

PATIENT ATTITUDES BEFORE AND AFTER DENTAL IMPLANT REHABILITATION



Thomas J. Balshi DDS*
Glenn J. Wolfinger DMD**
Ramon E. Hernandez OD***

A retrospective study was conducted to determine the subjective feelings of patients about their present implant-supported prostheses as compared with their previous removable prostheses. Of the 137 patients who responded to the survey, 70 previously had a removable prosthesis. The patients answered questions concerning esthetics, function, self-esteem, and overall dental condition. A large majority of the respondents rated their implant prostheses better than their previous removable prostheses and indicated significant improvements in function and overall dental health. All patients surveyed did not wish to again function with a removable prosthesis. (Implant Dent 1994;3:106-109)

A large number of patients experience difficulties in adapting to removable prostheses, while a smaller number are unable to accept removable prostheses at all.^{1,2} This may be explained by anatomical, physiological, psychological, and/or prosthodontic factors.

Functional tests have demonstrated inferior masticatory ability in subjects with removable prostheses in comparison to dentate controls.^{3,4} Even with excellent prostheses, many patients experience difficulty with denture retention, speech, and mastication.⁵⁻⁷

One psychological indication for implant treatment is the inability of some patients to adapt and function with conventional prostheses, which may result in psychosocial impairment with avoidance behavior, phobic reactions, and contact problems.

Implant prosthodontics has become an accepted alternative to conventional removable dentures. Patients who have been unable to cope with conventional prosthetic treatment for anatomical or psychological reasons can now be successfully rehabilitated with the use of implants.⁸

Several studies using patient questionnaires have concluded that the great majority of patients treated with implant prostheses were very satisfied with their oral function. This was true for the first cross-sectional studies⁹ as well as for longitudinal investigations which directly compared pretreatment and posttreatment evaluations.⁹

This investigation surveyed patients who were restored with fixed implant-supported prostheses in an attempt to determine attitudes toward the patient's previous removable and current implant prostheses.

MATERIALS AND METHODS

Surveys were sent to a number of patients who had implant treatment at a private dental practice in Fort Washington, Pennsylvania (Fig. 1). Of the 137 surveys returned, 67 (47 percent) of the respondents never wore a removable prosthesis prior to implant placement. Seventy (51 percent) of the respondents completed the survey evaluating their previous removable prostheses and their current implant-supported prostheses.

The age range of the patients responding to the survey was from 17 to 80 years, with an average age of 60 years. Implant prostheses were used from 1 week to 9 years, with an average of 31 months. A total of 613 implants were placed in the 70 patients, ranging from 1 to 18 implants, with an average of 8.8 implants per patient.

RESULTS

Esthetics

When questioned on the esthetics of their previous removable dentures, the responses were spread from total dissatisfaction to complete satisfaction (Fig. 2). Of the 66 respondents answering the question, "How do you feel about the esthetics of your removable prosthesis?" 21 stated that they were totally dissatisfied, while 13 were completely satisfied. The remainder of the patients were in a content range.

Sixty-eight respondents answered the question regarding the esthetics of their implant prostheses (Fig. 3). Fifty-four indicated complete satisfaction, 12 were moderately satisfied, and 2 were content. None of the

*Private practice, Fort Washington, PA.

**Private practice, Fort Washington, PA; Clinical Assistant Professor, Department of Prosthodontics, Temple University School of Dentistry, Philadelphia, PA 19140-5096.

***Clinical Assistant Professor, Department of Endodontics, Temple University School of Dentistry, Philadelphia, PA 19140-5096.

Results Denture Function

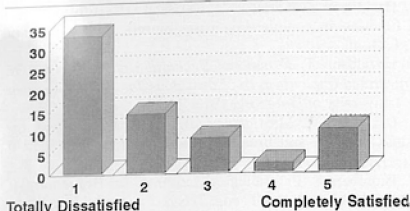


Fig. 4. Removable prosthesis function survey results.

Results Implant Function

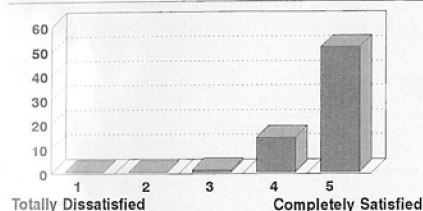


Fig. 5. Implant-supported prosthesis function survey results.

Results Implant Prosthesis & Self Esteem

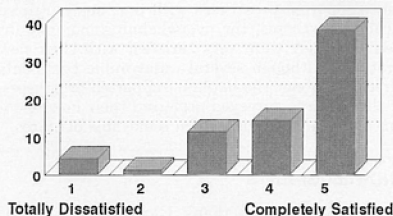


Fig. 6. Implant-supported prosthesis self-esteem survey results.

Results General Dental Condition After Implant Treatment

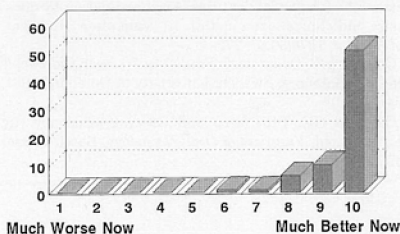


Fig. 7. General dental condition after implant treatment survey results.

10 (Fig. 7). Of the 69 respondents, 51 indicated their condition was 100 percent better with the fixed prostheses, 10 reported a 90 percent improvement, 6 reported an 80 percent improvement, and 1 patient was in each of the 70 and 60 percent categories.

DISCUSSION

A dramatic improvement was noted by patients with respect to increased function perceived with their implant-supported prostheses when compared with their previous removable prostheses, as has been reported previously.¹⁰ The small percentage of patients who reported similar or no increase of functional capabilities with their implant-supported prostheses all previously had removable partial prostheses. One of these patients attributed tongue biting, and another partial paresthesia, to the lack of increased functional capacity with their implant-supported prostheses.

An overwhelming positive response was noted when patients compared previous esthetics with a removable prosthesis to the present esthetics with an implant-supported prosthesis. None of the patients were dissatisfied with the esthetics of their new restorations. This finding is difficult to explain, except for those cases in

which clasps on previously worn removable partial dentures presented esthetic problems.

The majority of patients also noted an increase in self-esteem with their implant prostheses. Perhaps the patients considered the implant-supported prostheses to be integral parts of themselves as opposed to removable restorations. Lack of worry about a removable prosthesis that could be dislodged during function, speech, laughing, and yawning could also have attributed to the reported increased self-esteem.

The increase reported in general dental health with the implant-supported prostheses is most probably attributed to the perceived combination of improved esthetics, increased self-esteem, and better function.

A total of 11 complaints were made regarding the implant-supported prostheses. Three patients stated they found their prostheses hard to clean and/or a food trap; two complained about the expense; two had problems with fracture of denture teeth; one was unhappy because of partial paresthesia; and one indicated the procedure was too painful. One patient complained of tongue biting and another thought the implant prosthesis caused lisping during speech.



Patient Questionnaire Removable vs. Non-removable Teeth

Name: _____ Date: _____ Age: _____

** This survey is only to be completed by persons who had a removable prosthesis before receiving implant supported a fixed prosthesis.

1. How did you feel about the following aspects of your removable prosthesis (denture)?

	Totally Dissatisfied		Content		Completely Satisfied	
Ethetics:	1	2	3	4	5	
Function:	1	2	3	4	5	

2. How do you feel about the following aspects of your non-removable prosthesis?

	Totally Dissatisfied		Content		Completely Satisfied	
Ethetics:	1	2	3	4	5	
Function:	1	2	3	4	5	

3. Do you feel that your self esteem has improved since receiving your fixed prosthesis?

	Not at all		Somewhat		Quite a Bit	
	1	2	3	4	5	

4. With your non-removable teeth, are you able to eat better now than with your removable denture?

Yes No

5. Would you prefer to go back to wearing a removable prosthesis?

Yes No

6. On a scale from 1 to 10, how would you rate your dental condition with your fixed prosthesis over the removable one you once had?

Much Worse Now								Much Better Now	
1	2	3	4	5	6	7	8	9	10

7. How long have you had your current prosthesis? _____

Fig. 1. Patient questionnaire.

respondents reported any dissatisfaction with the esthetic results.

Denture Function

Sixty-seven respondents answered the question concerning the function of their previous removable dentures. Thirty-three were totally dissatisfied, while 10 patients were completely satisfied (Fig. 4).

When questioned regarding function with their implant-supported prostheses, 66 respondents replied (Fig. 5). Fifty-one patients were completely satisfied, 14 patients were almost completely satisfied, and 1 patient was content. None of the respondents indicated any dissatisfaction with function.

Self-Esteem

Patients were questioned as to whether their self-esteem improved after receiving fixed implant-supported prostheses (Fig. 6). Sixty-eight patients answered the question with the majority (n = 38) indicating that their self-esteem improved "quite a bit." Only

Results Denture Esthetics

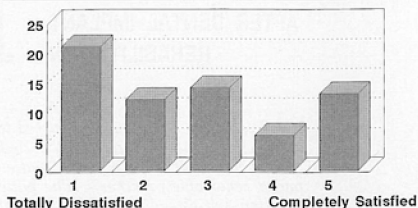


Fig. 2. Removable prosthesis esthetics survey results.

Results Implant Esthetics

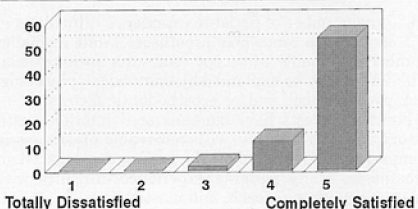


Fig. 3. Implant-supported prosthesis esthetics survey results.

four respondents indicated that their self-esteem had not improved at all.

Mastication

All patients were asked if they were able to eat better with their implant-supported fixed prostheses as compared with their removable dentures. Sixty-one respondents (88 percent) indicated that they could chew better with their implant-supported prostheses as compared with their previous removable prostheses. Five patients (7 percent) indicated that they could not chew better with their implant-supported prostheses, and three patients (4 percent) stated that they had the same chewing ability with their implant prostheses as compared with their previous removable prostheses.

Return to Removable Dentures

All 70 respondents indicated that they preferred not to return to removable dentures.

General Dental Condition

The patients were asked to rate their general dental condition after implant treatment on a scale from 1 to

CONCLUSION

Of the 70 patients responding to a survey comparing implant-supported prostheses with previously utilized removable prostheses, the overwhelming majority indicated that they were very satisfied with their new restorations. Although several unfavorable comments were received about the implant-supported prostheses, all of the patients surveyed preferred their new restorations over the previously worn removable dentures.

ACKNOWLEDGMENTS

The authors wish to thank Chris Raines for the survey design and computer graphics and Liz Kirk for manuscript preparation.

REFERENCES

1. Carlsson GE, Hedegård B, Koivumaa KK. Late results of treatment with partial dentures. An investigation by questionnaire and clinical examination 13 years after treatment. *J Oral Rehabil.* 1976;3:267-272.
2. Österberg T. *Odontologic Studies in 70-Year-Old People in Göteborg.* Göteborg, Sweden: University of Göteborg; 1981. Thesis.
3. Carlsson GE. Bite force and chewing efficiency. In: Kawamura Y, ed. *Frontiers of Oral Physiology.* Basel: Karger AG; 1974:265-292.

4. Bates JF, Stafford GD, Harrison A. Masticatory function—a review of the literature. III. Masticatory performance and efficiency. *J Oral Rehabil.* 1976;3:57-67.

5. Haraldson T, Karlsson U, Carlsson GE. Bite force and oral function in complete denture wearers. *J Oral Rehabil.* 1979;6:41-48.

6. Haraldson T. *Functional Evaluation of Bridges on Osseointegrated Implants in the Edentulous Jaw.* Göteborg, Sweden: University of Göteborg; 1979. Thesis.

7. Carlsson GE. Masticatory efficiency: the effect of age, the loss of teeth and prosthetic rehabilitation. *Int Dent J.* 1984;34:93-97.

8. Blomberg S. Psychological response. In: Brånemark P-I, Zarb GA, Albrektsson T, eds. *Tissue-Integrated Prostheses. Osseointegration in Clinical Dentistry.* Chicago, IL: Quintessence Publishing Co.; 1985:165-174.

9. Lundqvist S, Carlsson GE. Maxillary fixed prostheses on osseointegrated dental implants. *J Prosthet Dent.* 1983; 50:262-270.

10. Carlsson GE, Haraldson T. Functional response. In: Brånemark P-I, Zarb GA, Albrektsson T, eds. *Tissue-Integrated Prostheses. Osseointegration in Clinical Dentistry.* Chicago, IL: Quintessence Publishing Co.; 1985:155-163.

Reprint requests to:

Dr. Thomas J. Balshi
 Prosthodontics Intermedica
 467 Pennsylvania Avenue, Suite 201
 Fort Washington, PA 19034