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Original Article

Patients' satisfaction and maintenance of fixed partial denture

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ABSTRACT

Objectives: The aims of this study were to evaluate patient satisfaction with fixed prosthesis following placement and to assess the oral health and oral hygiene practices awareness by survey questionnaire. **Materials and Methods:** One hundred and ninety-two questionnaires were filled by patients wearing fixed prosthesis; the questionnaire included the subjective perception of treatment with fixed prosthesis, patients' perception of clinical outcome, regarding esthetics, masticatory function, speech, and together patient's attitude toward oral hygiene measures. **Results:** Results showed that 84% of the patients were satisfied with their fixed prosthesis, while only 46.4% of patients were satisfied with the chewing ability. In concern, with esthetic outcome, 80% of patients showed that they were satisfied with the esthetic. The results showed that a high significantly number of patients did not use any form of interdental aids' to clean their fixed prosthesis (94%). The main reason for not using any dental aids' (91.1%) was a lack of post fixed prosthodontics instructions and not been informed by the dentist. **Conclusion:** High percentages of patients were satisfied with their fixed prosthesis. The most important finding of this study was that majority of patients showed a lack of knowledge regarding post fixed prosthodontics instructions and the significance of maintenance of fixed prosthesis using dental aids'. Of particular concern was the majority of dentists did not pay attention to the post treatment instructions concerning the maintenance of fixed prosthesis.

Key words: Dental aids and patients, fixed prosthesis, oral health, oral hygiene practices, satisfaction

INTRODUCTION

Fixed partial dentures (FPDs) have been the treatment of choice for the replacement of missing teeth for some years. The dental literature has some 7000 articles on the topic of FPDs. However, only a few number of them deal with patients' perceptions of clinical outcomes and level of satisfaction with FPD treatment. Edentulism and dental disease have been shown to affect patients adversely. Patients with the dental disease suffer from an altered self-image.[1] They may be expected by others to be socially less competent and have less intellectual achievement.[2] Dento-facial problems have known effects on patient's satisfaction with their dentition as they affect esthetics, performance, and function.[3-5] Regarding prosthodontics, the literature is almost full with studies of patient satisfaction among complete denture wearers, although with little consensus on the factors influence it.[6,7] Reports on satisfaction with implant-supported prostheses among edentulous patients have been both strongly positive and more equivocal.[8] Studies of satisfaction among partial

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denture patients have largely focused on those treated with removable partial dentures,[9] although there are some reports on patient groups treated by a variety of prosthodontic means.[10,11] In these studies, even though patient satisfaction with treatment received was reported as high, it was lower than had been expected before the start of treatment. The general conclusion is that patient satisfaction is a complex and multidimensional phenomenon,[12] much of which remains unclear. Studies to investigate patient's satisfaction were carried out in different countries, including Sweden, Finland, the Netherlands, Croatia, and Singapore,[10,13-17] all concluded that patient's satisfaction with FPD was very high. The purpose of this study was to evaluate patient satisfaction with FPD following placement and assess their awareness of oral health and oral hygiene practices.

MATERIALS AND METHODS

Study population and methodology

The study was conducted in the two main dental hospitals in Sudan. All patients treated with FPD were asked to answer a questionnaire consisted of 20 close-ended questions that assess the patient's perceptions of clinical outcome regarding esthetics, masticatory efficiency, speech, the comfort of the FPD and the importance of oral hygiene measure and the ease and practice of cleaning. Patients were wearing fixed prosthesis filled 192 questionnaires; the questionnaire included the subjective perception of treatment with fixed prosthesis, patients' perception of clinical outcome regarding esthetics, masticatory function, speech, and together patient's attitude toward oral hygiene measures. The data were analyzed by Statistic Package for Social Sciences (SPSS Inc. Chicago, IL USA). Frequency distribution and graphs Z-test for single proportion will be used if the data appear normal. Furthermore, the confidence interval for proportion with significance level 95%. Ethical approval consents were obtained from hospitals and patients.

RESULTS

The total sample size was 192 questionnaires, regarding the gender male participating, were 31.8%, and the females were 68.2%. The type of the examined restorations showed that there were 41% of patients with crowns while patients with bridge were 59%. About 64.1% of the examined patients had their fixed prosthesis for 0–3 years, 16.7% from 4 to 7 years while 14.6% had for 10 or more years. In general, 83.3% of the examined patients were satisfied with the fixed prosthesis while 16.7% were not satisfied with their fixed prosthesis. On examination of the functioning ability, 89.6% of the examined samples were satisfied with the fixed prosthesis, on the other hand, only 10.4% were unsatisfied with the functional ability of their fixed prosthesis. The masticatory function was evaluated 46.4% felt more comfortable with their fixed prosthesis, 24.0% responded comfortably, 25.0% responded with less comfortably while 4.7% were totally uncomfortable.

The results for the evaluation of esthetic perception 80% of patients reported being satisfied with the esthetic result of their fixed prosthesis while 20% were not satisfied.

When patient's expectation was assessed 66.7% of patients agreed that the treatment turned out as they expected while 33.3% showed that the treatment did not rise up to their expectation. For the patients with unfulfilled expectations, the reasons were mainly esthetic rational (51.6%) [Figure 1].

On the evaluation of the awareness and oral hygiene practices of the patients' results showed a significant difference, 94% were not using dental aids to clean their fixed prosthesis while only 6% were using dental aids. Reasons for not using dental aids, the reasons were as follows: 91.1% for not informed by the dentist, 2.1% for difficult to obtain the dental aids, 1% for difficult to approach the fixed prosthesis, 4.8% for dental aids not of importance, while 1% for others unmentioned reasons [Figure 2].

DISCUSSION

The performance of any fixed prosthesis is evaluated by measuring outcomes of chewing

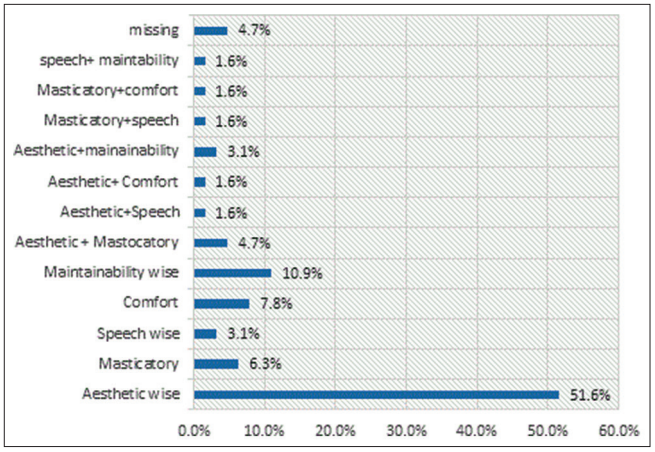

Figure 1: Reasons for unfulfilled fixed prosthesis treatment expectations

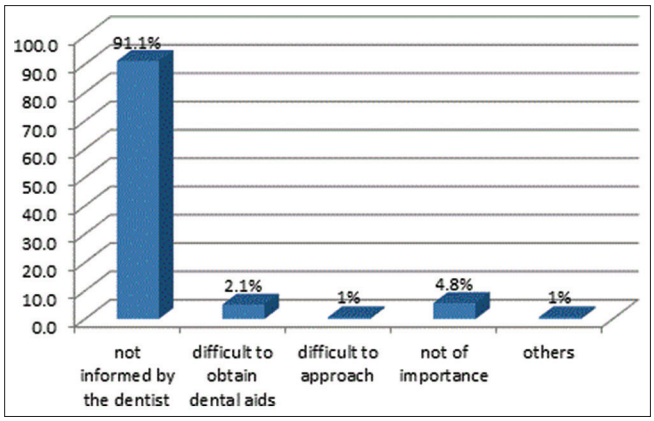

Figure 2: Reasons for not using dental aids

function, esthetics, longevity, as well as technical complications. When assessing the efficiency of fixed prosthesis therapy, Anderson in 1998 showed that it is important to consider both the clinicians' as well as the patients' appraisals.[18] However, important parameters such as patient satisfaction are clearly underexposed in the current literature, especially for implant prosthesis.[19] A recent study confirmed that implant-supported prosthesis positively influenced the patients' quality of life, the degree of satisfaction, and their ability to perform oral hygiene.[20]

The present cross-sectional descriptive study investigated patients with a functional FPD, which range from recent up to more than 10 years duration. The questionnaire had included different aspects to measure the satisfaction with FPD. The high percentage of females among the investigated sample suggests that females in Sudan were more concerned about getting a replacement to their missing teeth. This result comes into agreement with a previous investigation in which female were more critical about their dentofacial appearance.[20,21] In the present investigation, it was concluded that patients with bridge (with natural tooth abutment) were more than patients with crowns; this can indicate that patients are more aware to replace their missing teeth than restoring them. Evaluations of treatment outcomes by clinicians do not necessarily correspond to the patients' own judgment which included both function and psychosocial adaption.[22] Patient concerns are mainly related to function, comfort, and esthetics, especially for implant fixed prosthesis.[23,24] In the present investigation, the high percentage of patients satisfied with their prosthesis indicates that patients were satisfied with most of the functional aspects of their prosthesis; 46.6% of patients reported that their chewing ability had improved after receiving their FPD. The majority of the patients had no speech disturbances as a result of their prosthesis, and 91% did not face any problems with their pronouncing after receiving their fixed prosthesis. This comes into agreement with Wismeijer *et al*. investigation on patient satisfaction of dental implant where it was concluded that there was no significant improvement in speech which was more difficult to explain.[25]

Although shade and color play an important role in patient's satisfaction with their FPD, 80% of the patients were pleased with the esthetic outcome of the treatment, even though 20% reported not being satisfied with esthetic result. This result highlights the importance of esthetic parameters in FPD design and construction. Patient satisfaction data are an important source of information that can guide dentists to provide prosthodontics treatment that will fulfill patient's expectations. There were 66.7% who agreed that the treatment has fulfilled their expectation, the manner in which dentists communicate with patients proved to influence patient's satisfaction, at least in the short-term.

Esthetic concern was the highest reason for not fulfilling the patient's expectation by scoring 51.6%, followed by maintainability wise, comfort, masticatory and finally speech. Usually patients' complaints about the time taken by the dentist to construct their FPD, the study has showed that 76.6% of patients were satisfied. Too often, patients assume that the "permanent" crown or fixed prosthesis is just that permanent. They expected nothing more is required to maintain this condition. It is the responsibility of the dentists to inform their patients that further care is necessary to maintain the restoration and the remaining teeth.[26] The most important finding of the present investigation was that 94% of patients reported that patients did not use any form of dental aids' to maintain their prosthesis, which had showed the lack of knowledge regarding the importance of maintenance of fixed prosthesis; the major reason was the lack of posttreatment instruction which usually been provided by the treating dentist.

CONCLUSION

The results of this survey showed that fixed prosthesis are still satisfying patient's needs for replacing their missing teeth. A large majority of patients were satisfied with all functional aspects of their fixed prosthesis. The most important finding of this survey was the majority of patients showed a lack of

knowledge regarding oral hygiene measures and the significance of maintenance of fixed prosthesis using dental aids'. Of particular concern was the majority of dentists did not pay attention to the posttreatment instructions concerning the maintenance of fixed prosthesis.

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Conflicts of interest
There are no conflicts of interest.

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