



Reasons for not using Implants to retain Complete Denture: Patients' Survey

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ABSTRACT

Objective: This study aimed to gain more information from complete denture (CD) wearers who did not receive dental implants, of the reasons preventing them from using implants to retain their CD in a selected sample of dental patients in Riyadh, Saudi Arabia.

Materials and methods: A paper-and-pencil questionnaire containing 20 direct questions of the possible reasons preventing CD wearers from receiving implants to retain their dentures was distributed in three different places in Riyadh, Saudi Arabia.

Results: A total of 270 subjects were included in this survey. The results showed that 180 (66.7%) patients indicated that the fear of pain associated with implant placement was the main reason preventing them from receiving an implant treatment, followed by fear of the surgical procedure (175, 64.8%), fear of postoperative complications (166, 61.5%), information from other people about the various problems associated with implant treatment (154, 57%), and finally cost of the implant (141, 52.2%).

Conclusion: Fear is the main reason preventing CD wearers from receiving implant treatment. Therefore, it is essential for dentists to be familiar with the reasons for implant refusal to overcome a common, yet an influential obstacle.

Keywords: Complete denture, Fear, Implant.

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INTRODUCTION

Loss of all natural teeth has a negative impact on the quality of life (speech, mastication, aesthetics, and overall oral health).¹ Replacement with new conventional dentures does not appear to give significant improvement.²⁻⁴ The reflection of total tooth loss is not only on patient's social behavior and self-image, but also has a great impact on the level of acceptance of complete dentures (CDs). Conventional dentures have well-documented problems, such as lack of stability and retention, pain with chewing and eating, movement of denture when eating, and negative self-image.⁵⁻⁹

Patients find implant-supported overdenture (ISO) significantly more stable, and they rate their ability to chew various foods as significantly easier. In addition, they are more comfortable and speak more conveniently.¹⁰ Satisfaction level with ISO was significantly higher than that with conventional dentures.¹ Nowadays, the 2-implant-retained overdenture is considered the first-choice standard of care for edentulous mandible.^{10,11}

A variety of factors may prevent CD wearers from receiving implant treatment. Fear of pain associated with the surgical procedure and the following complications are important factors that help explain refusal of implants.¹² Patients' fear was based mainly on their perception of an unknown entity. They tend to rely on surgical and medical experience, as well as on limited information and rumors

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about implants.¹² Allen et al¹³ study in 2006 found 12 individuals who had conventional dentures refusing implant. Reason for refusing implant was mainly due to fear of the surgical procedure.¹³ When comparing conventional denture treatment with ISOs, cost is considered the high priority factor in the choice of treatment option.^{14,15} In the study of Walton and MacEntee,¹⁶ although cost was waived, and free implants were offered to the participants to retain their mandibular dentures, but still more than one third (36%) of the old edentulous participants refused to receive the free implant treatment.

The objective of this study was to elucidate more information from CD wearers who did not receive dental implant, of the reasons preventing them from using implant to retain their CD by conducting a patients' survey.

MATERIALS AND METHODS

This study was approved by the College of Dentistry Research Center, King Saud University (Registration No. IR 0008).

A paper-and-pencil questionnaire was designed based on reviewing the available literature on this topic and discussion sessions between the authors. The initial draft of the questionnaire was evaluated by two expert methodologists and pilot-tested by 10 participants to evaluate the clarity and face validity of the questions. Comments and suggestions were collected, and the questionnaire was finalized.

The final questionnaire was divided into three sections that assessed the following: Personal data (age, gender, income, and educational status), edentulous status in maxillary and mandibular arches, and 20 questions of the possible reasons preventing CD wearers from using implants to retain their CD.

The selected subjects for this study were CD wearers who did not have implants to retain their CD and have been using CD for at least 1 year. Participants were approached during their regular dental visits in three different places in Riyadh, Saudi Arabia. These places were College of Dentistry in King Saud University (two campuses), Prince Sultan Medical Military City (PSMMC), and King Saud Medical City (KSMC).

Statistical Package for the Social Science (SPSS Inc., Chicago, IL, USA; version 16.0) was used for data analysis, where the frequency was used to show the main reasons preventing CD wearers from using implants to retain their CD. Proportional t-test was used to compare the responses of the participants to the questions. Significance level was set at $p < 0.05$

RESULTS

A total of 270 CD wearers were included in the study. There were 176 (65.2%) male participants and 94 (34.8%)

female participants. Table 1 summarizes the demographic data of the participants. Table 2 summarizes the edentulous status of the participants. For each subject, 20 variables were used to collect the data. Table 3 summarizes the responses of the subjects to the survey questions. The top five reasons for not using implant to retain CDs are shown in Fig. 1.

DISCUSSION

In this study, participants were asked to identify factors preventing them from considering implant as a treatment option to retain their dentures. The sample for this study was selected based on ease of access to increase the response rate as they are old patients who were approached during their dental visits.

Fear factor was the most common reason. The findings of this study ranked fear of pain associated with implant placement (66.7%), fear of the surgical procedure (64.8%), and fear of postoperative complications (61.5%) as the main reasons preventing CD wearers from using implant to retain their CD. Agreeing result have been reported by

Table 1: Personal data of the participants

	No. (%)
<i>Age</i>	
40–under 60	77 (28.5)
60–under 80	174 (64.4)
Above 80	19 (7.1)
<i>Gender</i>	
Male	176 (65.2)
Female	94 (34.8)
<i>Income</i>	
Under 3,000 SR	65 (24.1)
3000–under 5,000 SR	73 (27)
5000–under 7,000 SR	74 (27.4)
7000–under 10,000 SR	38 (14.1)
More than 10,000 SR	20 (7.4)
<i>Educational level</i>	
Primary school or below	129 (47.8)
Secondary school	81 (30)
High school	47 (17.4)
Diploma	9 (3.3)
University level	4 (1.5)

Table 2: Edentulous status of the subjects

<i>Arch</i>	No. (%)
<i>Upper jaw</i>	
Complete edentulism	232 (85.9)
Partial edentulism	38 (14.1)
<i>Lower jaw</i>	
Complete edentulism	253 (93.7)
Partial edentulism	17 (6.3)

Table 3: Summary of the participants' responses to the survey questions

Factors	Agree, No. (%)	Do not know, No. (%)	Disagree, No. (%)	p-value, Agree/Disagree
1 Lack of knowledge about implant treatment	129 (47.8)	15 (5.5)	126 (46.7)	0.4170
2 Cost of implant	141 (52.2)	19 (7.1)	110 (40.7)	0.0104*
3 I am too old to receive implant treatment	69 (25.6)	39 (14.4)	162 (60)	0.0000*
4 My general health does not allow me to undergo surgical procedure for implant treatment	57 (21.1)	48 (17.8)	165 (61.1)	0.0000*
5 My current denture works properly	63 (23.3)	12 (4.4)	195 (72.2)	0.0000*
6 Fear of the surgical procedure	175 (64.8)	19 (7.1)	76 (28.1)	0.0000*
7 Fear of pain associated with implant placement	180 (66.7)	22 (8.1)	68 (25.2)	0.0000*
8 Fear of postoperative complications	166 (61.5)	37 (13.7)	67 (24.8)	0.0000*
9 Several visits are required for implant placement	113 (41.9)	60 (22.2)	97 (35.9)	0.1782
10 Total duration of implant treatment	80 (29.6)	55 (20.4)	135 (50)	0.0000*
11 I do not have the time for regular dental visits for implant treatment	58 (21.5)	11 (4.1)	201 (74.4)	0.0000*
12 The quality of my jaw bones prevents me from receiving implant treatment	38 (14.1)	78 (28.9)	154 (57)	0.0000*
13 I have bone deficiency, and I do not want to receive bone graft treatment	22 (8.1)	97 (36)	151 (55.9)	0.0000*
14 The floor of my maxillary sinuses is receding which prevents implant treatment	20 (7.4)	93 (34.4)	157 (58.1)	0.0000*
15 The floor of my maxillary sinuses is receding which prevents implant treatment, and I do not want surgical preparation to correct it	20 (7.4)	90 (33.3)	160 (59.3)	0.0000*
16 I am not aware of any specialized implantologist	96 (35.6)	20 (7.4)	154 (57)	0.0000*
17 Other people have informed me the many problems of implant treatment, and I do not want to risk experiencing such problems	154 (57)	37 (13.7)	79 (29.3)	0.0000*
18 Implants and the supported dentures require meticulous oral hygiene practices	67 (24.8)	80 (29.6)	123 (45.6)	0.0000*
19 I have undergone chemo/radiation therapy for cancer treatment which prevents implant treatment	2 (0.7)	10 (3.7)	258 (95.6)	0.0000*
20 I am currently taking medications which prevent me from receiving implant treatment	0 (0)	34 (12.6)	236 (87.4)	0.0000*

*Significant difference at $p < 0.05$

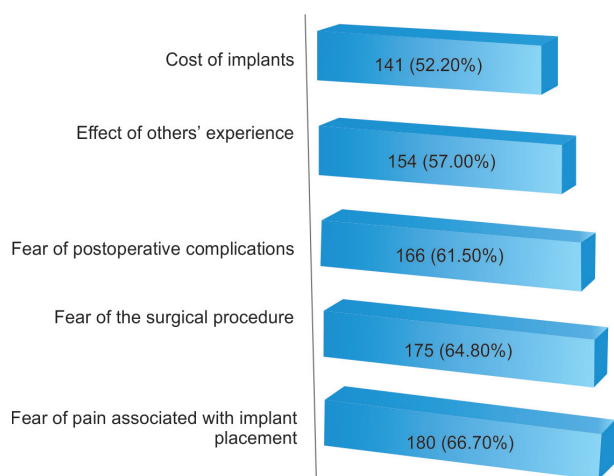


Fig. 1: The top five reasons for not considering dental implants by complete denture wearers

Ellis et al,¹² Al-Johany et al¹⁷ (41.40%), and Tepper et al¹⁸ in their studies, where they found that 43% of the subjects considered surgery as a disadvantage of implant.

The fourth most common reason was the information from other people that implant treatment has many

problems and complications (57%). In another study¹⁷ done in the same community about dental patients' awareness and knowledge in using dental implants, 31.5% (highest percentage) of the questioned subjects ranked friends and relatives as the main source of information about dental implants followed by dentists in 28.3% of the subjects. Dentists should be aware of this fact and they should pay more attention toward educating patients about the advantages, disadvantages and high predictability of dental implants in dentulous and edentulous patients.

The fifth most common reason was cost of the implant (52.2%). Similarly, Al-Johany et al¹⁷ (70.70%) and Tepper et al¹⁸ (76%) found that cost is a primary factor preventing people from using dental implants. However, such a result was contradicted by a previous study¹⁶ where even when free implants were offered to the participants to retain their mandibular dentures, 36% of their patients refused the free implants. Cost of implants in this study is not considered as the main factor; this could be due to the wide use of implant therapy nowadays, which may have led to reduction in implant treatment cost. This could enable more people to afford dental implant treatment.

Despite superiority of implant treatment for elderly edentulous people over conventional prosthesis, the anticipated risk associated with implant surgery refrains them from choosing such treatment modality. Fear is a primary factor that could better explain the refusal of the elderly patients on receiving dental implants. It is therefore, essential for dentists to be familiar with the reasons for implant refusal to overcome a common, yet an influential obstacle. Future research is needed to provide a better understanding for both dentists and patients.

CONCLUSION

In this study, it can be concluded that fear was the main reason preventing CD wearers from using implants to retain their dentures, including fear of pain associated with implant placement, fear of the surgical procedure, and fear of postoperative complications. Cost of implants may also be an influential factor. Dentists should provide patients with more information about the advantages and disadvantages of using implants to retain their CD.

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