EVALUATION OF ORAL FUNCTION AFTER REMOVABLE PARTIAL DENTURE THERAPY

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ABSTRACT

This study aimed to evaluate the oral function after removable partial denture therapy from patients perspective. It was a descriptive case series. One hundred and ten partially dentate subjects were studied in the Department of Prosthodontics, de, Montmorency college of dentistry, Lahore. All the subjects were given oral health impact profile -14 questionnaire before and one month after provision of removable partial denture. Before and after treatment responses were recorded on 5 point Lickert scale. The post treatment scores were compared with pretreatment baseline scores and improvement in oral functional problems were assessed. 96% of study subjects had problems in pronouncing words, which persisted in 56% of the subjects after using removable partial denture. 94% of the study group had taste problems before removable partial denture treatment, which improved in 50% of study population after therapy. This suggested that removable partial dentures had a positive impact on oral function in almost half of the population. Lack of improvement in remaining group can be attributed to lack of education and awareness which was responsible for negative attitude of these patients towards removable partial dentures.

Key Words: Removable partial denture, Lickert scale, Oral health impact profile.

INTRODUCTION

Tooth loss results in deterioration of functional, psychological and social status of an individual. Removable partial denture represents one of the major treatment modalities for the replacement of missing teeth. There are also some practical problems with removable partial dentures such as food retention, difficulty in pronouncing words and pressure spots. Their success is often judged differently by patients and dentists. Dentists consider dentures successful when they meet certain technical standards, whereas patient evaluate them from their personal satisfaction. Therefore, even if they are constructed according to all accepted criteria, some patients are still dissatisfied.

In the literature there is a strong support for the patient based measures than the functional measures for detecting the differences between the treatment and psychosocial consequences of the oral condition. Thus the knowledge about patients use of removable partial denture would be helpful to both the dentist and patient, when making a decision about a prosthodontic treatment option.

Studies show that clinicians judgment correlates quite poorly with patients judgment about comfort, esthetics and function of removable partial dentures. Therefore the aim of present study was to evaluate the oral functional problems after provision of removable partial dentures from patients perspective.

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METHODOLOGY

It was a descriptive case series. Non-Probability sampling technique was used. Partially dentate subjects with 4-5 teeth missing in either arch with age range of 35-45 years and first time denture wearers were included in the study. Study sample consisted of one hundred and ten partially dentate subjects with 4-5 missing teeth in either arch visiting Department of Prosthodontics, Punjab Dental Hospital Lahore and requesting removable partial denture for the first time. Informed consent was taken from each subject. Patients underwent a history and clinical examination. Patients were asked to answer a questionnaire on socio-demographic factors. In addition a self administered questionnaire called Oral health impact profile - 14 was used for patient based assessment of oral functional problems i.e. problems in speech and sensation of taste. The questionnaire consisted of 14 questions which covered 7 domains namely functional limitation, physical pain, psychological discomfort, physical disability, social disability and handicap. Only one domain i.e. functional limitation was selected for the present study. Responses by subjects were made on 5 point Likert scale and coded as (0 = Never, 1= Hardly ever, 2 = Occasionally, 3= Fairly often, 4= Very often). The Prosthodontic procedures were carried out by experienced Prosthodontists. All study subjects were subjected to answer the oral health impact profile before treatment and one month after provision of removable partial denture. The post treatment scores were compared with pretreatment baseline scores . Confounding variables i.e. age , number of missing teeth, experience of denture wearing and prosthodontic treatment modality were controlled and being addressed in inclusion criteria.

SPSS software version 16.0 was used to analyze the data. The demographic variables (age, gender and occupation) were analyzed using simple descriptive statistics. Age was presented by calculating Mean + S.D. Gender and responses of questions were represented by calculating percentages and frequencies.

RESULTS

TABLE 1: DISTRIBUTION OF AGE OF THE SUBJECTS

<table>
<thead>
<tr>
<th>Age range (years)</th>
<th>No. of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-40 years</td>
<td>43</td>
</tr>
<tr>
<td>40-45 years</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
</tr>
</tbody>
</table>

Mean ± S.D = 41.1 ± 2.91

TABLE 2: GENDER DISTRIBUTION

<table>
<thead>
<tr>
<th>Gender</th>
<th>No. of patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>53</td>
<td>48.0</td>
</tr>
<tr>
<td>Females</td>
<td>57</td>
<td>52.0</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

DISCUSSION

Patient perception of oral health status are important outcomes in Prosthodontics. Oral health problems experienced by the patients seeking Prosthodontic treatment are important for diagnosis and success of
Prostodontic therapy. The present study has shown the frequency and degree of oral functional problems under the domain of functional limitation. The study population was homogenous in relation to gender and age, as the same groups were analyzed before and after the treatment. This is in agreement with Zaltaric et al.19

In the present study, the majority of the patients (96%) showed problem in pronouncing words before removable partial denture therapy. This suggests that patients encountered speech problems due to missing teeth and after removable partial denture therapy, this problem was solved. This is in agreement with studies of Kuboki et al.15 and John et al.16 In the present study the significant increase in oral health impact profile scores in half of population (56%) suggested increase in speech problems after removable partial denture therapy. Similar results have been reported in a study by Szentpetry et al.3, who found that greater percentage of patients (60%) reported speech problems at an interval of one month. But in a study by John et al.16 21% of the population showed difficulty in pronouncing words after removable partial denture therapy. Speech is a complex skill requiring prolong adaptation to polish surface and shape of prosthesis, thus lack of improvement in present study may be attributed due to shorter review period.17

The small sample size of one hundred and ten subjects was the limitation of this study. This sample size did not allow detailed analyses of results according to the different Kennedys classes of partially dentate subjects. It has been reported that patients are least satisfied with distal extension bases.15 Future studies should use more distinct patient groups e.g. patients with different Kennedys classes and different denture design.

In the present study, there was an increase in problem of altered taste sensation after removable partial denture therapy. Szentpetry et al.3 and John et al.16 also showed the similar results after treatment but the affected study population was small i.e. 20% and 30% respectively. The increase in taste problem with removable partial denture in the present study population could be due to lack of education and awareness which was responsible for the negative attitude of these patients towards removable partial denture therapy. Therefore more efforts should be made in order to educate denture wearers.

REFERENCES
13 Scott BJ, Forgie AH, Davis DM. A study to compare the OHRQoL and satisfaction before and after having replacement complete dentures constructed by either copy or conventional technique. Gerodontontology 2006, 22: 79-86.