

Hygiene habits and frequency of dental visits in mobile denture wearers 65 years and older, Sarajevo, June-September 2018

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Abstract

Introduction: Hygiene of removable dentures can not be separated from oral hygiene. Removable dentures persist in mouth for up to 16 hours every day. Inadequately cleaned dentures with lots of plaque accumulated, can compromise health status of mucosa and remaining teeth. It can lead to stomatitis protetica, candidiasis and periodontitis.

Aim of the research was to investigate habits of 65+ old patients, regarding the method and frequency of cleaning their dentures, to investigate substances used for cleaning and to investigate frequency and causes for dental visits.

Materials and methods: Questionnaire was presented to 61 patient who were 65 or older, and have removable dentures.

Results: 82% of the patients interviewed is cleaning their dentures at least twice daily. 93% of them is using the mechanical method of cleaning the dentures. 86% is using a toothpaste for cleaning, 52% is keeping the dentures in clean water when it is not in the mouth, 48% is using cleaning tablets. 57% of interviewed patients is wearing dentures at night. 48% of them reported that they have never been instructed from their dentists on how to clean their dentures. 36% of them goes to the dentist only when have some emergency problem.

Conclusion: The patients had limited knowledge about prosthetic- and oral hygiene, and they rarely visited dentist. The data collected provided an insight on habits of patients and pointed to the need of greater involvement in prosthetic hygiene promotion and in better informing of the patients.

Keywords: mobile dentures, hygiene

Introduction

Sarajevo Canton had in 2017. 65000 people over 65 years (Statistic Institute of Sarajevo Canton). Currently, data on the exact number of 65+ persons wearing removable dentures does not exist. Authors Cakan et al. [1] conducted a research and estimated that the way of cleaning dentures with toothbrush and a toothpaste was a method of choice in 57.6% patients and 53% never took their dentures off, not even during the night.

Patients used tablets for denture cleaning very often [1,2], and large number were complaining that primary haven't been instructed how to maintain dentures [3-6]. Dentures, because of the porosity of the acrylic material, and its morphology, are receptive to plaque accumulation, which is contributing to gingival and teeth deterioration [7-9]. It is recommended to increase the oral hygiene for 50-100%, after inserting dentures [10]. Because of the continuous night wearing, which is present in many people, there is a high incidence of denture stomatitis, mostly caused by *Candida albicans* [11,12]. Different topography of the dentures can cause increased plaque accumulation [13,14].

Aim of the study

Motive for the research was a large number of patients who neither practiced, nor knew the meaning and importance of denture cleaning, and did not regularly visit the dentist.

Aim of the study was:

- To evaluate the way and frequency of cleaning dentures,
- To evaluate the frequency, motivation and attitude patients had towards dental visits

Study hypothesis

During the study, hypotheses have not been established.

Material and methods

The research project was approved from the general director of the PI Health Center of Sarajevo Canton, decision 01-05-4195-5/18, date 30 May 2018. and Center for science and teaching, decision 01-05-4195-4/18 from 24 May 2018. The total number of 61 patients of both genders from Dentistry-prosthetic department PI Health Center of Sarajevo canton, who came during the period of June-September 2018., were interviewed using a questionnaire,

addressing denture wearing, denture cleaning habits and habits regarding their dental visits. Only patients with mobile dentures could participate.

The questionnaire was tested on 10 patients, for checking the comprehensibility and need for potential correction (wasn't needed).

The questionnaire consisted from two parts :

1. General part (addressing gender, age and type of dentures),
2. Special part (addressing denture cleaning habits and habits regarding dental visits).

The patients were asked to choose an answer for the each question (Figure 1).

Figure 1. The questionnaire.

Ethical aspects

The research has been conducted according to the current regulations and principles of Helsinki declaration. Participants of the study signed the informed consent and had a copy with the signature of the researcher (Figure 2).

Figure 2. Participants informed consent with the signature of the researcher.

	Everyday	Sometimes
Men	26	5
Women	24	8
Total	50	11

Table 1. Frequency of denture cleaning.

	Yes	No
Men	15	16
Women	20	10
Total	35	26

Table 2. Night wearing.

	Mechanical method	Immersing method
Men	28	3
Women	29	1
Total	57	4

Table 3. Methods of cleaning.

	Toothbrush	Denture brush	Some other brush
Men	26	4	1
Women	27	3	1
Total	53	7	2

Table 4. Type of the brush.

	Toothpaste	Baking soda (sodium hydrogen carbonate)	Toothpaste and baking soda	Immersing in rinse liquid	Home available cleaning substance	Immersing in some home cleaning substance solution
Men	22	5	0	1	0	3
Women	17	2	9	1	1	0
Total	39	7	9	2	1	3

Table 5. Substances used for cleaning dentures.

	Yes	No
Men	15	16
Women	14	16
Total	29	32

Table 6. Cleaning tablets usage.

	Dry	Immersed in liquid	None
Men	0	29	2
Women	1	29	0
Total	1	58	2

Table 7. Cleaning tablets usage.

	Clean water	Water with tablet for cleaning	Clean water and/or tablet for cleaning	Baking soda (sodium hydrogen carbonate) solution	Home cleaning substance solution	Never get dentures out
Men	18	3	3	3	3	1
Women	13	7	5	5	0	0
Total	21	10	8	8	3	1

Table 8. Types of immersing liquids.

	When in pain	Checking regular, even they have no specific problem	Never
Men	16	7	8
Women	19	8	3
Total	35	15	11

Table 9. Reason for visiting a dentist.

	Positive	Negative
Men	28	3
Women	29	1
Total	57	4

Table 12. Aware of importance of maintaining dentures clean.

	Urgent problem	Control examination	Some routine procedure	Tooth extraction
Men	11	6	10	4
Women	11	4	6	9
Total	22	10	16	13

Table 10. Cause of the last visit.

	Yes	No	Do not remember
Men	16	14	1
Women	16	12	2
Total	32	26	3

Table 13. Previously informed how to clean dentures.

	Positive	Negative
Men	26	6
Women	26	4
Total	52	10

Table 11. Attitude of the patient towards dentists.

Results

Thirty one patients were males (age range 65-89 years, average 70.68) and thirty of them were females (age range=65 to 77 years, average 68.63). They all wore acrylic dentures. Average age of the interviewed patients was 69.67.

Data referring to patient distribution, according to previous information on denture cleansing, denture cleaning method used, frequency of cleaning of dentures, the use of some type of oral rinse, reasons, frequency of dental visits and longevity of dentures use during the day, are presented in Tables 1,2 [13].

Discussion

In this study, 82% of the participants are cleaning their dentures more than once daily (Table 1), which is even better than the results of Peracini et al. [9], where the percentage was 73,58%. In the study conducted by Pietrovovski et al. [15], 96% of patients cleaned their dentures 2 and more times daily.

57% of the patients in this survey are wearing dentures at night (Table 2), while Peracini et al. [9], are reporting the similar result, 58,49%. Nalçaci [16], concluded that 55.2% patients sleep with their dentures, while Marcus et al. [17], found it was 45%.

In the study, mechanical way of denture cleaning is used in 93% of interviewed patients (Table 3). In another study [9] all patients used mechanical method, as well as in most similar studies: 97% [18], 86% [19], 80.1% [20], 79.7% [21], 57.1% [22], 40.59% [23].

Toothbrush are using 97% of participants in the survey, and 3% of them are using special denture brush (Table 4).

In 56% cases, patients used only toothpaste, 30% of them used toothpaste with baking soda, 6% of them used baking soda only, 3% are using home cleaning substance and 3% is using the mouth rinse for denture cleaning (Table 5).

In another study [9], toothbrush and toothpaste was used by 84.91% participants. It is similar to the results of this study, where the toothpaste was used in 86% cases.

Cleaning tablets from time to time is using 48% of the participants (Table 6).

The liquid where dentures is hold was tap water in 52% cases, 6% held dentures in water plus cleaning tablet every night, 13% baking soda solution, and 3% of the participants never get dentures out of their mouth (Table 7).

In similar research [9], denture was immersed in clean water during the night in 38.71% cases, followed with mouth rinse (33.87%). In the study conducted by Baran i Nalçaci [16], 42.9% patients are keeping their denture in clean water, while 1.6% of them is immersing it in mouth disinfectant. According to Veres et al. [24], 5% of participants cleaned the denture immersing it in some liquid, while in this study it was 7% (Table 3).

57% participants of the study are visiting the dentist when are in pain or have some problem, 25% visit a dentist for regularly check-ups, and 18% never go to a dentist (Table 7).

Last visit to a dentist was in 36% of the patients to resolve some urgent problem, 21% had a tooth extraction and in 26% it was a regular check-up (Table 8).

85% of participants have positive attitude towards dental visits

(Table 9 and Table 10), 93% of them understand the importance of keeping dentures clean (Table 11). Only 52% patients got the instructions earlier on how to keep dentures clean. 5% of patients do not remember ever being instructed on denture hygiene (Table 12 and Table 13).

Conclusion

This survey revealed the hygiene habits, frequency, causes and attitude towards dental visits in 61 patients. Within the limitations of this study, it may be concluded that the interviewed patients had limited knowledge of denture cleaning and oral hygiene. Brushing was mostly the method of choice, but too many patients is still wearing their dentures during the night. In half of the cases they did never get informations on how to clean their dentures. It is necessary to do some more in the field of education, regarding importance of keeping the denture clean and knowledge of how the denture should be cleaned, importance of visiting the dentist regularly, and warnings about the danger of wearing dentures during the night.

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