

Intolerance to Total Dentures by the Patients

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Abstract: Introduction. In everyday dental practice, when making total dentures a common problem is intolerance of the patients. **Purpose.** To alleviate the inconvenience and allow patients to quickly and easily accept the new dentures. **Material and methods.** In this study we divided the patients who manifested intolerance to total dentures into three groups of ten patients. After handing over the dentures and examining the nature of intolerance, the first group included patients with the crucial role of dentures taking the factor of time, as a period of adaptation to something new and foreign. In the second group we included patients who during the process of making total dentures had the problem of nausea and vomiting. The third group consisted of patients in whom we cut the finished dentures pharyngeal and lingual, at their request, and yet in accordance with the basic prosthetic principles. **Results.** After a certain period we achieved success in the three groups, but the biggest and the fastest success we achieved with the second group, where after only 10 days taking medications (Reglan, Dramina) patients accepted total dentures and success was evident. **Conclusion.** In case of manifested intolerance to total dentures, an individual approach to solving the problem is required. Therefore, always approach the therapy that you think that in a particular patient you will achieve a faster and greater loss of the factor of intolerance to total dentures.

Keywords – intolerance, total dentures, edentulism, adaptation

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I. Introduction

Tooth loss is a major problem worldwide, one with adverse oral, systemic, and mental health effects. Edentulous participants experience such difficulties as problems with chewing food, weakened facial musculature, degradation of the supporting alveolar structures, reduced bite-force and chewing efficiency, gastrointestinal disorders, and difficulties with socializing or forming close relationships. Rehabilitation with dentures can alleviate these adverse effects to some degree and provide a sense of normalcy, allowing the patient to interact with others. [1-4]

Removable dentures have been used as one method to compensate for missing teeth for a long time. [5]

The success of dentures is related to many factors. These include technical procedures, functional factors, esthetics, biologic determinants and psychological factors. Psychological factors include the preparedness of the patients and their mental attitudes towards dentures, their relationship with and attitude toward the dentist, their intelligence and ability to learn how to use the dentures and their personalities. [6]

The teeth are there to replace what you have lost and the denture base holds it all in place while covering the palatal, or the roof of the mouth. Unfortunately, this can cause the issue of intolerance to the dentures, nausea and even vomiting. Not all people can tolerate having their palatal area covered. The palatal area is gag zone, this triggers the Vagus nerve in the brain to activate and cause the person to gag. Statistics show that 57% of Americans aged 65 to 74 wear some form of dentures. 51% of Americans aged 55 to 64 have either full or partial dentures. That is a huge part of the population trying to avoid denture intolerance and denture problems. [7]

There is a different approach to managing the severe denture intolerance (gag reflex) problem in the dental literature:

1. Clinical techniques
2. Prosthodontic management
3. Pharmacologic measures
4. Psychologic intervention

Making dentures for patients with total edentulism is one of the biggest challenges in dental prosthodontics. The chewing function at these patients is completely disrupted, and they are barely fed. In addition, especially if the edentulism prevailed over a longer period of time, such patients develop harmful habits of abnormal placement of the tongue and adjustment of tonus of the surrounding musculature to the newly occurring situation. All this additionally complicates the making of dentures. [8]

In addition, the patients with total edentulism are with decreased self-confidence. They lack the esthetic function of the teeth, so they feel inferior to people with teeth. The external physiognomy of patients with total edentulism has been changed. They receive the so-called an older look due to reduced lower third of the face. The state of total edentulism affects the socialization of these patients. Speech function is impaired, so these people often lose the desire for communication. [9]

Therefore, the therapist should treat patients with total edentulism with special care and patience. He must help patients overcome difficulties and improve quality of life using total dentures. Particularly specific are the patients who have a feeling of nausea when placing new dentures in the mouth. For them, the therapy of total edentulism consists not only of the preparation of the dentures, but also of creating conditions for accepting them by the patient. [10]

Before patient starts feeling comfortable with new dentures in the mouth, it is necessary to pass a certain time period of adaptation. This period varies at different patients (usually 2-6 weeks). The period of adaptation to the new dentures is particularly stressful and difficult for the patient. Therefore, it is important for the therapist to inform the patient of all the difficulties and inconveniences that he can feel and guide how to deal with them. If the patient knows what is expected, he will easily bridge the transitional period of adaptation and learn how to handle the dentures in the mouth. He must learn to speak and feed normally with his dentures without causing any special effort or difficulty. He must accept the dentures as a foreign body that will always be present in his mouth. The best indicator of the definitive adaptation of the patient to the dentures and its full functional value when the patient no longer feels presence in the mouth, is well fed with it and is technically correct, since during the development it was taken into account the prophylactic effect of the tissues on which it lies. [11]

Inspired by the large number of problems that arise as a result of the intolerance to total dentures by patients, problems that often endanger and put into question the success of the overall prosthetics therapy, we have set ourselves up the aim to develop possible therapeutic approaches towards such patients. In this paper we focused on the feeling of nausea (gag reflex) that occurs in a number of patients, as one of the most dramatic manifestations of intolerance to total dentures.

II. Materials And Methods

In this study, we have treated 30 patients with total dentures. All patients came to the University Dental Clinic "St. Pantelejmon" - Skopje, and for all of them was indicated therapy with total dentures, and there was no possibility for another type of prosthetic therapy. Alternative solution of these cases are by placing dental implants and an additional more comfortable solution was not possible for various reasons. Some of them had a medical contraindication for implant placement, or a general medical condition, or the local orofacial conditions did not provide a good prognosis. In a certain proportion of these patients, although there were favorable conditions for placing implants, the economic factor was decisive, so we had to approach the therapy of total edentulous with total dentures.

In this study we managed the denture intolerance problem in three ways. Because of that, we divided the patients into three groups. The first group was with psychologic intervention, second group with pharmacologic measures, the third group with prosthodontic management (correction).

As criteria for intolerance to total dentures, we set the gag reflex that disables the normal acceptance of new dentures, and thus compromised the outcome of overall prosthodontic therapy. Patients who manifested intolerance to total dentures, were divided into three groups of ten people in each of them. We consciously neglected the sex and age factor, and focused more on the etiology of intolerance. Thus, after all patients were excluded from the objective finding which could be the cause of the gag reflex (pre-stretched and coated pharyngeal edges of the denture, reduction of the lingual space due to lingually inclined artificial teeth or the reduction of the vertical dimension of the occlusion), we have approached the psychological assessment of patients. Thus, when handing over the finished total dentures, we talked to patients who showed intolerance to them. Depending on the psychological type, we classified the patients into three groups.

The first group included 10 patients who despite manifesting intolerance to the dentures, however, expressed a willingness to cooperate and fully trust the therapist. The measures taken involved a conversation and a few simple tips on how to easily accept new dentures. We explained to these patients that before they feel comfortable with new dentures in the mouth, it is necessary to pass a certain time period of adaptation. We advised them before putting their dentures in their mouth, to moisture them with warm water, which would reduce the feeling of a foreign body and the reflex of vomiting. If we thought that the reason for this reflex was

the increased salivation, we advised the patient before putting the dentures, to rinse the mouth several times with salt water. Through a conversation, we explained to these patients that what they feel when placing dentures in the mouth is a very common and normal phenomenon, which in time will decrease and disappear. In this way, we motivated patients from the first group to be persistent when wearing the dentures, because the factor of time will contribute to success.

The second group included patients who have had the problem of nausea and vomiting during the process of making of total dentures. The work itself was difficult for them. Therefore, in this category of patients we decided for a medication therapy (Reglan, Dramina) at the beginning, where by suppressing the vomiting reflex, should have contributed to easier acceptance of the dentures. In addition, we discussed with the patients in this group for the factor time needed to accept the new total denture.

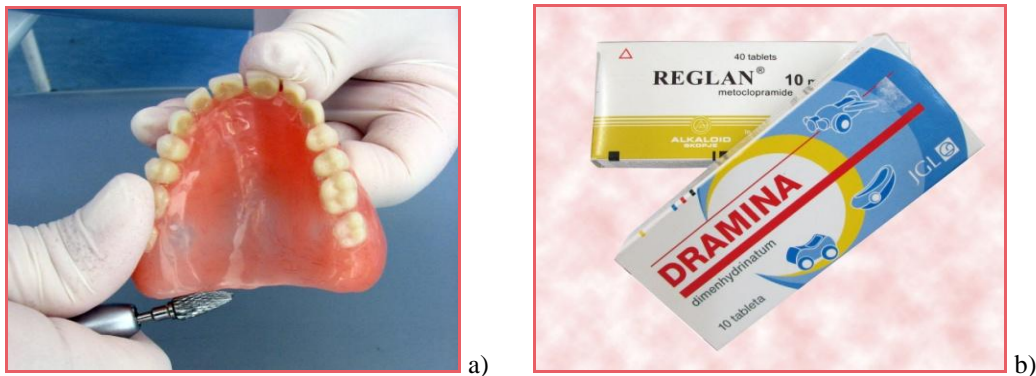


Figure 1.

- (a) Cutting the pharyngeal edge of the upper total denture
- (b) Medicines used to suppress the reflex for vomiting and to overcome the intolerance to total denture.

The third group consisted of 10 patients who could not accept the presented arguments for the necessary adaptation period, and upon their request, we reduced the total denture pharyngeal and lingual, since the starting point of the reflex is the back third of the palate and the root of the tongue. We followed patients from all three groups within 6 weeks after giving new dentures, through regular weekly checks. We registered the course of the changes and the achieved results. As criteria for achieving success we set the loss of vomiting reflex and the ability of a patient to normally perform day-to-day activities without feeling the dentures as a foreign part in the mouth.

III. Results

After a certain period of time, we achieved success in the three groups. Within each group, we calculated the average time needed for adaptation to the new dentures. The results are shown in the table and the image below. It can be seen that the fastest acceptance of total dentures was achieved within the second group of patients, where success was evident after an average of 2 weeks of medically prescribed drugs. The path to the successful acceptance of the dentures was longest within the third group of patients. They needed approximately 4.2 weeks to overcome an unpleasant feeling of vomiting and to begin to function normally with total dentures.

Table 1. The average time period required to overcome the intolerance to total dentures, calculated for each group separately, and expressed in weeks.

| | 1. Group | 2. Group | 3. Group |
|--|----------|----------|----------|
| Average time period needed to overcome intolerance to dentures (weeks) | 3,5 | 2 | 4,2 |

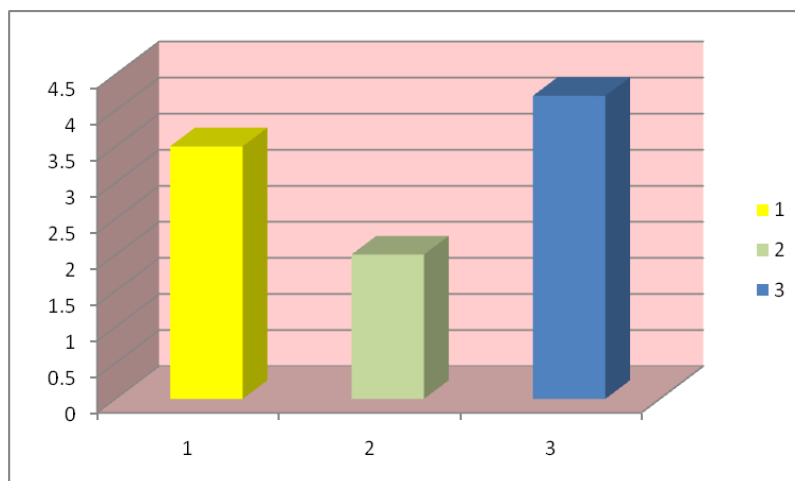


Figure 2. Graphic presentation of the results from Table 1, the x-axis represents the three groups of patients, and the y-axis represents the average time needed to overcome the intolerance

IV. Discussion

Patients from all three groups successfully overcome the intolerance to total dentures, although they used a different therapeutic approach to solve the problem. This suggests that there is no single protocol for dealing with these patients that would be applied in all cases. The various ways to solve the problem of intolerance to total dentures indicate the need for an individual approach to these patients. Therefore, one of the most important factors for achieving success in these cases is the ability of the therapist to assess the patient and act on the breakdown of the psychological barrier to accepting total dentures. This can be achieved only with a lot of perseverance and patience. The way in which the therapist comes to the desired result should be chosen according to the characteristics of each patient separately.

In addition, the results show that the patients of third group had most difficulties to overcome the intolerance to total dentures. For them, despite the most drastic therapeutic approach (denture correction), the results were achieved most slowly. This finding only confirms the importance of the psychological factor during the treatment for overcoming intolerance. These patients had a negative attitude from the very beginning and showed distrust towards the therapist, which also reflected on the achieved results.

In the third group of patients with prosthodontic management (correction), there was a longest period of adaptation or overcoming the problem of 4,2 weeks. Similar findings were seen in the study by Kassab NH et al. [12] Ramsay et al. [13] suggested that patients with bad prior dental experiences will approach dental treatment with bias, and will behave the same during similar episodes in the future. Several studies have suggested behavioral techniques (hypnosis relaxation and reading) and distraction technique to temporarily divert patient's attention during short dental procedures. [14,15]

The prosthodontists usually encounter many patients in the clinics who are enormously sensitive to oral cavity which cannot tolerate any foreign body.

V. Conclusion

When intolerance to total dentures is manifested, an individual approach to solving the problem is required. Therefore, always approach to the type of therapy that you think that in the particular patient will achieve a faster and greater loss of the intolerance to total dentures.

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