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Change in Oral Health Related Quality of Life During Implant Treatment in Partially Edentulous Patients: A Prospective Study

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ABSTRACT

Background: Diverse treatment conceivable outcomes have been put forth to supplant the missing tooth. Oral health-related quality of life (OHRQoL) is an essential patient-focused endpoint to be considered while surveying the effect of alterations in the oral cavity and assessing proficient intercessions. Hence; the present study was undertaking for assessing the changes in oral health related quality of life during implant treatment in partially edentulous patients.

Materials & methods: A total of 25 patients with missing mandibular first and second molars of same quadrant were enrolled in the present study. Complete demographic and clinical details of all the patients were obtained. Complete oral examination of all the patients was carried out. A self-framed questionnaire was for assessing the QoL among the patients. The questionnaire was given to all the patients before the implant placement procedure and 1 week after the implant placement procedure. All the questions of the QoL questionnaire were graded on a scale of 0 to 10 with 0 indicating minimum value and 10 indicating maximum value of the questionnaire.

Results: Mean pre-treatment functional limitation score was 8.9 while mean post-implant surgery, the score was 6.5. Mean pre-treatment psychological discomfort score was 5.6 while mean post-implant surgery, the score was 2.5. Mean pre-treatment social disability score was 5.9 while mean post-implant surgery, the score was 2.4. Significant results were obtained while comparing the pre-treatment and post-treatment quality of life among patients undergoing dental implant surgery.

Conclusion: Dental implant significantly improves the quality of life among patients with edentulous spaced.

Keywords: Implant, Quality of life, Treatment.

INTRODUCTION

Edentulism is viewed as a physical disability since imperative body part has been lost and in the aged individual's edentulism adversely affects distinctive parts of personal satisfaction. Numerous edentulous individuals experience a debilitated competence to perform vital life assignments.[1-3] Diverse treatment conceivable outcomes have been put forth to supplant the missing tooth. Oral health-related quality of life (OHRQoL) is an essential patient-focused endpoint to be considered while surveying the effect of alterations in the oral cavity and assessing proficient intercessions.[4-6]

A number of studies on patient-reported outcomes of implant treatment have been conducted regarding implant-supported overdentures and implant-supported fixed prostheses for a single or small number of missing teeth. [5-7] Hence; the present study was undertake for assessing the changes in oral health related quality of life during implant treatment in partially edentulous patients.

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MATERIALS & METHODS

The present study was conducted in the department of prosthodontics of the dental institute and it included assessment of change in oral health related quality of life during implant treatment in partially edentulous patients. Ethical approval was obtained from institutional ethical committee before the starting of the study. Also written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 25 patients with missing mandibular first and second molars of same quadrant were enrolled in the present study. Complete demographic and clinical details of all the patients were obtained. Complete oral examination of all the patients was carried out. A self-framed questionnaire was for assessing the QoL among the patients. The questionnaire was given to all the patients before the implant placement procedure and 1 week after the implant placement procedure. All the questions of the QoL questionnaire were graded on a scale of 0 to 10 with 0 indicating minimum value and 10 indicating maximum value of the questionnaire. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

RESULTS

In the present study, analysis of a total of 25 patients was done who were scheduled to undergo dental implant placement surgery. Majority of the patients of the present study were males and belonged to the age group of less than 35 years. 56 percent of the patients of the present study had urban residence.

Mean pre-treatment functional limitation score was 8.9 while mean post-implant surgery, the score was 6.5. Mean pre-treatment psychological discomfort score was 5.6 while mean post-implant surgery, the score was 2.5. Mean pre-treatment social disability score was 5.9 while mean post-implant surgery, the score was 2.4. Significant results were obtained while comparing the pre-treatment and post-treatment quality of life among patients undergoing dental implant surgery.

Table 1: Demographic data

Parameter		N	%
Age group (years)	Less than 35	15	60
	35 to 55	6	24
	More than 55	4	16
Gender	Males	16	64
	Females	9	36
Residence	Urban	14	56
	Rural	11	44

Table 2: Change in quality of life on the basis of QoL questionnaire

Questionnaire	Mean Score before implant placement surgery	Mean Score after implant placement surgery at one week follow-up	p- value
Functional limitation	8.9	6.5	0.00 (Significant)
Physical pain	2.6	4.8	
Psychological discomfort	5.6	2.5	
Social disability	5.9	2.4	
Physical disability	8.7	5.6	

DISCUSSION

Enhancement in quality of life is noted in individuals who were treated with implant supported removable over-dentures in correlation with use of complete dentures. Implant-supported dentures catered more noteworthy change of oral health in terms of masticatory efficacy, solace, discourse, function, improved personal appearance. Changes in practical angles and oral wellbeing have been confirmed in geriatric patients who were rehabilitated with implant prosthesis.[7- 9]

In the present study, analysis of a total of 25 patients was done who were scheduled to undergo dental implant placement surgery. Majority of the patients of the present study were males and belonged to the age group of less than 35 years. 56 percent of the patients of the present study had urban residence. Swelem AA et al investigated changes in oral health-related quality of life (OHRQoL) in partially edentulous patients treated with removable dental prostheses (RDPs), fixed dental prostheses (FDPs), fixed-removable

(combined) restorations (COMBs), and implant-supported fixed prostheses (ISFPs). A total of 200 patients (30 to 50 years old) were enrolled: 45 received RDPs, 32 received FDPs, 66 received COMBs, and 57 received ISFPs. OHRQoL was measured using the shortened version of the Oral Health Impact Profile (OHIP-14) before treatment and 6 weeks and 6 months after treatment. Treatment groups were sex-neutral; however, significant differences were found relative to age and Kennedy classification. A general linear model was used to explore the interaction of age and Kennedy classification with treatment modality. Pretreatment analysis revealed that the psychologic discomfort domain showed the greatest negative impact on OHRQoL, while functional limitation had the smallest effect. Within-group comparison revealed a significant decrease in OHIP scores throughout the study in all groups except the younger age group treated with RDPs after 6 weeks. Between-group comparison revealed significant differences among the treatment groups. The least amount of OHRQoL improvement was recorded for RDPs for both age groups at 6 weeks and for the younger age group at 6 months. There were no significant differences between FDPs and ISFPs. All treatments produced significant improvement in OHRQoL. The least amount of improvement was observed in patients with RDPs.[10]

In the present study, mean pre-treatment functional limitation score was 8.9 while mean post-implant surgery, the score was 6.5. Mean pre-treatment psychological discomfort score was 5.6 while mean post-implant surgery, the score was 2.5. Mean pre-treatment social disability score was 5.9 while mean post-implant surgery, the score was 2.4. Significant results were obtained while comparing the pre-treatment and post-treatment quality of life among patients undergoing dental implant surgery. AlZarea BK assessed the OHRQoL of patients treated with implant-supported single crowns or fixed partial dentures. A total of 79 healthy partially edentulous subjects needing implant therapy were incorporated in this study. Before placement of the implants, the subjects were instructed to fill the original version of OHIP questionnaire. Subsequently patients received titanium oral implants of the ITI® Dental Implant System. After 1st, 2nd and 3rd year of implant placement, patients filled the same OHIP-49 questionnaire. In this manner the impact of implant therapy on OHRQoL by putting in comparison pre- and post-treatment OHIP-49 scores was assessed. Functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability were significantly decreased from baseline to 1st year ($p<0.05$) except handicap ($p>0.05$). Patients aged less than 60 years and more than 60 years of age groups differed significantly with respect to OHIP scores measured at 1st year, 2nd year and at 3rd year of implant placement ($p<0.05$). Decrease in pre- and post-treatment OHIP scores OHIP demonstrated the significant increase in the OHRQoL after the therapy, which suggested increased levels of patient satisfaction.[11]

CONCLUSION

From the above results, the authors conclude that dental implant significantly improves the quality of life among patients with edentulous spaced.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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