

FUNCTIONAL ASSESSMENT OF REMOVABLE COMPLETE DENTURES

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ABSTRACT

The objective of this study was to evaluate the clinical quality of old removable complete dentures and to find out patient satisfaction. It was carried out from July 2011 to June 2012. It was case series descriptive study. Data relating to 72 patients wearing complete dentures were collected using structured eight categories, four point scale Proforma. Detailed patient history, clinical and prosthesis examination were undertaken. Data related to age, gender, fitting place and complete denture post-fitting duration were also recorded. Male to female patient's ratio was 2.2:1. Forty one (57%) complete dentures wearers had got their dentures made from public hospitals. Majority (42%) of evaluated complete dentures were not older than five years. Patients told us about good retention in 27 (37.5%) of maxillary and fair retention in 34 (47.2%) of mandibular complete dentures. Good mastication was reported by 40 patients (55.5%) and good esthetics by 34 (47.2%). Sixty three (87.5%) patients complained about pain in their maxillary dentures and 54(75%) in mandibular dentures. Good stability was reported by 31 (43%) of mandibular dentures and 37 (51.3%) of maxillary dentures. Good occlusion was seen in 37 (51.3%), oral hygiene in 45 (62.5%) and prostheses hygiene in 39 (54.1%). It was concluded that retention and stability was good in maxillary dentures while fair in mandibular dentures. Majority of the patients showed poor oral and prosthesis hygiene. Pain was the most common complaint of these complete denture wear.

Key Words: Complete denture evaluation, Patient satisfaction.

INTRODUCTION

Complete edentulism has great impact on a patient's life style and quality.¹ The aim of complete denture construction is to provide dentures that have a pleasing appearance, adequate retention and stability, maintain normal speech and provide good occlusal and facial support and adequate masticatory function. In addition to this, dentures should be comfortable to wear and preserve remaining supporting structures.²

The recognition, understanding and incorporation of certain mechanical, biological and physical factors are necessary to ensure optimal complete denture treatment. These factors are the determinants that promote the properties of retention, stability and support in complete dentures.³ Patient's requirements of complete denture are to restore normal contour, function, comfort, and speech. Most of these goals are achieved with

the help of retention.⁴ In this country, old peoples are more concerned about functional properties of complete denture rather than aesthetics, which makes retention the most important and essential goal to achieve for a prosthodontist. Prosthodontists have sought to improve the quality of denture treatment through an understanding and application of the factors involved in retention.³

Majority of patients are satisfied with complete dentures that are well designed and constructed, however few patients show dissatisfaction in spite of the clinical perfection of their prostheses.⁵ Many reports have been published evaluating patient satisfaction with complete dentures and to identify the reasons of dissatisfaction with their dentures.⁶⁻⁷ Patients' dissatisfaction with complete dentures has been attributed to many factors. Patients who are not satisfied with their dentures return more frequently for follow up visits than patients who are satisfied with their dentures.⁸

Various variables related to denture retention, stability, occlusion, discomfort, pain, mastication, aesthetics, speech and oral and prostheses hygiene and over all satisfaction with complete dentures have been evaluated over the years.⁹ Both maxillary and mandibular complete dentures have been shown to have one or more unacceptable characteristics with equal frequency. Common problems with complete dentures are poor stability and poor retention.¹⁰ Maxillary den-

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tures have been evaluated to have better stability and retention than mandibular dentures.¹¹

The purpose of this study was to evaluate clinical quality of old removable complete dentures and to find out patient satisfaction.

METHODOLOGY

With a convenience sampling technique and descriptive study design, during the period from July 2011 to June 2012, data relating to 72 patients having complete denture problems were collected, after taking their informed consent, using a structured eight categories, four point scale Proforma. The participants of the study were patients who reported in Prosthodontics Department of Liaquat Medical University Hospital Hyderabad.

This study included only those patients who have been wearing dentures for at least one year with satisfactory general medical condition and psychological health. Patients with any chronic or debilitating disease particularly with oral manifestations were excluded from the study.

After taking relevant history and demographic data from each patient, detailed intra-oral clinical examination, prosthesis examination was carried out. During history taking patient was asked about duration and from where they got their dentures made and about retention, pain, mastication, esthetics and oral hygiene of the prosthesis. During clinical examination retention, stability, occlusion, oral and prostheses hygiene were checked. The collected data were computed and analyzed using SPSS version 17.

RESULTS

Of the total 72 patients, the males outnumbered the females with male to female patient's ratio was 2.2:1. Age distribution of patients is shown in table 1. Years of use of dentures is given in table 2. Evaluation of problems expressed by the denture wearers are shown in table 3.

DISCUSSION

All the patients selected for this study had problems with their complete dentures. Male patients outnumbered

the females, whereas in other studies ratio was 1.6 to 4.0 female patients.¹²⁻¹³ The possible explanation for this finding might be seen from different angles. Females usually do not seek treatment so easily as compared to males, especially in this part of the country where females are traditionally home-bound. Even if they seek any kind of treatment, it is not generally the public hospital but a private clinic. Moreover, many female patients who had previously sought private treatment might have preferred to go to those clinics.

Results shown in this study are in agreement with Brunello and Mandikos.¹⁴ They in their study have reported that the most common complaints of the complete denture patients were pain and generalized discomfort (75%), difficulty in eating (61%) and looseness of the dentures (59%). The denture bases in these cases were either underextended (86%) or overextended (2%), formed poor tissue contact (86%) or displayed an inadequate posterior palatal seal. Incorrect jaw relationships were observed in 94% of patients and errors in tooth positions were observed in 63% of denture patients. The study also found that patient complaint of

TABLE 1: AGE DISTRIBUTION OF PATIENTS

| Age Group (Years) | Numbers |
|-------------------|----------|
| 35-50 Y | 20 (28%) |
| 51-60 Y | 21 (29%) |
| 61-70 Y | 25 (35%) |
| 71-80 Y | 06 (8%) |
| Total | 72 |

TABLE 2: YEARS OF USE OF DENTURES IN RELATION TO RENDERED SERVICE

| Placement Duration | No (%) |
|--------------------|----------|
| 1-5 Y | 30 (42%) |
| 6-10 Y | 16 (22%) |
| 11-15 Y | 14 (19%) |
| 16 and above Y | 12 (17%) |
| Total | 72 |

TABLE 3: EVALUATION OF DENTURE PROBLEMS

| Type | Excellent | Good | Fair | Bad |
|-------------------|------------|------------|------------|------------|
| Retention (Upper) | 10 (13.8%) | 27 (37.5%) | 23 (31.9%) | 12 (16.6%) |
| (Lower) | | 24 (33.3%) | 34 (47.2%) | 14 (19.4%) |
| Pain (Upper) | 34 (47.2%) | 29 (40.2%) | 6 (8.3%) | 3 (4.1%) |
| (Lower) | 31 (43%) | 23 (31.9%) | 12 (16.6%) | 6 (8.3%) |
| Mastication | 9 (12.5%) | 17 (23.6%) | 40 (55.5%) | 6 (8.3%) |
| Esthetics | 12 (16.6%) | 34 (47.2%) | 23 (31.9%) | 3 (4.1%) |
| Oral Hygiene | 6 (8.3%) | 34 (47.2%) | 26 (36.1%) | 6 (8.3%) |
| Total | 141 | 255 | 187 | 65 |

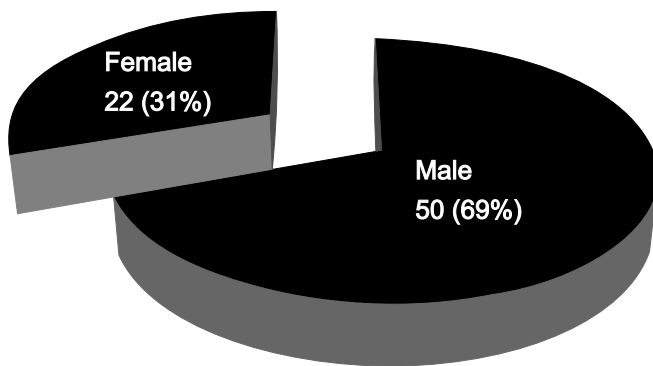


Fig 1: Gender distribution of patients having problems with complete dentures

loose dentures could be associated with faults relating to retention and that complaints of difficulty in eating were significantly related to errors in establishing jaw relationships.¹⁴

The factor that most often appears to have an impact on either success or failure of complete dentures is esthetics.^{15,17} Sometimes the appearance of denture prevents patients from wearing them. The way in which the patients think is not always in accordance with the clinician's perception of a pleasing appearance.^{15,17} Patients may have unrealistic high expectations of their dentures, often believing that the dentures will be comparable to their natural teeth.¹⁷⁻¹⁸ It has also been stated that these high expectations from dentures are more prevalent in older age groups.¹⁸ Interestingly, in the present study there were few complaints from the patients regarding the appearance of the dentures, which is in strong contrast to most other reports.¹⁵⁻¹⁶

Patient satisfaction with complete dentures is based on an interaction of psychological, biological, anatomical, and constructional factors. Davis et al¹⁹ examined the dilemma of providing dentures to patients with unrealistic expectations of dental care. A patient's pretreatment expectations may influence treatment outcomes and treatment failures may result from mismatched perceptions and expectations of the patient and the dentist.

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