

## ORIGINAL ARTICLE

### Attitude towards Denture Hygiene Habits among Elderly Patients Wearing Complete Dentures: A survey based study

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#### ABSTRACT:

**Background:** The quantity of completely or incompletely edentulous patients is still expansive in exhibit days. Dentures are utilized for supplanting lost teeth and restoring the functional and esthetic conditions to the patients. The primary aim of this article is to decide the denture cleanliness propensities in entire denture patients as indicated by their age and time of dentures. **Materials and Methods:** Total 120 complete denture wearing patients age 50 ±15 years took an interest in this examination. Surveys were replied by patients wearing complete upper and lower dentures. The survey included data on gender, age, length of prosthesis utilize, cleaning strategies and materials, and so on. **Statistical Analysis and Results:** Nearly 52% of the subjects cleaned their dentures every day once. Members from the more young age gathering and who had been wearing dentures since 2 years kept up better recurrence of cleaning. The dominant part of these subjects utilized water and brush for denture cleansing. **Conclusion:** Poor state of complete dentures found in the populace is fundamentally because of irregularly cleansing habits and furthermore less utilization of cleansing solutions. Dental specialists should give legitimate guidelines with respect to maintenance of denture cleanliness.

**Keywords:** Denture Hygiene, Complete Denture, Habits, Denture Cleansers.

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#### Introduction

Tooth loss in any grown-up populace is exceedingly prone to increment as the populace ages on the grounds that the elements that prompts the loss of teeth – dental caries, loss of periodontal support, a past history with dento-alveolar injury, a background marked by dental care – are added substance over time.<sup>1,2</sup> For this reason, the rates of tooth loss are generally the most noteworthy in the older age groups. Complete dentures are the most well-known treatment for add up to loss of teeth in a dental arch. Despite the fact that the rate of tooth loss keeps on declining among grown-ups in the, populace shifts have brought about a sustained, even somewhat expanding, interest for complete dentures.<sup>3</sup> As denture cleanliness has been accounted for to be the primary methods for averting oral lesions.<sup>4,5</sup> Food particles situated between the denture and the gingiva or between the denture and the sense of taste permit augmentation of *Candida* spp., microscopic organisms, which can cause denture stomatitis.<sup>6</sup> These microorganisms may likewise fill in as repositories for

dispersed diseases with gastrointestinal and pleura pulmonary association. Subsequently cleaning and disinfecting of dentures are basic for the support of oral delicate tissue health.<sup>7,8</sup>

Elderly denture wearers are prone to suffer from one or more oral mucosal lesions, such as denture stomatitis, burning mouth syndrome, angular cheilitis, candidal secondary infections, and many other mucosal lesions. Denture care instructions to denture patients should also include instructions to clean the soft tissues of the oral cavity. Also, elderly individuals are having numerous systemic ailments and Diabetes Mellitus being one of such illnesses very common among elderly and have demonstrated more appearances of candidiasis including the Denture Induced Stomatitis (DIS).<sup>9</sup> Therefore, it is basic to catch up these patients frequently for their oral tissue wellbeing and cleanliness support of the dentures.<sup>10</sup> Studies have demonstrated that the patients who are not trained legitimately for cleanliness and upkeep of their dentures indicate inadequately kept up denture and DIS. In different

occurrences, patients don't catch up routinely to the dental practitioners for control and upkeep of their dentures at the fitting interims. Along these lines it's the obligation of the treating dental practitioner to direct their patients legitimately about denture cleaning and suitable chemicals to be used.<sup>11</sup> Directions ought to be given with respect to washing of dentures and mouth after each supper. Patient's should clean mucosal surfaces of the edges and the dorsal surface of tongue every day with brush, denture chemicals may likewise be utilized. Notwithstanding, it has been discovered that for the most part denture wearers don't focus on oral hygiene.<sup>12</sup> This might be because of diminishing manual capacities because of cutting edge age. In this way, this cross-sectional study planned to explore the denture cleanliness propensities among seniority denture wearers.

**Materials and Methods**

This descriptive cross-sectional investigation was conducted on 120 totally edentulous patients with age 50 ±15 years reporting to department of Prosthodontics. A poll was produced and given to the patients for filling them. The poll was later tried among a gathering of 30 patients to know the suitability and comprehend the capacity. The reason for the study was disclosed to the subjects and their composed assent was gotten. Out of 120 patients, 65 patients were male and 55 were female. In the wake of taking educated assent from the patients, information accumulation was completed. The poll contained statistic data, for example, age, sex, time of wearing, and different inquiries to know the demeanor of denture cleanliness propensities, recurrence of cleaning, and nighttime denture wearing propensities. The interviews were conducted in the local language. A single trained investigator recorded the answers to the questionnaire. Despite the fact that denture hygiene education is the utmost important part of denture therapy, most elderly patients are not sufficiently informed and periodically recalled to review denture care.

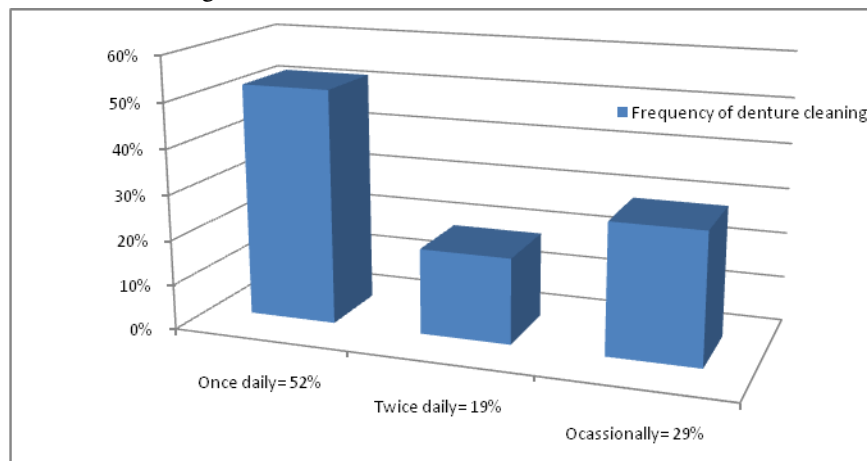
**Statistical Analysis and Results** All the collected data were compiled logically and subjected to basic statistical

analysis using SPSS statistical package for the Social Sciences version 21 for Windows.. Nonparametric test, namely, chi-square test, was used for further data analysis; p-value. Nearly 76% of the patients admitted that they do not remember the verbal and written instructions for denture maintenance at the time of insertion of dentures by the dentists. Only 24% told they were given denture hygiene instructions. Out of the total sample size of 120 subjects who participated in the study, 58 belonged to the age group of 40-50 years, 34 subjects were of 51-60 years of age, and 28 were >60 years of age. Overall, 52% participants cleaned their dentures almost once a day and 39% people use only water for cleansing (refer Table 1 & Graph 1, 2).

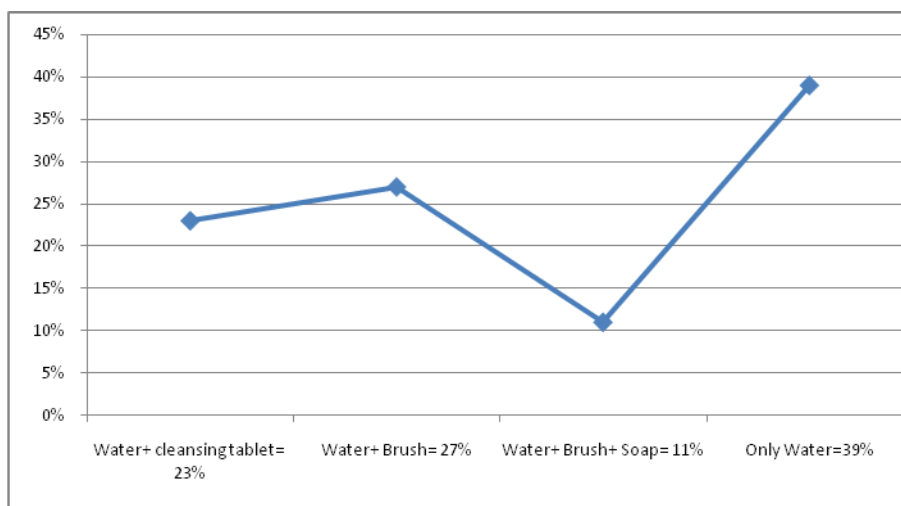
**Table 1:** Demographic details of patients wearing CD

Variable	Number
<b>Age</b>	
40-50	58
51-60	34
>60	28
<b>Gender</b>	
Male	65
Female	55
<b>Time of use of CD</b>	
<1 year	27
1-5 year	34
6-10 year	22
11-15 years	19
>15 years	18
<b>Condition of denture</b>	
Good	57
Fair	39
Poor	24
<b>Nocturnal denture wearing habit</b>	
Remove denture	68
Does not remove	43
Remove sometimes	9
<b>Medical history</b>	
Present	37
Absent	83

**Graph 1:** Frequency of denture cleaning



**Graph 2:** Method of denture cleaning



**Discussion**

Routine denture cleansing can be done with mechanical methods such as toothbrushes. However, they cause surface abrasion which leads to undesirable aesthetics. Denture abrasions and pigmentation are associated with toothbrush and toothpaste use. Cleansing and disinfecting of dentures are fundamental for the support of oral delicate tissue wellbeing. Satisfactory cleaning propensities render biofilm arrangement troublesome, in similarity to what occurs on the normal dentition. In the present investigation, the majority of the patients used to clean the dentures with water alone (39%). This esteem was higher than that detailed by Apratim et al.<sup>13</sup> and lower than that revealed by Patel et al.<sup>14</sup> Use of brush with water was bring down among our investigation bunch populace contrasted with that of Patel et al. (27%). Different examinations led by Coelhe et al.<sup>15</sup> and Dikbas et al.<sup>16</sup> announced considerably higher esteems in contrast with the present investigation. Veres et al<sup>17</sup> watched that 36% of the members brushed their dentures, and not very many individuals (5%) utilized submersion as cleaning and 63% utilized just water to clean their prostheses. Though the majority of the examinations had discovered that normally utilized denture cleanliness technique is brushing with toothbrush.<sup>18,19</sup> Some creators specified that brushing with toothpaste may make denture surfaces rougher, which builds the gathering of dental plaque and diminishes the sparkle of denture surfaces.<sup>20</sup> Furthermore; brushing without toothpaste is an insufficient way to deal with evacuate the microorganisms that colonize resinous materials. Ideally, blend of brushing and dousing with purging arrangements has been prescribed as the best technique for cleaning dentures.<sup>21</sup>

Around 52% of the examination subjects specified that they clean their dentures once day by day and the discoveries were like Ozcan et al<sup>22</sup> in which 45.7% expressed that they clean their dentures once every day. However many examinations have demonstrated higher recurrence of

cleaning as Peracini et al<sup>23</sup> who revealed 73.58% cleaned their dentures 3 times day by day and Pietrokvoski et al<sup>24</sup> said that 96% of patients announced cleaning their dentures 2 times each day.

The present investigation had demonstrated that 56 % subjects remove their dentures at night and this propensity was certain than different examinations as 41.5% revealed by Dikbas et al, 55.2% by Baran and Nalçaci<sup>25</sup> and just 26.3% detailed by Marchini et al<sup>26</sup> who evacuate their dentures. In a perfect world prostheses ought not be worn overnight to offer rest to the supporting tissues. As indicated by the state of the dentures around half of the dentures were in great condition in this examination. Whereas Amjad et al<sup>27</sup> in 2010 said that denture cleanliness was appraised as "Good" for 21.9% members, "Fair" for 45.0% and "Poor" for 32.94%. Chemical methods have the benefit of being easy to utilize. Be that as it may, Chemical methods have impediments, for example, high cost and metal consumption and in addition the blanching of acrylic gum bringing about harm to the denture base.<sup>28</sup> Chemical agents might be an essential option, particularly for elderly patients and those with motor deficiencies. Improvement in denture and oral cleanliness has been seen by submersion in chemicals, for example, chlorhexidine, alkaline peroxides and sodium hypochlorite.<sup>29</sup> Prosthesis immersing in chlorhexidine gluconate has been appeared to be powerful against growths, avert bacterial colonization and restrain the advancement of inflammation.<sup>30</sup> Alkaline peroxides are viable at disinfecting prostheses as they accomplish a 99% slaughter rate of most life forms when dentures are doused for the prescribed 10-to 20-min periods. In addition, the oxidizing operators help to evacuate recolors and give some antimicrobial action. Ghalichebaf et al tried four prosthesis cleaning drenching specialists and found that the best were those with high sodium hypochlorite content.<sup>31</sup> Sodium hypochlorite has both bactericidal and fungicidal impacts and acts

specifically on the plaque's natural network. It is likewise utilized as an entire denture inundation answer for the brief treatment of denture stomatitis. Dychdala expressed that when prostheses are submerged for 5 min in 0.525% sodium hypochlorite arrangement, viable cleansing happens.<sup>32</sup> Barnabe utilizing sodium hypochlorite at 0.05% presumed that when consolidated with mellow cleanser, a huge lessening in clinical indications of denture stomatitis was watched.<sup>21</sup>

In a perfect world, both mechanical and synthetic instruments ought to be utilized together to accomplish better plaque control. The blend of brushing and drenching technique has been prescribed as the successful path for cleaning dentures.<sup>33</sup> In a review by Veres et al. concerning dental specialists' dispositions, it was brought up that 71% of private dental practitioners prompted a mix strategy to their patients.<sup>34-35</sup> Moderately little example measure breaking points to reach any distinct determination of a very huge edentulous geriatric populace who may be having denture prosthesis however don't to the hospital until the point when they feel their dentures truly excruciating and difficult. Since the dental practitioners honing in these fringe towns are likewise moved on from a similar dental school, these dental specialists additionally train the patients practically in same way. Subsequently a more extensive examination should be led across the country to draw the genuine picture in regards to this issue.

### Conclusion

In the present study, the greater part of the patients was ignorant of the measures of cleaning dentures. Most extreme patients utilized water alone to clean the dentures. Mechanical strategy for cleaning dentures utilizing toothbrush was less among our members. Just an immaterial number utilized chemical technique, i.e. submersion in cleansing solution, in mix with mechanical strategy. Mindfulness should be expanded among denture wearers by leading instructive and motivational camps. Additionally inquire about with an oral examination of the patients is required to correspond the different components considered.

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