NEW PERSPECTIVES IN PROMOTION OF HEALTH AT PATIENTS TREATED WITH REMOVABLE PARTIAL DENTURES

Otilia Gombos¹, Cristina Bortun¹, Claudiu Leucuta², Romeo Barlea¹

INTRODUCTION

Oral health status and its impact on general health are very important for the individual’s quality of life.¹ Due to a rapid increase of the elderly population, the demands for prosthodontic treatment are expected to rise in developed countries.²-⁴ Treatment options for replacing missing teeth are diversified; reason for which, it is very important to understand their impact on quality of health and life, which is impaired due to teeth loss.⁵,⁶ Implant therapy is expensive for people...

¹ Victor Babeş University of Medicine and Pharmacy Timişoara, Romania
School of Dentistry, Specialization Dental Technology, ² Department of Removable Partial Dentures, Vasile Goldiş West University Arad

Correspondence to:
Gomboş Otilia, B-dul Revolutiei 1989, no.9, Timisoara 300041, Tel: 0040741127858
Email: otilia_gombos@yahoo.com

Received for publication: Jul. 22, 2010. Revised: Nov. 17, 2010.
with medium incomes, so, removable partial dentures (RPD) are still used as a sustained treatment option for replacing the missing teeth.

Estimation of prosthodontic treatment impact on oral health was studied before. There has been studied not only the impact of edentation and treatment options on oral health, but also the association between quality of life influenced by oral health and quality of RPD. For this purpose, one used different index, who tried to describe the way oral health influences the quality of life: OHRQoL – Oral Health Related Quality of Life and OHIP- Oral Health Impact Profile. The purpose of these indexes was also to offer a self measurement method of disfunction, discomfort and disabilities, which appear because of the poor oral health conditions.

For this purpose, one used different index, who tried to describe the way oral health influences the quality of life: OHRQoL – Oral Health Related Quality of Life and OHIP- Oral Health Impact Profile. The purpose of these indexes was also to offer a self measurement method of disfunction, discomfort and disabilities, which appear because of the poor oral health conditions.

The aim of the study was to understand and evaluate the relationship between RPD quality and life quality influenced by oral health. The research hypothesis of the study was that the quality of RPD influences the individuals’ OHRQoL status.

MATERIAL AND METHODS

We made an experimental study on 20 patients with good general health. Two of them were RPD wearers for about 2 months, but the rest of them had worn the dentures for about 7 years. Twelve from the patients had maxillary dentures and eight wore mandibular RPD; all the dentures treated 1° class Kennedy edentulism, with or without modification.

Our working method (questionary) was used before in Great Britain and then in Japan, by Preventive Oral Health Care Organisation, but, this time it was applied on a Romanian population sample. The Oral Health Related Quality of Life (OHRQoL) status was appreciated with help of OHIP (Oral Health Impact Profile) score and of VAS (Visual Analog Scale) scale.

OHIP score was calculated for each patient. Each patient got a questionnaire with 49 questions. These questions had the same template, like: "How often..."
did you feel ..... in the last time?”. The answer to each question was quantified on a scale from 0 to 4, that was already mentioned above.

Each patient’s OHRQoL status was characterized by OHIP score (which is the sum of answer scores to each question from the questionnaire).

Visual Analog Scale (VAS) index is a 0-100 mm scale used for determining RPD quality score (with the limits 0- for RPD quality completely dissatisfied and 100- for RPD quality completely satisfied). The RPD quality was analyzed from 2 points of view, taking into account the components considered most clinically important: denture’s stability and esthetics. Practically, we determined separately RPD stability score and RPD esthetics score, using the same VAS scale. RPD quality score was obtained by adding the denture stability and esthetics scores and dividing them by 2, in order to maintain the original 0-100 metric limits.

RESULTS

Characteristics of the Study Population

Study participants, in number of 20, had a mean age of 59 +/- 7 years; 65% of them were represented by women; they had a mean number of missing teeth of 7 +/- 3 (table 1).

Table 1. Demographics of Study Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Bad RPD Quality</th>
<th>Good RPD Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Missing Teeth</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>OHIP summary score</td>
<td>59</td>
<td>59</td>
</tr>
</tbody>
</table>

Like we already specified, the RPD taken into study treated I° class Kennedy edentulism, with or without modification.

The mean OHIP summary score was 46.5; RPD quality had a mean VAS score of 65, with a minimum of 15 and maximum of 85. Based on this median value, the study participants were divided into “bad” and “good” RPD quality, there were no significant differences in the proportions of men-women, mean age or mean number of missing teeth (table 2).

Anyway, individuals with bad RPD quality had higher OHIP scores, which demonstrates that they reported more problems regarding the denture, than did the patients with good RPD quality.

Optimum RPD Design

Our study results show that, the improvement of prosthetic pieces’ design has a good influence on the patients general health status. We observed that, if RPD has a good esthetic score, the accommodation with the denture is quick. Last, but not least, the major connector configuration is very important; in 70% of upper denture cases, this had as small as possible dimensions, being realized with stippled casting wax profile. At mandible, one preferred dentomucosal plates, because they are thinner and have multiple repair possibilities.

DISCUSSION

The results of our study demonstrate that, Oral Health Impact Profile score is directly connected to the removable partial denture quality. Better denture quality was related to better OHRQoL status, and this finding was independent of age, gender, or number of missing teeth. Nevertheless, our study sample was not a population-based sample, but a consecutive sample of individuals who sought prosthodontic treatment.

A potential use of subjective health status measures is to predict treatment need. However, at the present time, so called “predictive validity” of available measures appears to be weak. In these studies, associations between professionally assessed treatment need and health status measure summary scores were assessed using sensitivity and specificity statistics. While statistically significant associations between clinical indicators and subjective measures were found, the associations were moderate.

 Locker and Slade suggest that these findings should not be unexpected, as health status measures were not derived specifically as predictive indices. They recommend that health status measures should be used to complement objective needs assessment, and may help identify patients who are likely to benefit most from dental treatment.

Douglas and Yamazaki suggest that further research is required to help refine use of health status measures for this purpose. 
CONCLUSIONS

Within the limitations of our study, we can conclude that:

1. A better RPD quality is associated with a better oral health status, this finding being independent of age, sex or number of missing teeth;
2. The improvement of RPD quality leads to the improvement of poor OHRQoL status.

REFERENCES