Advances in Medical and Dental Research

Original Article

Assessment of Patient's Satisfaction to the Removable Partial Denture After 5 Years

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DOI:
10.21276/amdr.2017.3.2.1

Article History
Received: 11 April 2017
Revised: 2 May 2017
Accepted: 25 May 2017

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ABSTRACT

Background: Satisfaction with RPDs has multifactorial dimensions involving technical and patient-related variables. Success is judged differently by the patient and by the professional: the first judge personal satisfaction; the second judge biological and technical aspects.

Aim: To assess the patient's satisfaction to the RPDs after 5 years.

Materials and Methods: The study was conducted in the Department of Prosthodontics of the Dental Institution. 26 patients responded and visited the Department on the desired date. The age of the patients ranged from 35 to 72 years. On the day of reporting at Department, the patients were asked to fill up a questionnaire. The acceptance of RPD was marked as excellent, good or bad. The patients were asked to rate the acceptance of RPD for aesthetics, comfort, hygiene, masticatory efficacy and retention.

Results: The male patients in the study sample were 12 in number and female patients were 14 in number. The patients in the age group of 31-40 years were 6, 41-50 years were 5, 51-60 years were 9 and more than 60 years were 6.The number of patients with maxillary RPD were 16 and mandibular RPD were 10. Majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. Only 6 patients in total reported bad experience with Removable partial denture. The results were statistically significant ($p<0.05$).

Conclusion: The treatment for partially edentulous ridge with Removable partial denture is satisfactory for majority of cases. Only few cases reported to be having bad experience with RPD.

KEYWORDS: RPD, Acceptance, Edentulous, Prosthodontics.

INTRODUCTION

More than 95 years ago Hillyer noted that as the edentulous condition decreases, the use of removable partial dentures (RPDs) increases. Despite decreasing rates of tooth loss, the need for removable prosthodontic treatment remains high.[1] One consequence of the profession's improved preventive measures has been an increase in the number of patients who require prosthodontic treatment with RPDs. Conservative treatment types such as dental implants are expensive. This may limit their availability to lower socioeconomic groups in whom the highest rates of tooth loss occur. Conventional removable prosthodontic treatment types, therefore, continue to outnumber implant tooth replacements in general practice.[2,3]

Satisfaction with RPDs has multifactorial dimensions involving technical and patient-related variables.[4] Success is judged differently by the patient and by the professional: the first judge personal satisfaction; the second judge biological and technical aspects. Comfort, masticatory ability, esthetics, and retention seem to be the most important factors for prosthesis acceptance. Personality, attitude towards RPD, previous experience, and motivation are dependent on the patient and may influence general satisfaction.[5,6] Hence, the present study was planned to assess the patient's satisfaction to the Removable partial denture after years.

MATERIALS AND METHODS

The present study was conducted in the Department of prosthodontics of the dental institution. The protocol of the study was approved from the ethical committee of the institute prior to starting the study. For the study sample, we contacted 56 patients from the previous medical records of 5 years who got treatment of partially

edentulous ridge with removable partial denture. The patients were recalled. Only 26 patients responded and visited the Department on the desired date. The protocol and procedure of the study was explained to the patients and an informed consent was obtained from them. The age of the patients ranged from 35 to 72 years. It was made sure that each patient had either one of the maxillary or mandibular RPD for the evaluation. On the day of reporting at Department, the patients were asked to fill up a questionnaire. The acceptance of RPD was marked as excellent, good or bad. The patients were asked to rate the acceptance of RPD for aesthetics, comfort, hygiene, masticatory efficacy and retention. After completion of questionnaire, the patients submitted them to the operator. The data was analysed and data was stored for further evaluation.

The statistical analysis of the data was done using SPSS program for windows. Student's t test and chi square test were used for checking the significance of the data. The statistical significance was predefined at $p<0.05$.

Table 1: Demographic data of the study sample

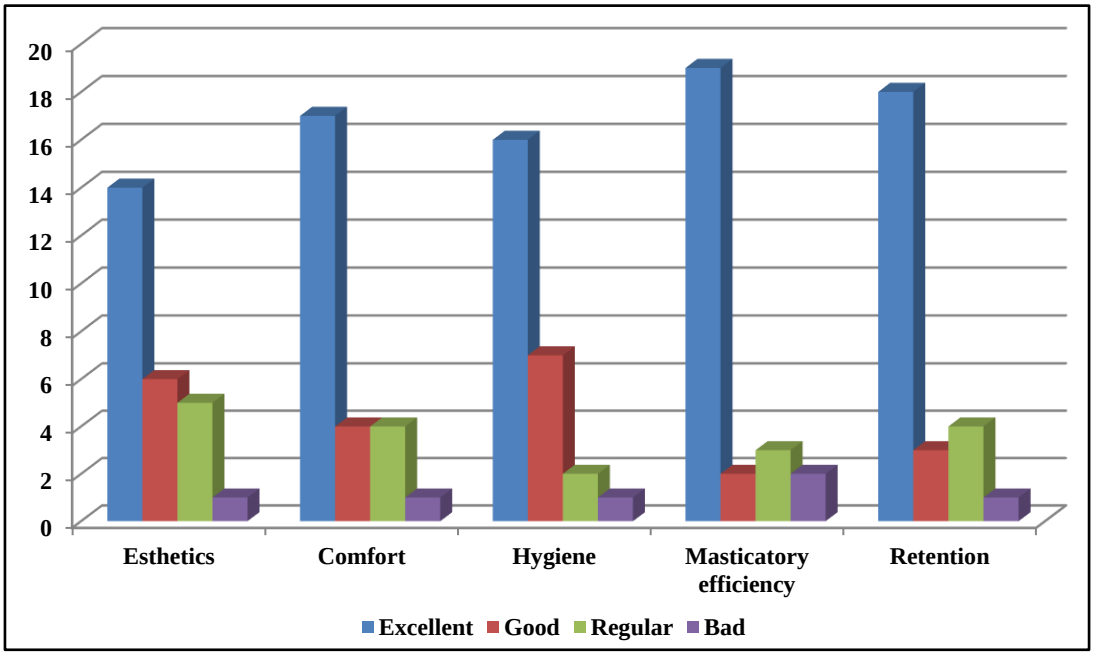
VARIABLES		Frequency
Sex	Male	12
	Female	14
Age (years)	31-40	6
	41-50	5
	51-60	9
	>60	6
Dental arch with RPD	Maxillary	16
	mandibular	10

Table 2: Evaluation of esthetics, comfort, hygiene, masticatory efficiency and retention according to patient

	Esthetics	Comfort	Hygiene	Masticatory efficacy	Retention	Total	p-value
Excellent	14	17	16	19	18	84	0.02**
Good	6	4	7	2	3	22	
Regular	5	4	2	3	4	18	
Bad	1	1	1	2	1	6	
Total	26	26	26	26	26		

** Statistically significant

Fig 1: Showing evaluation of esthetics, comfort, hygiene, masticatory efficiency and retention according to patient



RESULTS

In Table 1, demographic variables of the study sample are shown. The male patients in the study sample were 12 in number and female patients were 14 in number. The patients in the age group of 31-40 years were 6, 41-50 years were 5, 51-60 years were 9 and more than 60 years were 6.The number of patients with maxillary RPD were 16 and mandibular RPD were 10.

Table 2 shows the evaluation of aesthetics, comfort, hygiene, masticatory efficacy and retention according to patient. We observed that majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. Only 6 patients in total reported bad experience with Removable partial denture. The results were statistically significant ($p<0.05$).

DISCUSSION

In the present study, we assessed the patient's satisfaction to the Removable partial denture after 5 years. We observed that majority of patients reported excellent experience with RPD. Very few patients reported bad experience. The patients were highly satisfied with respect to aesthetics, comfort, hygiene, masticatory efficacy and retention. Similar studies conducted by other authors also reported similar results. Celebić A et al compared satisfaction between complete denture (CD) and Kennedy Class I removable partial denture (RPD) wearers. A total of 156 CD and 112 RPD wearers took a part in this study. From the primary group of the examined patients, only those whose RPDs and CDs were assessed as excellent or very good by the dentist, took a part in this study. Patients graded satisfaction of their dentures by using an analogue scale from 1 to 5 (1=unsatisfactory; 5=excellent). Both CD and RPD wearers were mostly satisfied with their dentures (the distribution of the scores of the patients' assessments was skewed towards the highest scores; more than half of the patients scored all the examined variables to the best score category). Complete Denture wearers were significantly more satisfied with chewing, speech and retention of maxillary denture than RPD wearers.

Removable partial denture wearers were significantly more satisfied with the retention and the comfort of wearing mandibular denture. There was no significant difference between CD and RPD wearers for general satisfaction with their dentures, aesthetics and comfort of wearing maxillary denture.

It was concluded that majority of CD and RPD wearers were satisfied with the dentures. CD wearers were more satisfied with speech, chewing and retention of maxillary denture, while RPD wearers were more satisfied with the retention and the comfort of wearing mandibular denture. Different groups of denture wearers have to make significant, but different adjustments to wear their dentures successfully.

Knezović Zlatarić D et al examined patients' satisfaction with RPDs in relation to some socio-economic variables, patients' habits of wearing and cleaning RPDs, comfort of wearing RPDs and different RPDs characteristics. A questionnaire was devised for the purpose. Two hundred and five patients were required to assess satisfaction with RPDs. They graded RPDs, depending on the level of satisfaction, on scale ranging from 1 to 5.

A dentist determined Kennedy classification, material and denture support, denture base shape, number of missing teeth and evaluated denture construction. Majority of the patients were satisfied with the prosthesis. The patients of a higher education level gave lower grades to aesthetics of maxillary RPDs. Almost half of the patients were wearing RPDs during the day. Most of the patients cleaned RPDs three times a day. A significant difference was found between the patient's grades for comfort of wearing mandibular RPDs and number of missing teeth and between hygiene of mandibular RPDs and habits of cleaning them. Majority of the patients treated with RPDs were satisfied with the prosthesis. Dissatisfaction was related to mastication, esthetics, number of missing teeth and maintenance of oral hygiene.[7,8]

Hummel SK et al evaluated the prevalence and quality of RPDs by use of the National Health and Nutrition Survey (NHANES III) data set. Estimates of the health and nutritional status of the American population were obtained from the NHANES III data set (1988-1994). Calibrated dentists performed dental examinations on 17,884 adults.

If the subject wore an RPD, its quality was assessed with 5 criteria: integrity, tooth wear, the presence of temporary reline material or adhesive, stability, and retention. In this study, the data on RPD defects were used to assess the prevalence of problems. The original population was divided into 4 subgroups: paired RPD data = subjects wearing both maxillary and mandibular RPDs (n = 600 prostheses, 300 maxillary and 300 mandibular); single RPD data = subjects with only one RPD (n = 1003 prostheses, 511 maxillary and 492 mandibular); maxillary versus mandibular RPD data = all subjects with all RPDs (n = 1603 prostheses, 811 maxillary and 792 mandibular); and pooled RPD data = all subjects with a single RPD plus subjects with 2 RPDs, counting only the RPD with the most defects (n = 1303 prostheses, 674 maxillary and 629 mandibular). The subjects were analyzed with descriptive statistics. Of the 17,884 adults who underwent a dental examination, 1306 had RPDs.

Three patients were excluded because their records were incomplete, leaving 1303 patients available for analysis. Most of the prostheses examined (65%) had at least 1 defect. Lack of stability was the most prevalent single defect. Distinctions in the type and prevalence of defects

were observed between mandibular and maxillary RPDs. Mandibular RPDs had significantly more problems related to retention, whereas maxillary RPDs had significantly more problems related to the presence of reline material and to integrity defects. Tooth wear defects were significantly associated with patient age. Only one third of the RPDs were considered satisfactory according to NHANES III criteria. The authors concluded that in spite of a decline in tooth loss, RPDs are still used in all age cohorts, including young adults. A large number of RPDs were found to have defects. Pun DK et al investigated the patterns of tooth loss in patients receiving removable partial dentures (RPDs) in eastern Wisconsin. Digital images (1502) of casts at 5 dental laboratories in Eastern Wisconsin were collected. Any prescription requesting fabrication of a removable partial denture was photographed twice. The first photograph was made immediately upon arrival at the laboratory, while the second photograph was made immediately before being returned to the prescribing dentist for the first time.

A calibrated investigator analyzed all the photographs for Kennedy Classification, type of RPD, major connector, and other details. Data were analyzed with descriptive statistics. Fisher's exact test was used to confirm repeatability.

Kennedy Class I was the most common RPD with a frequency of 38.4%. More than 40% of prescriptions had no design input from the dentist. One in 3 RPDs used acrylic resin or flexible frameworks. One in 5 RPDs had no rests. The horseshoe major connector was the most common maxillary major connector, while the lingual plate was the most common in the mandible. The authors concluded that RPDs remain a common prosthodontic treatment in this region. Non-metal RPD frameworks are a common treatment type and rarely include rests. These data indicate a changing partially edentulous patient population and a variable commitment to standard levels of prosthodontic care.[9,10]

CONCLUSION

From the results of present study, we conclude that the treatment for partially edentulous ridge with Removable partial denture is satisfactory for majority of cases. Only few cases reported to be having bad experience with RPD.

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How to cite the article: Ranjana Balla, Roshika Sudan, Himanshu Gupta. Assessment of Patient's Satisfaction to the Removable Partial Denture After 5 Years. Adv Med Dent Res 2017; July-Dec; 3(2); 1-4.