al.¹² These values are comparable to the study that was conducted by Azad et al.⁶

Patients used soap along with water and brush are 25% in our study in contrast to the values reported by Kosuru et al reported 9%⁴ and Shetty et al (83%).⁵ This displayed that need to aware elderly people regarding cleaning and hygiene of denture along with oral health.

Patients using water with cleansing tablets constituted 7% in contrast to the values reported in the studies of Cacklen et al¹³ (39.3%), Azad et al⁶ (15%) and Vural et al¹⁴ (37.5%). It was found that soaking in cleansing tablet and sodium hypochlorite (NaOCl), were the most commonly used cleansing agents.¹³ Denture cleansing with some mechanical tools like tooth brush could lead to abrasion of denture surfaces.⁶ Peracini et al described that 58.49% patients clean their denture by immersion

and 38.7% patients used water out of all solutions used for immersion of the dentures.⁸

The majority of dentists instruct their patients a combination of brushing technique and soaking in cleansing solutions. However, there are still some dentists who showed ignorance in this field or who did not recommend adequate and efficient cleansing protocols. Therefore results of the present study revealed that dental professionals must updated their knowledge of denture cleansing strategies in order to inform and aware the patients about denture hygiene. High standard of denture cleaning and oral health must avoid various oral pathological conditions associated with poor condition of prosthesis.

CONCLUSION

It is concluded that within the limitations of this study, Majority of the patients had not proper knowledge of cleaning the dentures. Regular visits to assess the status of denture hygiene and mucosal surfaces examination along with denture cleaning and maintenance instructions will be fruitful for the patients to get better use of their denture and improve their oral health.

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Conflict of interest: None

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