

THE SATISFACTION DEGREE OF FOOD PROTECTED REFLECTED PATIENTS ON FRUIT AND VEGETABLES CONSUMPTION

GRADUL DE SATISFAȚIE AL PACIENȚILOR PROTEZAȚI AMOVIBIL REFLECTAT ASUPRA CONSUMULUI DE FRUCTE ȘI LEGUME

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Abstract. A healthy diet of the elderly is important in improving oral health. But the emergence of editorialism prevents the consumption of diversified foods. A nourishing and varied diet, including vegetables, fruits, cereals, dairy products and protein, is of great value especially at the elderly. Many patients regard the mobilizable dentures as a sign of aging and therefore accept them hard, and the accommodation process is difficult. After a rather long period of non-protection, when inserting a prosthesis, it is very difficult to chew or speak with it. This is less common in prosthetic patients. Therefore, restoring the integrity of dental arches by applying mobilizable prostheses increases the satisfaction of edent patients during mastication.

Key words: oral health, vegetables, fruits, minerals, vitamins, removable dentures, satisfaction

Rezumat. O alimentație sănătoasă, a persoanelor în vârstă, este importantă în ameliorarea stării de sănătate orală. Dar apariția stării de edentație împiedică consumul alimentelor diversificate. O dietă hrănitoare și variată, în care sunt incluse legumele, fructele, cerealele, produse lactate și proteinele, au o importanță benefică mai ales pentru persoanele mai vârstnice. Mulți pacienți privesc protezele dentare mobilizabile ca și un semn al îmbătrânirii și de aceea le acceptă greu, iar procesul de acomodare este îngreunat. După o perioadă destul de lungă de neprotezare, în momentul inserării unei proteze se obișnuiesc foarte greu să mestece sau să vorbească cu aceasta. Acest lucru este mai puțin întâlnit la pacienții purtători de proteze. De aceea refacerea integrității arcașelor dentare prin aplicarea de proteze mobilizabile, crește gradul de satisfacție a pacienților edentați.

Cuvinte cheie: sănătate orală, legume, fructe, minerale, vitamine, proteze dentare mobilizabile, satisfacție

INTRODUCTION

Problems with mobilizable prostheses can affect patient satisfaction and lifetime of the prosthesis. Hummel *et al.* (2002) reported that 65% of patients

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carrying mobilizable prostheses have at least one problem, the lack of stability being the most common. Other authors have shown that loss of retention, aspects related to the vertical dimension of occlusion, trauma and ulceration play a significant role in patient satisfaction (Bilhan, 2012). Koyama *et al.* found a significant relationship between age, edentulous ridge, number of occlusal stops, pain and discomfort, the shape of artificial teeth, and the patient's desire to use these types of prostheses (Koyama, 2010). It was found that pain and discomfort are the most important causes of interruption of the mobilization of mobile prostheses (Akeel, 2010).

Lack of communication with the treating physician makes it possible to discontinue the mobilization of the mobilizable prostheses, but the patient is unaware that the dentures help mastication properly, thus obtaining all the nutrients necessary for the body.

Dental prostheses improve overall physical condition, provide control over the diet, and without their consumption of raw fruits and vegetables is difficult.

It can be assumed that the quality of prosthetic treatment can also affect oral health, so oral health is related to quality of life because prosthetic and surgical treatment is performed to improve patient satisfaction (Douglass, 2002; Inoue, 2011).

MATERIAL AND METHOD

The study was conducted over a period of 2 years, attended by 37 patients (23 women and 14 men) with a large partial protuberance, prosthetic prostheses 13 and classic removable prostheses - acrylic and modern - skeletonized and total - 24. This study is based on the completion of questionnaires for patients who have addressed the Clinic of Dental Prosthetics, Apollonia University in Iasi, in the urban area, to improve the quality of mastication with dental prostheses. The age of selected patients is between 40 and 75 years of age, with an average age of 57.5 years and the absence of any debilitating systemic illness. Prior to conducting the study, the research protocol was approved by the Institutional Ethics Commission.

For the patient satisfaction form, we used a questionnaire developed by Siqueira *et al* (de Siqueira GP, 2013) in this study. This questionnaire evaluates patient satisfaction in four categories: (1) mastication, (2) aspect, (3), (4) comfort level. In each part, patient satisfaction was assessed using the Likert analog visual scale ranging from 0 to 10, with zero representing the lowest satisfaction and 10 representing the highest satisfaction in mobilizable prosthesis carriers. Average satisfaction was calculated in all four categories (Zlataric, 2008).

RESULTS AND DISCUSSIONS

The lack of stability and retention of mandibular prostheses that increase over time with continuous residual resorption, impaired masticability are the major complaints of total prosthesis carriers (Van Waas, 1990). These handicaps combined with the resulting pain and impairment of patients' ability to communicate can cause dissatisfaction.

The use of mobilizable dentures is strongly influenced by patient satisfaction. Factors such as patient's attitude and personality, the quality of the mobilizable prostheses, the oral hygiene of patients, the tolerance and the level of comfort can influence the satisfaction of prosthetically treated patients with mobilizable prostheses (Akeel, 2010).

In our study too, all evaluated cases had moderate to high (6.2 out of 10) levels of satisfaction, the result of the questionnaire is shown in table 1.

Table 1

Distribution of average and standard deviation of four demographic variables

	CHEWING		FACIAL ESTHETICS		SPEECH		COMFORT	
	Mediate \pm SD	p	Mediate \pm SD	p	Mediate \pm SD	p	Mediate \pm SD	p
Age								
Less than 50 years old	4.4 \pm 4.0	0.004	4.9 \pm 3.9	0.01	4.7 \pm 3.9	0.01	4.4 \pm 4.0	0.004
Over 50 years	7.3 \pm 2.4		7.3 \pm 2.4		7.3 \pm 2.4		7.3 \pm 2.4	
Sex								
Men	5.1 \pm 3.8	0.07	5.6 \pm 3.7	0.13	5.4 \pm 3.7	0.1	5.1 \pm 3.8	0.06
Ladies	7.1 \pm 2.7		7.1 \pm 2.8		7.06 \pm 2.8		7.1 \pm 2.8	
Kennedy Classification								
I	6.5 \pm 3.5	0.41	6.8 \pm 3.4	0.32	6.7 \pm 3.2	0.35	6.5 \pm 3.6	0.37
II	6.0 \pm 3.2		6.3 \pm 3.2		6.1 \pm 3.2		6.0 \pm 3.2	
III	5.6 \pm 3.8		5.8 \pm 3.6		5.6 \pm 3.6		5.5 \pm 3.8	
IV	9.0 \pm		9.0 \pm		9.0 \pm		9.0 \pm	
Spring								
Maxillary	7.4 \pm 3.0	0.004	7.5 \pm 2.9	0.005	7.4 \pm 3.0	0.004	7.4 \pm 3.0	0.006
Mandibulary	5.1 \pm 3.5		5.3 \pm 3.5		5.1 \pm 3.5		5.1 \pm 3.6	
The type of doctor								
Student	5.6 \pm 3.4	0.009	5.8 \pm 3.4	0.003	7.5 \pm 3.0	0.005	7.5 \pm 2.9	0.004
Prosthetic specialist	8.1 \pm 2.8		8.1 \pm 1.5		5.5 \pm 3.4		5.3 \pm 3.5	
Removable partial prosthesis								
Chromium-cobalt	6.01 \pm 3.4	0.22	6.15 \pm 3.4	0.22	6.15 \pm 3.4	0.22	6.01 \pm 3.5	0.24
Acrylic	9.0 \pm 1.4		9.0 \pm 1.4		9.0 \pm 1.4		9.0 \pm 1.4	
The total	6.1 \pm 3.4		6.25 \pm 3.3		6.25 \pm 3.3		6.1 \pm 3.5	

Patient satisfaction in patients aged 50 years or older was significantly higher in all four categories compared to patients aged less than 50 years ($P < 0.05$).

Our study shows that patients aged 50 years or older were more satisfied with the mobilization of prostheses compared to those younger than 50 years, and patients aged 45 to 65 were much more satisfied than the 65-year-old.

Also in our study, patient satisfaction is not gender-related, but women tended to be more satisfied than men.

There was no difference in patient satisfaction and the type of Kennedy classification of the crest edited in this study.

In all four categories, there were no significant differences between men and women. The Kennedy classification had no influence on patient satisfaction ($P > 0.05$). When all four categories were analyzed, patients with jaw mobilizable prostheses were much more satisfied than those with mandibular mobilizable prostheses. Patients who wore jaw mobilizable prostheses were more satisfied than patients who had mandibular partial prosthesis ($P < 0.05$). Patients treated by specialist doctors were more satisfied than those treated by students ($P < 0.05$). There was no significant difference between patients who had acrylic-based prostheses or chromium-cobalt metal base ($P > 0.05$).

In the questions in the questionnaire regarding the lack of retention during speech, one of the frequent prosthetic wearers' complications, 36%, was dissatisfied with this inconvenience (fig. 1). Consumption of soft foods in 54% caused inconvenience, while in 28%, the inconvenience was caused by hard foods (fig. 2).

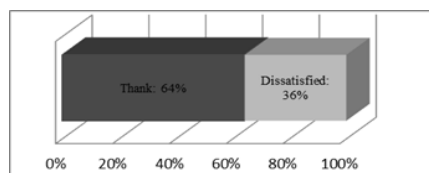


Fig. 1 Lack of speech retention

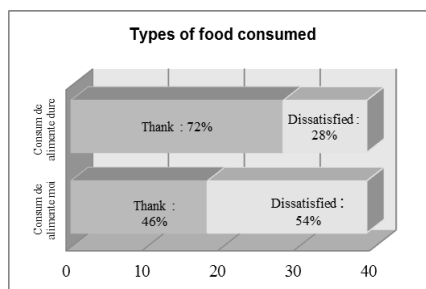


Fig. 2 Satisfaction of patients with food consumption

The health of teeth and dental tissues is determined by the consistency of foods. Consumption of hard, crunchy foods like raw vegetables and fruits (carrot, sweet pepper, turnips, radishes, apples, peaches, pears, quinces) contributes to the cleaning and self-cleaning of dental surfaces as well as to the massage of surrounding soft tissues with stimulating action on gingival circulation.

Therefore, daily consumption of hard fruits (apples, pears) and a series of vegetables (cucumbers, tomatoes, salad, spinach, cauliflower, broccoli, celery) are recommended because they have a high water content that reduces the effect of sugars in saliva. But for the consumption of these foods, edentulous patients should use as much stable prostheses as possible in the prosthetic field.

Also, 33% of patients reported having difficulties in the tolerance of the prosthesis (fig. 3). Thanks to the insertion / disinfection capacity of the prosthesis in the oral cavity, 74% was declared (fig. 4), and with regard to the aesthetic aspect of the prosthesis, 82% were satisfied (fig. 5).

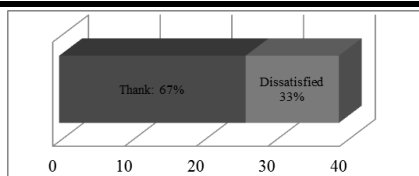


Fig. 3 Satisfaction with prosthetic tolerance

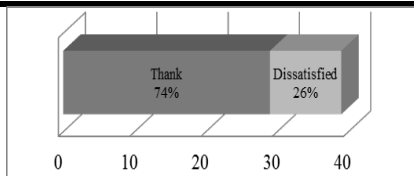


Fig. 4 Satisfaction with the insertion / disassembly capability of the prosthesis in the oral cavity

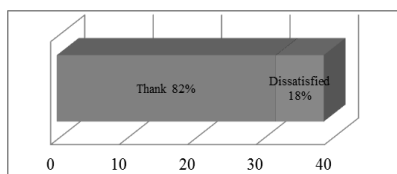


Fig. 5 Satisfaction with the aesthetic aspect of the prosthesis

Removable prosthetic therapy is still widely used due to an economical procedure and easy to apply to patients in need of partial mobilization of prosthesis. However, this prosthesis may be associated with several complications. It is known that the most common complication of removable prostheses is loss of retention, denture destabilization and ulceration, patient discontent with mastectomy, noise, comfort of prostheses and aesthetics, due to an incorrect vertical dimension and, of the tall vertical dimension. The cause of the failures is related to the destructive action of the design and production of inadequate prostheses. Some patients in this study complained about poor adaptation and improper prosthesis manufacture. This complication is an essential reason to replace them. In addition, loss of retention has caused dissatisfaction with patients associated with the function. Loss of prosthesis retention may affect the ability of patients to chew.

As a result of the study, the rate of complications of mobile prostheses decreases, if they are correctly made and inserted in the prosthetic field, and the degree of patient satisfaction associated with mobilizable prosthesis, odontal health and periodontal position of the remaining teeth, the masticatory stability increases significantly. The effect of various types of prostheses on satisfaction are aspects that increase the quality of life of patients.

CONCLUSIONS

1. The types of complications of patients with partial dysfunctions occurring during the mobilization of mobile dentures may affect the acceptance and the degree of satisfaction

2. The instability of prostheses in the prosthetic field leads to loss of retention, which causes discontent among patients related to the ability to chew especially hard foods.

3. Ulcerations that result from poor insertion of mobilizable prostheses or fracture of prostheses negatively affect the ability of mastication and phonation.

4. From the above results, it is concluded that patients with correctly made mobilizable dentures have a high level of satisfaction both aesthetically and functionally, along with a positive impact on good nutrition, by increasing the consumption of fruits and vegetables raw, required oral health of patients.

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