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"PATIENT SATISFACTION OF UNILATERAL AND BILATERAL ARCH PARTIAL DENTURE TREATMENT" - A SURVEY

Dental Science

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ABSTRACT

Purpose: Considering that patient's satisfaction is one of the most important goals in conducting removable dental prosthesis (RDP) therapy and the fact that there are many factors which influence this parameter, the present study aims to evaluate the expectation before and satisfaction after therapy with RDP in patients who seek such therapy. As a secondary objective, other variables that may be associated with patient satisfaction are also evaluated, such as gender, age, the number of RDP adjustments after delivery and patients' evaluation of the dentists' conduct.

Materials and methods: A sample of 50 patients who received RDP therapy were assigned visual analog scale scores for their expectation before and satisfaction after therapy regarding chewing, aesthetics, comfort and phonetics. They also completed a questionnaire concerning the dentists' conduct.

Results: There was no statistically significant difference among scores concerning different genders, age, number of post-delivery settings and arch involved in the RDP.

Conclusions: Patients with RPD showed positive attitude towards it. Even now, some patients are unable to afford complicated treatments with implants, therefore RPD can be considered as an economical treatment choice for elderly patients and totally fulfill their expectations. Depending upon the expectations of the patient, the acceptance and satisfaction of the RPD can be improved provided they are more realistic in nature.

KEYWORDS

Introduction

Removable partial denture (RPD) remains the primary form of dental restoration as it is one of the cheapest treatment options for patients who are unable to afford treatment with implants either due to anatomical or economic reasons.[1,2] Over the last two decades, interest in dental implants has increased rapidly. However, the vast majority of edentulous persons still have to accept conventional dentures, mainly due to economic factors.[3]

According to De Van's, the main purpose of partial denture therapy should always be "conservation of that which remains, not the meticulous replacement of what has been lost". Hence, RPDs are considered as an acceptable form of treatment whic provides an various options of restorative options: maintaining or improving phonetics, establishing or increasing masticatory efficiency, stabilizing dental relationships and developing the required esthetics.[4] RPDs can be retained and stabilized with clasps and variety of attachment components which have the ability to resist denture dislodgement.[5]

The success and satisfaction of RPD depends on a number of factors such as individuality of patients, patient attitude towards RPD, previous RPD experience, encouragement for denture and design and fabrication procedure for RPD.[6-8] The most important factors for RPD acceptance are retention, chewing ability and aesthetics.[9,10] Patient's dissatisfaction with removable partial denture depends on certain factors such as risk to local damage of the remaining teeth, for e.g. caries, periodontal disease, plaque accumulation, oral candidiasis, denture stomatitis, *etc*.[11-15]

So, from this questionnaire survey we tried to find out the patient satisfaction for patients with unilateral and bilateral edentulous arches being treated with removable partial denture treatment.

Aim

This study aimed to assess patient's satisfaction with removable partial dentures (RPDs), for retention, chewing ability, aesthetics during the observation period.

Materials and Methods

A total of 50 patients, in the age group of 40 to 74 years with RPD were selected for the following questionnaire study. The research was approved by ethical committee and Informed consent was obtained from each subject participating in this study.

Inclusion criteria

1. Partially edentulous patients with Removable Partial Dentures
2. No parafunctional habits, no known disabilities that may have an effect on RPD maintenance.
3. Opposing natural teeth or opposing RPDs wearers. 50 patients were examined, with both unilateral and bilateral prosthesis.

Source of Data collection

The subjects were selected at the Department of Prosthodontics, Rajarajeswari dental college, Bengaluru, Karnataka.

Methodology

A questionnaire was formulated to evaluate the satisfaction and success of RPD, which included the following- mastication, esthetics, phonetics, comfort of use and comfort with dentist. For the assessment of expectation before and satisfaction after RDP therapy, a visual analog scale (VAS) with a numerical sequence from 0–10, where 0 represented the worst possible outcome and 10 the best possible outcome, was used.

In both situations, before and after treatment, the subjects assigned scores to various aspects of RDP outcomes.

RESULTS

STATISTICALANALYSIS:

Descriptive Statistics:

Descriptive analysis includes expression of mean VAS scores for different variables using mean and standard deviation.

Inferential Statistics:

Student Paired t test was used to compare the mean VAS scores for different study variables between Pre & Post Rx time intervals.

Independent Student t test was used to compare the mean VAS scores for different study variables between genders & type of partial edentulism during Pre and Post Rx time intervals. The level of significance was set at $P<0.05$.

Table 1. Comparison of mean VAS scores for different study variables between pre and post Rx time intervals using Student Paired t test

Comparison of mean VAS scores for different study variables between Pre & Post Rx time intervals using Student Paired t test							
Variables	Time	N	Mean	SD	Mean Diff	t	P-Value
Mastication	Pre Rx	50	7.5	0.6	-0.4	-4.032	<0.001*
	Post Rx	50	7.9	0.6			
Aesthetics	Pre Rx	50	7.5	0.8	-0.4	-3.739	<0.001*
	Post Rx	50	7.9	0.7			
Phonetics	Pre Rx	50	7.9	0.8	0.1	0.733	0.47
	Post Rx	50	7.8	0.7			
Comfort of Use	Pre Rx	50	8.0	0.8	0.0	0.376	0.71
	Post Rx	50	8.0	0.7			
Comfort with Dentist	Pre Rx	50	8.0	0.8	-0.2	-2.291	0.03*
	Post Rx	50	8.2	0.7			

* - Statistically Significant

Graph 1. Comparison of mean VAS scores for different study variables between pre and post Rx time intervals

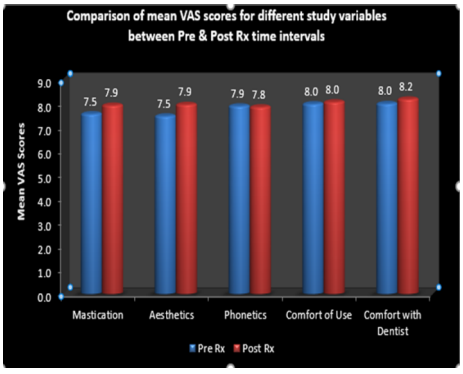
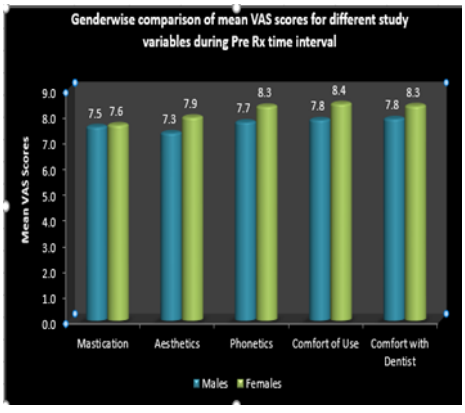


Table 2. Genderwise comparison of mean VAS scores for different study variables during pre Rx time interval using independent Student t Test

Genderwise comparison of mean VAS scores for different study variables during Post Rx time interval using Independent Student t test							
Variables	Gender	N	Mean	SD	Mean Diff	t	P-Value
Mastication	Males	36	7.8	0.6	-0.4	-2.038	0.05
	Females	14	8.2	0.7			
Aesthetics	Males	36	7.8	0.7	-0.5	-2.375	0.02*
	Females	14	8.3	0.6			
Phonetics	Males	36	7.8	0.7	-0.1	-0.528	0.60
	Females	14	7.9	0.7			
Comfort of Use	Males	36	7.9	0.7	-0.5	-2.338	0.02*
	Females	14	8.4	0.5			
Comfort with Dentist	Males	36	8.1	0.7	-0.3	-1.329	0.19
	Females	14	8.4	0.7			

* - Statistically Significant

Graph 2. Genderwise comparison of mean VAS scores for different study variables during pre Rx time interval



Graph 3. Genderwise comparison of mean VAS scores for different study variables during post Rx time interval

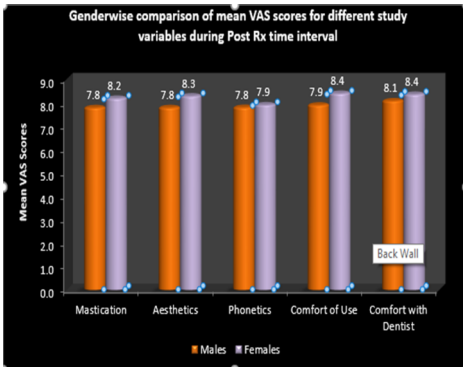


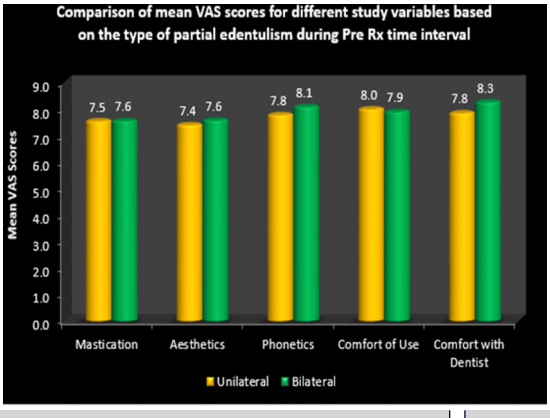
Table 4. comparison of mean VAS scores for different study variables based on the type of partial edentulism during pre Rx time interval using Independent Student t Test

Comparison of mean VAS scores for different study variables based on the type of partial edentulism during Pre Rx time interval using Independent Student t test							
Variables	Arch	N	Mean	SD	Mean Diff	t	P-Value
Mastication	Unilateral	34	7.5	0.6	0.0	-0.062	0.95
	Bilateral	16	7.6	0.7			
Aesthetics	Unilateral	34	7.4	0.8	-0.2	-0.713	0.48
	Bilateral	16	7.6	0.8			
Phonetics	Unilateral	34	7.8	0.8	-0.3	-1.361	0.18
	Bilateral	16	8.1	0.7			
Comfort of Use	Unilateral	34	8.0	0.9	0.1	0.435	0.67
	Bilateral	16	7.9	0.7			
Comfort with Dentist	Unilateral	34	7.8	0.8	-0.4	-1.867	0.07
	Bilateral	16	8.3	0.7			

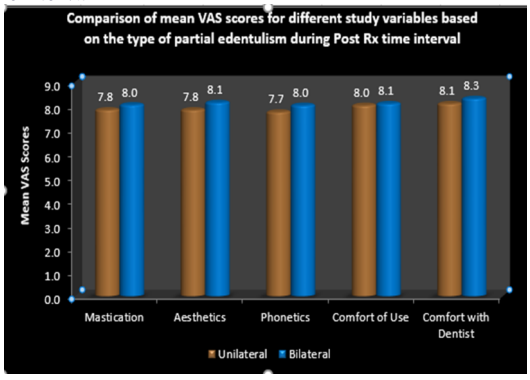
Table 5. comparison of mean VAS scores for different study variables based on the type of partial edentulism during post Rx time interval using Independent Student t Test

Comparison of mean VAS scores for different study variables based on the type of partial edentulism during Post Rx time interval using Independent Student t test							
Variables	Arch	N	Mean	SD	Mean Diff	t	P-Value
Mastication	Unilateral	34	7.8	0.6	-0.2	-1.055	0.30
	Bilateral	16	8.0	0.7			
Aesthetics	Unilateral	34	7.8	0.7	-0.3	-1.515	0.14
	Bilateral	16	8.1	0.6			
Phonetics	Unilateral	34	7.7	0.7	-0.3	-1.320	0.19
	Bilateral	16	8.0	0.6			
Comfort of Use	Unilateral	34	8.0	0.7	-0.1	-0.353	0.73
	Bilateral	16	8.1	0.7			
Comfort with Dentist	Unilateral	34	8.1	0.7	-0.2	-1.081	0.29
	Bilateral	16	8.3	0.7			

Graph 4. Comparison of mean VAS scores for different study variables based on the type of partial edentulism during Pre Rx time interval



Graph 5. Comparison of mean VAS scores for different study variables based on the type of partial edentulism during Post Rx time interval



DISCUSSION

The treatment of partially edentulous arches with removable partial dentures remains an ongoing process and is based on the specific needs of the patients. The acceptance and success depends on the patients physical and psychological status.[16,17]

From this questionnaire study we found that the patients in this sample presented higher satisfaction post treatment, for chewing and esthetics, comfort with doctor. Whereas satisfaction with RPD is multifactorial, involving technical aspects as well as those that relate to the patient, several factors must be considered in the analysis of satisfaction (example- personality, attitude towards RPD and motivation to use RPD).

Patients with previous RPDs experience would be expected to be more satisfied.[18] Past experience alone may not be a highly predictive indicator of future satisfaction.[19] According to Yen YY *et al.*, denture satisfaction is useful for assessing the effect of denture treatment on the OHRQoL of elderly individuals wearing RPD. In addition loss of retention of the dentures may have impaired the patients' ability to chew causing dissatisfaction.[20]

CONCLUSION

Patients with RPD showed positive attitude towards it. Even now, some patients are unable to afford complicated treatments with implants, therefore RPD can be considered as an economical treatment choice for elderly patients and totally fulfill their expectations. Depending upon the expectations of the patient, the acceptance and satisfaction of the RPD can be improved provided they are more realistic in nature.

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