

Assessment of Quality of Life Changes Among Denture Wearers: An Observational Study

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ABSTRACT

Background: In the time and age of extensive medical research, the world population growth rates along with the extended life expectancy has led to an increasing demand for conventional removable dentures. This treatment modality avoids surgical risks, difficulties and costs associated factors with implant prostheses. The complete edentulous condition influences the well-being, life satisfaction and nutrition levels of individuals.

Material and method: An elaborated clinical study was conducted by the department of prosthodontics of our dental collage. The study was approved by the ethics board and an informed consent was obtained from the participants. A total of 64 patients were selected over a time period of one year. The exclusion criteria were regarded as cognitive impairment, motility disorders and serious illness. All patients were accessed according to the four major standards i.e. (a) phonetics, (b) appearance, (c) functionality and (d) nutrition status. All the 64 patients were given a questionnaire, which was accessed before the treatment and three weeks post insertion of the denture.

Result: Out of 64 patients, 13 patients were previous denture wearers. (20%) now, 27 out of 64 patients had chief complaint of inability to chew food. (42%). Out of 64 patients 12 patients (19%) complained of poor aesthetics. Nearly 21 patient's complaint of poor phonetics (33%). Rest 4 patients' complaint of embarrassment (6%). Nearly 29 out of 64 patients were male and 35 were female. Around 19 patients were smokers (30%). About 8 patients suffered from denture stomatitis (12.5%). On ridge evaluation 12 patients (19%) has type 1 ridge. Type 2 ridge was seen in 20 patients (31%). Nearly 9 patients (14%) had type 3 ridge type and 23 patients (36%) had type 4 ridge type.

Conclusion: It can be concluded that wearing complete denture has a significant impact on physical pain, physical disability and psychological disability of the participants. Attempt should be made by the treating clinician so as to make a positive attitude for the patient decisions. Applying the Evidence-Based process to the periodontal literature will improve periodontal treatment.

Keywords: Cognitive, denture, quality.

INTRODUCTION

In the time and age of extensive medical research, the world population growth rates along with the extended life expectancy has led to an increasing demand for conventional removable dentures. This treatment modality avoids surgical risks, difficulties and costs associated factors with implant

prostheses. ⁽¹⁾ The complete edentulous condition influences the well-being, life satisfaction and nutrition levels of individuals. ⁽²⁾ Many methods have been adopted to assess the functional, social and psychological results of oral problems by using a methodological approach. ⁽³⁾ ⁽⁴⁾ Till date, there is no specific application or defined method to assess the impact of conventional dentures. Therefore,

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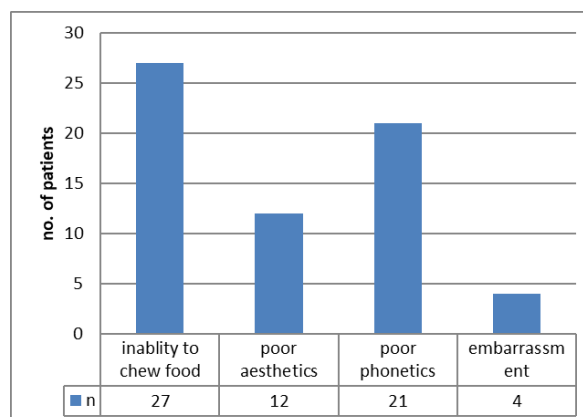
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using a generic health status scale may enable to compare more easily the results. (5) This will prove the effectiveness of removable prosthesis in restoring the oral function and also taking into account patient's subjectivity. In a method introduced by Slade and Spencer in year 1994 the Oral Health Impact Profile, a questionnaire containing 49 questions that did capture seven conceptually formulated dimensions such as functional limitation, physical pain, psychological discomfort, physical disability, social disability and handicap, based on the Locker's theoretical model of oral health. (6) (7) The aim of the present study was to assess the quality of life amongst denture wearers.

MATERIALS AND METHOD

An elaborated clinical study was conducted by the department of prosthodontics of our dental collage. The study was approved by the ethics board and an informed consent was obtained from the participants. A total of 64 patients were selected over a time period of one year. The exclusion criteria were regarded as cognitive impairment, motility disorders and serious illness. All patients were accessed according to the four major standards i.e. (a) phonetics, (b) appearance, (c) functionality and (d) nutrition status. All the 64 patients were given a questionnaire, which was accessed before the treatment and three weeks post insertion of the denture. Before treatment an elaborated phonetic assessment was done for each patient along with the facial profile was recorded. Also, blood haemoglobin and vitamin assay was also performed for each patient and recorded. The entire exercise is then repeated after three weeks of the denture insertion. A through oral examination was done to evaluate the oral condition and check for edentulous ridge. Four categories were established so as to classify the type of residual ridge present, which supported the complete removable prosthesis: Type 1: high wide ridge; type 2: high narrow ridge; type 3: low wide ridge; and type 4: low narrow ridge. Oral mucosal examination was conducted, chronic inflammation of the denture-bearing mucosa, which was detected by direct visual inspection, was diagnosed as prosthetic stomatitis. The adequate treatment involved medical management and control of oral lesions and modifying the prostheses. Post insertion problems

Graph 1: Chief complaints of the subjects



Graph 2: Gender distribution of the subjects

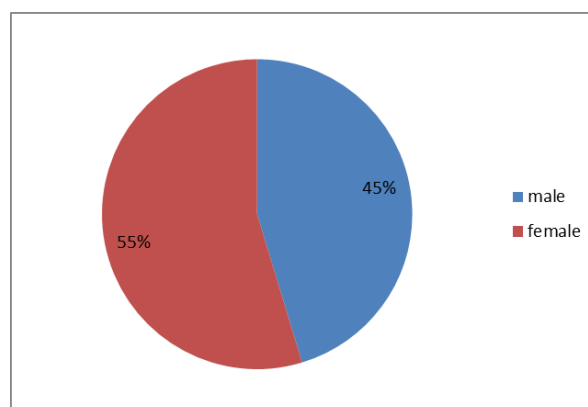


Table 1: Comparing pre and post insertion complaints.

PROBLEMS	PRE INSERTION	POST INSERTION
ANAEMIA	34	12
LOW VIATAMIN B12	22	
CONSTIPATION	33	8
APPEARANCE	62	1
SPEECH	64	8
CHEWING DIFFICULTY	64	4

were evaluated and accessed after the treatment for each patient. All this data was recorded manually and later on interpreted on a digital pattern for comparison.

RESULTS

Out of 64 patients, 13 patients were previous denture wearers. (20%) now, 27 out of 64 patients had chief complaint of inability to chew food. (42%). Out of 64 patients 12 patients (19%) complained of poor aesthetics. Nearly 21 patients complaint of poor phonetics (33%). Rest 4 patients complaint of embarrassment (6%). (GRAPH1) Nearly 29 out of 64 patients were male and 35 were female. (GRAPH2) Around 19 patients were smokers (30%). About 8 patients suffered from denture stomatitis (12.5%). On ridge evaluation 12 patients (19%) has type 1 ridge. Type 2 ridge was seen in 20 patients (31%). Nearly 9 patients (14%) had type 3 ridge type and 23 patients (36%) had type 4 ridge type. Pre insertion a total of 34 patients were suffering from low or border line blood haemoglobin levels. And also nearly 22 patients were suffering from low vitamin B12 levels. Nearly 33 patients suffered from constipation. These levels were again evaluated after 6 weeks of insertion. Results showed a drastic improvement on the blood haemoglobin levels, only 12 patients were anaemic. Vitamin B12 levels improved in almost all the patients. Most importantly hardly 8 patients were suffering from constipation after insertion of denture. Considering chief complaint almost all patients noted a remarkable improvement in the appearance and aesthetics. Merely 8 patients were still having problem with speech, but were very minor. About 4 patients still had problem in chewing food but were satisfied to a large extent. No sense of embarrassment of observed in any patient. (TABLE1)

DISCUSSION

Our study is based upon the general satisfaction of conventional complete denture wearers on the basis of the cross-sectional survey-based data and clinical examination. The results observed did predict the possible effect of conventional prostheses in terms of the well-being of future patients. The results of our study should be extrapolated with great care, considering that the sample size and the recruitment method may hamper their through-out application. Whatsoever gender showed no visible differences in our study, although there seems to be a marked tendency to high discomfort and lower satisfaction in male, also

the statistics agree with the findings of Slade and Spencer in edentulous patients. Married patients were more satisfied with their conventional dentures than those without partner, although no significant differences were encountered. Also, people with higher educational qualification showed a trend towards a higher impact in their quality of life with slight differences with respect to those having basic education. Patients who are edentulous and wearing the denture for less than five years resulted in higher impacts, as it takes time for patients to get used to removable prostheses. Patients having a dry mouth sensation resulted in higher impact in patients' quality of life considering that saliva plays very important role in retention and comfort of removable denture. Yet, no major differences were seen in the present study. The dry mouth sensation has been linked with age and pharmacotherapy also. ⁽⁸⁾ In our analysis, patients who had shown dry mouth sensation were medicated for problems like thyroid, sleepiness, hypertension, Parkinson, epilepsy or prostate cancer, etc. Marked differences were identified depending on the presence of prosthetic stomatitis, so that patients with such disease showed no impact in our study. In this analysis, prosthetic stomatitis was always associated to other severe illness, even extreme conditions such as cancer. Therefore, the self-perception of discomfort with the prostheses may have faded into the background in case of these patients. All participants having severe illness in the present study were daily medicated with painkillers and mucosal gels so as to reduce the impact of their prostheses. Patients who needed repairing or changing their prostheses expressed significantly lower satisfaction as previously reported. ⁽⁹⁾ In our analysis, both the self-perceived aesthetic appearance and the chewing ability improved in almost all patients who had worn other conventional dentures. ⁽¹⁰⁾ Considering the format of the questions, any study based on questionnaires must consider the socio-demographic characteristics of the population, translating and validating these assessment tools in various languages which are required to consider the possible influence of socio-cultural factors on the self-perception of oral health. ⁽¹¹⁾ Patients who required repairing or changing their prostheses expressed significantly lower satisfaction as previously reported. ⁽¹²⁾

CONCLUSION

It can be concluded that wearing complete denture has a significant impact on physical pain, physical disability and psychological disability of the participants. Attempt should be made by the treating clinician so as to make a positive attitude for the patient. A complete denture helps to create and maintain health in oral system, ultimately improving patient's life in all aspects.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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