

Assessment of Quality of Life on Patients Using Maxillofacial Prosthesis: An Original Research

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Keywords

Quality of life, maxillofacial prosthesis, tumor, cancer

Abstract

AIM: To examine how maxillofacial prosthesis rehabilitation affected patients' quality of life following surgery

OBJECTIVE: Now that oncology practices address patients' quality of life, treatment choices might include this aspect. This study examined how maxillofacial prosthesis rehabilitation affected patients' quality of life following surgery.

METHODOLOGY:

The study investigated 8 patients. After maxillofacial prosthesis, a questionnaire assessed patient's quality of life. The SPSS version 22 database included the gathered data and the results were compared with literature.

RESULT:

Eight patients were included in our study; the median age was 53 years old, and the sex ratio was 1.66. With an average score of 59, our research demonstrated that our patients were pleased with their quality of life after prosthetic rehabilitation.

CONCLUSION

Oral cancer patients who had maxillofacial prosthesis treatment were able to swallow and talk better. Our study showed that after oral implant recovery, patients' quality of life needs to be considered. Maxillofacial implants are advantageous for the well-being of the patient.

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1. Introduction

The standard of one's life is an important topic of discussion in a variety of fields, including philosophy, medicine, religion, economics, and politics. When taken as a whole, the expression "quality of life" refers to factors that influence the living conditions of people as well as societies. The quality of life is determined by a number of factors, including a person's physical health, their personal circumstances (such as their income and housing situation), their social connections, the helpful hobbies and interests they pursue, and the wider societal and economic influence (1). Oral abnormalities caused by surgical excision of oral cancer cause physical, functional, and esthetic problems. Social neglect and unfavorable personality characteristics might come from the accompanying social taboo. Prosthetic therapy takes less time and enables for examination of the surgery site for recurrence. In situations of elderly age, poor health, severe deformity, or irradiated tissue, prosthesis may be considered (2). Patients with maxillofacial issues usually have a lower QOL, even after surgery or a replacement is put in place. Depending on where, how big, how old, what caused it, how bad it is, and what the patient wants, these problems can be fixed with surgery or prosthetics. Surgical repair may be limited by the patient's age, general health, lack of remaining tissue, the need to watch for tumor return, damaged blood vessels after radiation, inadequate donor sites, or the patient's own choice. In these cases, artificial therapy is the best way to help the person. (3). In earlier clinical tests on implant-retained mandibular prostheses, the focus was on how the body responded to the implants, not how the prostheses affected the patient's lifestyle or ability to get back into society (4). More new studies, on the other hand, have looked at how craniofacial implant treatment affects QOL. At the moment, treatment plans for every type of therapy take into account not only life rates and biological results, but also the keeping of QOL. After this kind of evaluation, the doctor can tell the patient what to expect from treatment and see who might not be happy with the planned treatment goals (4). The underlying causes of maxillo-mandibular substance loss have remained the same throughout the last three decades. Tumors of the upper aerodigestive tract continue to be the most common cause of cancer and are responsible for between 5 and 7% of all cases (2). Oral cavity cancers can only be treated by removing the affected tissue

surgically, which is a painful and invasive procedure for patients. There have been reports of it being used with radiation and/or chemotherapy. On the other hand, these treatments are associated with a number of problems, both local and general (4). Post-radiques and post-surgical modifications might make it more difficult to achieve functional and aesthetic goals in prosthetic rehabilitation (5). Because of this, the purpose of our research was to investigate the effect that the rehabilitation of maxillofacial prosthesis had on the overall quality of life of eight patients.

AIM

Given that oncology practices now take into consideration patients' quality of life, the inclusion of this factor as assessment criteria for treatment options has become feasible. Therefore, the objective of this research was to investigate the impact that maxillofacial prosthetic rehabilitation had on the patients' quality of life after the completion of their surgeries.

2. Method

For 15 months, 8 patients who had maxillofacial prosthetic therapy were surveyed. Following surgery for a benign or malignant tumor, patients experienced loss of maxilla mandibular material. This research comprised patients who received prosthesis for a minimum of a week after tumor removal and lost maxillary or mandibular substance.

These patients were also excluded:

- Non-tumoral substance loss.
- With tumoral tissue destruction but less than a week in prosthesis.

The first portion of the questionnaire comprised the patient's socio-demographic data, prosthesis rehabilitation date, and questionnaire completion date. Clinical assessments were used to assess how the prosthesis affected ingesting (6 questions), talking (7 questions), and integrating into society (7 questions). The patient chooses between "not at all," "very little," "quite," and "quite a bit" in each assessment column. These answers were numerical. After totaling up the scores for the three questionnaire components, we get a score between 15 (excellent quality of life) and 60 (worst quality of life). At the

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conclusion of each segment, patients answered a subjective question on a visual analogue scale from 0 to 5 to reflect their satisfaction with the prosthesis's progress. The final section of the questionnaire asked patients about their expectations before prosthetic rehabilitation, overall satisfaction, and expectations after using the prosthesis. The data collected was entered into the SPSS version 22 software in the same database. We compared the results of our study with those of the literature.

3. Result

The socio-demographic, prosthetic characteristics, the nature of the loss of substance and tumor type were listed in Table 1. Our sample included eight patients, with a male to female ratio of 1.66 to 1, and the median age was 53.7 years old. According to the findings of our research, our patients are generally pleased with the way their quality of life as a result of their prosthetic rehabilitation, with an average score of 59 points (Table 2). The findings of the questionnaire showed that we had a mean total score of 59 points, with the greatest score being 44 points and the score that was the least pleasant being 83 points. Regarding the patients' expectations before the prosthetic rehabilitation, their overall satisfaction, and their expectations after wearing the prosthesis, the majority of patients reported that the prosthesis matched their expectations. This includes both the patients' expectations after wearing the prosthesis as well as their overall expectations after wearing the prosthesis. On the other hand, a few objections were brought up, such as the instability of the prosthesis. Other issues, such as difficulty swallowing, watering of one eye, and concerns over appearance were all directly linked to the surgical procedure.

4. Discussion

Quality of life must be taken into account while dealing with cancer because of the devastating physical and emotional effects the illness may have on its victims (6). Therefore, similar to how survival is an endpoint in clinical studies, quality of life is also an important measure. Over the course of 15 months, we were able to recruit 8 participants for our research. Although this seems like a very low number, it lines up with a research conducted over 22 years at Sahloul University Hospital and including 157 instances of malignant maxillary tumors (7, 8). This amounted to around 7

patients each year on average. Squamous cell carcinoma predominates in malignant tumors due to oral cavity epithelial tissue. Several researchers have found that squamous cell carcinoma is the most common type of cancer, especially in adults. Out of 29 maxillary cancer patients, Debry et al. reported 90% squamous cell carcinoma (9, 10,11). Similarly in our study out of 8 patients 5 had squamous cell carcinoma surgeries. The questionnaire shows that the prosthesis enhances patients' quality of life by restoring orofacial functions. Feeding and phonation improved greatly. Patients may now lead regular social and professional lives. Only 2 of 8 patients experienced significant prosthesis-related eating discomfort. Both instances were caused by a large reconstruction, which disrupted facial mimicry and caused discomfort. The mean score for patient satisfaction with their diet was 24 out of the possible range. During eating, the patients were satisfied with their prostheses. One of the noted drawbacks was the absence of a seal, which enabled food to leak and, in particular, liquid to run out of the nose. Radiotherapy-induced mouth opening and hyposialia may potentially explain these issues (12). The subjective assessment of patients' satisfaction with phonation yielded a mean score of 15 out of the possible range. During phonation, the patients were quite pleased with their prosthesis. Patients complained from an unpleasant, nasal, dull, and understandable voice without prosthesis. Patients also reported experiencing a hissing sound and a lack of breath. The subjective assessment of patients' satisfaction with social integration yielded a mean score of 20 with the possible range. This supported the patients' happiness and the significance of the prosthesis in the restoration to regular social engagement.

5. Conclusion

Maxillofacial prosthesis therapy improved swallowing and phonation in oral cancer patients. Maxillary tumor treatment may impair manducatory capabilities, lowering patient quality of life (9). Our research suggested assessing patients' quality of life following maxillofacial prosthesis rehabilitation. Maxillofacial prostheses improve patient well-being. It would be interesting to carry out a prospective multicenter research in the future in order to offer more thorough data.

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Table 1 The socio-demographic, prosthetic characteristics, the nature of the loss of substance and tumor type:

Patient Characteristics (n=8)	N
Gender	
Male	5
Female	3
Sex ratio	1.66
Age in years	33-85
30-39	1

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40-49	1
50-59	3
60-69	1
70-79	1
80-89	1
Marital status	
Single	1
Married	5
Divorced	1
Widowed	1
Tumor Type	
Squamous cell carcinoma	5
Ameloblastoma	1
Nasal Schwannoma	1
Osteosarcoma	1
Nature of the loss of substance (SDB)	
Maxillary SDB	6
Mandibular non-interrupting SDB	1
Non-interrupting mandibular SDB	1
Prosthetic rehabilitation	
Rigid Obturator	3
Immediate Obturator	1
Soft obturator	1
Complete lower prosthesis	1
Lower partial denture	1
Lower complete prosthesis	1

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Table 2 Questioner rating scores:

Rating Scale	Average	Best	Poor	Measurement of response on a Visual Analogue Scale
Disease	24	22	26	2.6/5
Phonation	15	10	21	3.15/5
Social Integration	20	12	36	3.2/5