

Clinical Survey of Denture Care and Maintenance in Denture Wearing Completely Edentulous Patients

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I. INTRODUCTION

Oral health goals (2020) aims not only to increase the percentage of population with availability to oral health care but also to provide adequate information regarding oral health care. Examination of a patient with dental prosthesis can help to provide valuable information regarding denture care and maintenance by geriatric patients (2).

Complete dentures are the most common treatment for the completely edentulous patient to improve their health by establishing function (1). The phase of oral care and denture maintenance begins once the patient is rehabilitated with complete denture. The dental professional must guide and encourage the patients regarding prosthesis care and maintenance (1).

Patients should be instructed about the periodic clinical visits and regarding various denture cleaning aids (3). Regular oral and dental hygiene measures plays an essential role in maintenance of oral health and the long term success of prosthodontic treatment. Patients motivation towards the correct use of prosthesis and hygiene maintenance procedures becomes important for the success of rehabilitative treatment procedures.

This paper aims at evaluating the denture hygiene knowledge and practices among patients using complete dentures using a questionnaire survey.

II. MATERIAL AND METHODS

A questionnaire was used to know the knowledge of denture wearers regarding care and maintenance of the dentures. The questionnaire contained 16 questions related to demographic details of patients, cleaning routine and other details related to denture hygiene.

A total of 150 complete denture wearers, aged 40-92 years, with atleast 3 months of prostheses use participated in the survey. The patients were informed about the study and written consent was taken. Ethical clearance was obtained from the institutional ethical committee to conduct the survey. Kuppuswamy's socioeconomic status scale was used to classify the socioeconomic status of the patients (4). This was based on the level of education, monthly income and occupations of the patients. According to this scale, the patients were categorised into five classes: Class I (Upper),

Class II (Upper middle), Class III (Lower middle), Class IV (Upper lower), Class V (Lower) [Table 1].

III. RESULTS

Out of 150 patients, 53.33% were male and 46.67% were female within the age group 40-92 years. All the patients had used their dentures for atleast 3 months. 61.33% had used them for less than a year, 29.33% had used their dentures between 1 and 5 years and only 9.33% had used their dentures for more than 5 years.

Data analysis showed that, 100% of Class I people removed their prostheses before sleeping, 27.78% of Class II people slept with their prostheses, 24.32% of Class I people slept wearing their prostheses, 46.43% of lower class people slept with their prostheses. Among all the 150 subjects, 58% removed their prostheses at some point during the day and 38.67% slept wearing their prostheses. When questioned about the placement of prostheses when it is out of mouth, 41.4% of total (150) subjects kept their prostheses in container in tap water, 33.33% in container without water and 25.25% in container in hot water.

When asked about the frequency of cleaning of dentures, 92.86% of lower class people and 86.49% of Class IV people cleaned their denture only once a day, whereas 75% of Class I people and 61.11% of Class II people cleaned their denture twice a day. There was a statistically significant difference found between socioeconomic status about frequencies of cleaning of dentures. Among all (150) subjects, 96.67% cleaned their denture daily and 3.33% did not.

Of the subjects, 92.67% cleaned their denture with tooth brush, 62.50% of Class I people used soap, 50% of Class II people used soap, 41.94% of Class III used soap, 45.95% of Class IV people used water, 60.71% of Class V people used water. 37.50% of Class I people used toothpaste, 33.33% of Class II people used toothpaste, 25.81% of Class III people used toothpaste, 21.62% of Class IV people used toothpaste, 61.07% of Class V people used toothpaste. Among all (150) subjects 42.67% of people used water, 22.67% used soap, 34.67% used toothpaste to clean their prostheses.

When patients were separately questioned regarding the use of denture cleansers, 100% of Class I people claimed to used denture cleansers, 55.36% of Class V people claimed no use of denture cleansers. Among all 150 subjects, 61.33% used denture cleansers, 38.67% did not used denture cleansers.

IV. DISCUSSION

The Oral health and behaviour of completely edentulous patients present a different picture due to variation in their socioeconomic status and lifestyle. In recent years, there has been increased interest and emphasis on public awareness in the health sector. The present survey was undertaken to assess the patients knowledge regarding the post insertion care of complete denture prosthesis, reported to Goa Dental College and hospital, Bambolim. This would help the patient to give their opinion regarding the prostheses and would serve as a guideline to the prosthodontist to pay attention to the factors of patient concern.

The patients visits to the dental institute was due to their routine dental check up, Follow up visits and desire for repair or replacement of the prosthesis. Of all the selected patients included in the survey 53.33% were male and 46.67% were female respectively. The inclusion criteria for the study were completely edentulous patients with healthy mucosa and that have worn complete dentures for atleast 3 months from the time of its insertion. The patients with inflamed or infected oral mucosa, temporomandibular disorders, neuromuscular disorders and psychiatric condition that will influence the understanding and answering the questionnaires were excluded from the study.

Of the subjects studied, 38.67% slept wearing their prostheses in their mouth and 100% of upper class people removed their prostheses before sleep. Most of the people who slept wearing their denture told that they were not given such instructions .On the other hand, few reported psychological benefit when they slept with their denture. Dikbas et al. (5) and Barbosa et al. (6) reported 41.5% and 64% subjects respectively sleeping wearing the dentures. Baran and Nalcaci (7) also showed that 55.2% slept wearing their dentures in the mouth.

Of the subjects studied, 41.4% of total subjects kept their prostheses in container in tap water and 33.33% in container without water. This may be due to the lack of adequate oral hygiene instructions by the dentists.

Of the subjects studied, 96.67% cleaned their denture daily. When asked about the frequency of cleaning of dentures, 92.86% of Class V people and 86.49% of Class IV people cleaned their denture only once a day which can be considered satisfactory. According to Nevalainen et al (8), this frequency would not indicate efficient cleaning. In the study done by Ozcan et al. (9), 45.7% of 70 subjects in the study reported cleaning their prosthesis more than once a day.

When asked about their cleaning regimen, it was seen that most commonly used method was toothbrush with soap. 60.71% of Class V people used a toothbrush with water. This was due to lack of motivation by the dentist. A review of literature showed that percentage of subjects using mechanical

methods for denture cleansing varied from a high of 97%(10), 80.1%(11) to a low of 57.1%(12) and 40.59%(5). When questioned separately about the use of denture cleansers, 55.36% of Class V people did not used denture cleansers. This may due to lack of instruction from the dentist or due to increase cost of denture cleansers.

V. CONCLUSION

The results of this study suggest that, the majority of denture wearers have limited knowledge about denture cleansing and oral hygiene practices. Patients should be instructed about denture cleansing methods, materials and the harmful effects of wearing denture at night. The demonstration of how to remove plaque from the denture surface will be beneficial to the patients. Periodic recall visits to evaluate denture and mucosal surface along with reinforcement of oral hygiene instructions will help the patients to maintain good oral health.

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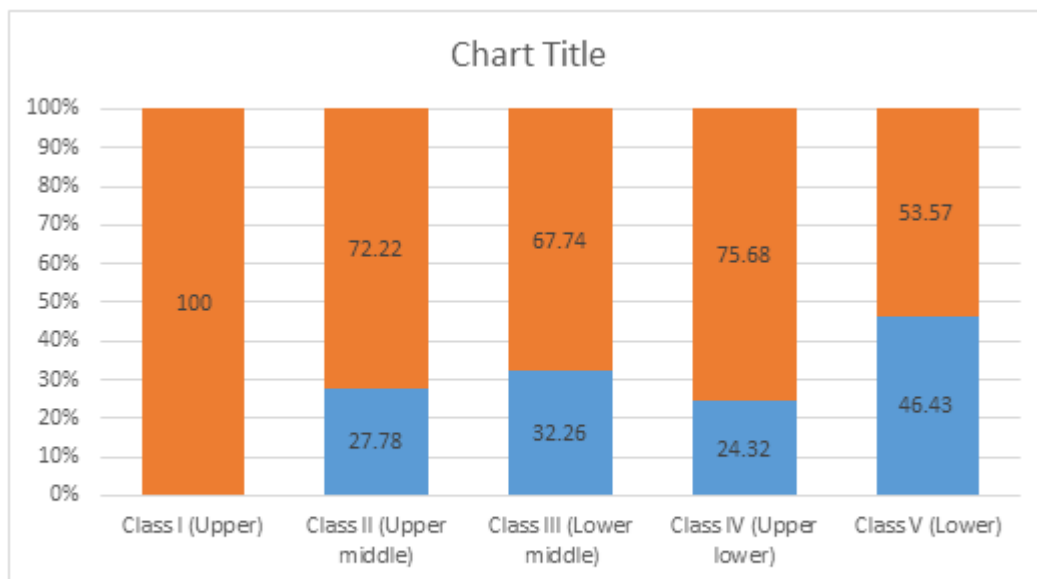


Figure 1. Socioeconomic classes of subjects who normally sleep with their prosthesis.

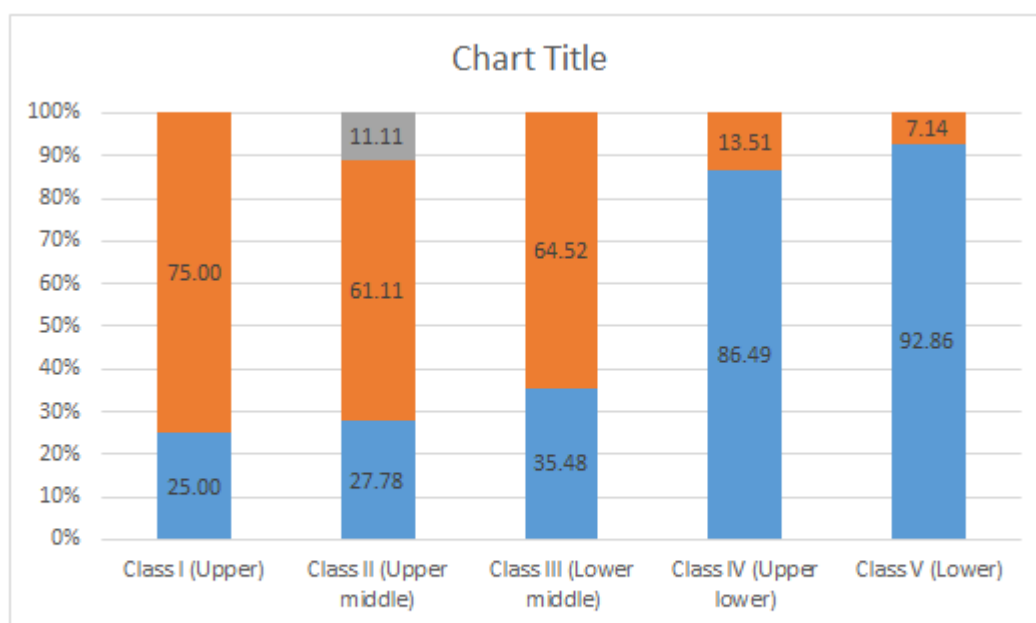


Figure 2. Frequency of complete denture cleaning (on socioeconomic basis).

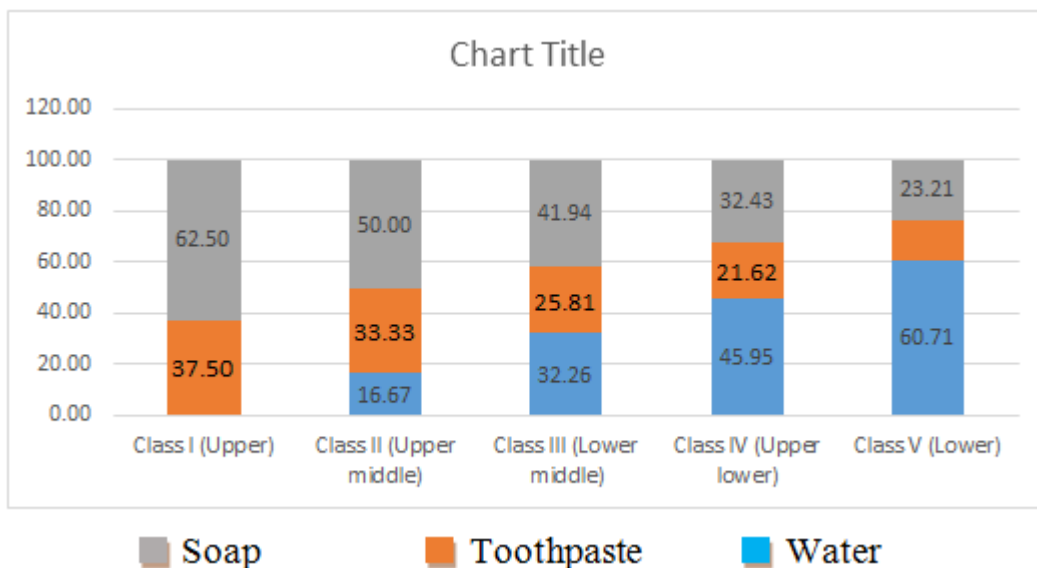


Figure 3. Other aid to cleaning the prosthesis along with the toothbrush (on socioeconomic basis).

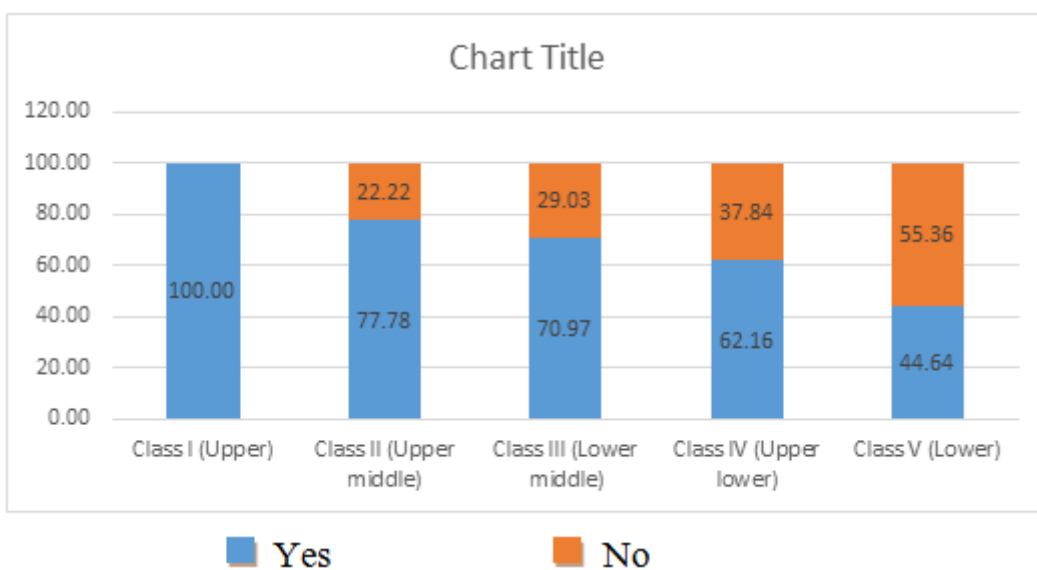


Figure 4. Use of denture cleansers by the subjects (on socioeconomic basis).

TABLE 1. Patient Classification based on Kuppaswamy’s Socio-economic Classification

	Class I (Upper)	Class II (Upper middle)	Class III (Lower middle)	Class IV (Upper Lower)	Class V (Lower)	Total
Male	4	11	20	21	24	80
Female	4	7	11	16	32	70
Total	8	18	31	37	56	150