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Original Research Article

ASSESSMENT OF QUALITY OF LIFE IN HEAD AND NECK CANCER PATIENTS – A PROSPECTIVE QUESTIONNAIRE STUDY

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Abstract:

Background: Head and neck cancers are commonly encountered malignant tumors in dental practice. Patients attending the clinics for the treatment of these conditions have their own expectations towards their illness.

Aim: To assess the patient’s perspectives on quality of life (QoL) in head and neck cancers.

Material and methods: 276 patients were included for the study and a well-structured consumer quality of life (CQoL) questionnaire was designed and inputs from the patients were recorded and transferred to the database for statistical analysis. Statistical analysis was performed by SPSS 22. Descriptive statistics, paired t test, chi square test and Pearson correlation were done to compare the association between the subgroups. ($P<0.05$).

Results: A total of 278 subjects were included for the study of which 191 male and 87 female. The mean age of diagnosis in males is 47.3 +/- 11.1 years. And in female are 50.6 +/- 13.9 years. The most preferred language for answering was Gujarati (187 67.2%), followed by Hindi (91, 32.8%) and English (0,0). the critical issues found in the questionnaire were 1) when questioned about the pain 153 (55%)subjects had pain and pain is negligible in 86 (30.9%) subjects. 2) appetite levels – good appetite 163 (58.6%), diminished in 72 (25.8%). 3) depression about having cancer – 114 (41%) stated yes and 37 (13%) were normal. 4) family relationship – 199 reported that their family relationship was not disturbed and in contrary 54 subjects were neglected by them.

Conclusion: It is important to identify factors that are predictors of a poor physical and psychological outcome after treatment for head and neck cancer because rehabilitation programs could then be optimized on an individual basis and health-care workers could focus better on restoring function and assisting patients to achieve an acceptable QOL.

Keywords: head and neck cancer, quality of life, questionnaire, depression

Introduction:

Cancer is relatively most common word heard in the modern world, head and neck squamous cell carcinoma is one of the most common cancers in India.[1] In a sharp contrast to this, according to the population based cancer registry published by the Indian Council of Medical Research (ICMR), in India, oral cavity and pharynx cancer accounts for about 12–32% of all cancers in males and about 3.5–10% of all cancers in females. Whereas, lung cancer which is the most common worldwide accounts for only about 5–11% of all cancers in males and about 1.5–3% of all cancers in females. [2]

The basic goal of cancer treatment is to control the cancer, minimize the likelihood of secondary tumors and achieve acceptable "quality of life" (QoL). The quality of life has become a subject of considerable debate and controversy in medicine and head and neck cancer is no exception. Head and neck cancers and its treatment can affect the most basic functions of life, such as speech, respiration, swallowing, hearing, esthetics, social and sexual relationship.

These influences interaction with relatives, career and society and in worst cases it can even lead to suicidal tendencies, social isolation and depression. Hence in addition to the survival, recurrence rates and complications, QoL is an important parameter. [3]

Over the past 10 years, quality of life (QOL) has been increasingly recognized as an important outcome parameter in head and neck cancer. Various researchers have presented QoL questionnaire assessment[4, 5]. Although many facets of QOL following head and neck cancer have been explored over the last five years the paper identifies issues where research is still lacking.

So the aim of the present study was to assess the patent's perspectives of quality of life in Head and neck cancers.

Material and Methods:

A prospective questionnaire study was conducted at Narsinhbhai Patel Dental College and Hospital and Nootan General Hospital on all the patient attending the OPD, underwent treatment and referred to higher center for cancer treatment in the year 2013-2015. The duration of the study was 3 years. A total of 278 patients were included for the study, informed consent was obtained from all the participants included for the study. All the patients who were diagnosed as having cancer, treated in the hospital and referred to higher center for treatment were included for the study. Patients with cancers other than head and neck cancers were excluded from the study.

A structured Performa was designed in three languages English, national language Hindi, and a regional language Gujarati which constituted of questions related to the quality of life assessment. The questions were randomly organized to minimize the psychological errors of the patient while answering them. Broadly the questions can be grouped into 5 groups i.e. psychological, social, financial, sexual and behavioral. The questions were revised after conducting a pilot study before the start of actual research, the final questionnaire constituted of 26 questions. Each question have five options, subjects were instructed to tick only one from the five options.

All the demographics were statistically analyzed and the relations between the subgroups were analyzed using Pearson correlation and chi-square test. The statistical analysis was done with spss 22. Version.

Results:

The study sample was grouped according to the sex and a total of 278 subjects were included for the study of which 191 male and 87 female. The mean age of diagnosis in males is 47.3 +/- 11.1 years. And in female are 50.6 +/- 13.9 years which shows that the incidence of cancer is earlier in males when compared to females.

The questions that have been answered by the subjects were analyzed according to sex. As the questionnaire format was in three languages (English, Hindi and Gujarati) the most preferred language for answering was Guajarati (187 67.2%), followed by Hindi (91, 32.8%) and English (0,0) (Table 1.)

Table 1: showing frequency of preferred language.

Sex	**Language**		
	English	**Hindi**	**Gujarati**
Male (n = 191)	0	59 (30.9%)	132 (69.1%)
Female (n=87)	0	32 (36.8%)	55 (63.2%)
Total (n= 278)	0	91 (32.8%)	187 (67.2%)

The questionnaire answering results were as follows.

Question	**Expected answer**	**Male**	**Female**	**Least expected answer**	**Male**	**female**	**Pearson co-rrelation**
I am able to walk and move around comfortably despite my illness and treatment.	Yes	120	66	No	27	14	0.02
My illness and its treatment to do not interfere with my energy level	Yes	81	27	No	99	54	0.14
My illness and its treatment cause pain	Yes	101	52	No	67	19	0.06
My appetite is like it used to be	Yes	110	53	No	52	20	0.52
My bowel habits interfere with my activities of daily living	No	127	47	Definitely yes	17	8	0.07
I have been able to maintain or regain weight	Yes	58	19	Definitely no	23	16	0.18
I feel fatigue from the cancer and its treatment	No	58	17	Definitely yes	35	18	0.16
My illness and its treatment make me feel anxious	Yes	96	58	Definitely yes	74	14	0.001
I can think about the future because my illness and its treatment are under control.	Definitely yes Yes	0 73	3 22	Definitely no No	20 98	18 44	0.003
I feel angry about having cancer	No	24	13	Definitely yes	90	24	0.018
My illness and its treatment have made me feel thankful for the future	Yes	94	32	Definitely no	10	3	0.17

My relationship with my family and/or friends has become closer	Yes	134	65	No	43	11	0.001
I need assistance from my family and/or friends to perform everyday activities (cooking, cleaning and dressing).	No	116	27	Definitely yes	2	3	0.000
I feel comfortable talking with my family and/or friends about the future.	Yes	108	58	No	65	27	0.003
My illness and its treatment interfere with my sexual functioning	Yes	42	4	No answer	83	74	0.000
I am able to plan future activities	Yes	95	29	No	87	55	0.03
My illness and its treatment do not interfere with my ability to work	Yes	98	27	No	88	60	0.003
I do not worry about health insurance	Yes	17	3	No No answer	57 117	27 57	0.263
I am able to talk about my illness and its treatment with my supervisor or co-workers	Yes	114	28	No	45	11	0.000
I am concerned about financial problems	Yes	86	67	No	35	7	0.000
I worry about losing my job	Definitely Yes	52	0	No	41	0	0.000
My illness makes it difficult to seek a new job.	Yes	67	2	No No answer	24 54	0 85	0.000
My illness and its treatment have made spirituality more important in my life.	Yes	108	71	No	48	2	0.000
I have difficulty fulfilling my daily responsibilities	Yes	90	65	No	90	19	0.000
I do not participate in the leisure activities that I used to.	Yes	129	54	No	42	11	0.001
I have difficulty understanding the information that I receive from my healthcare providers about my cancer and its treatment	No	130	62	Yes	12	17	0.001

Five options were given for each question (definitely yes, yes, no answer, no, definitely no.) because subjects who are in doubt could be misinterpreted if there are only three options (yes, no answer, no) most answered option for each question is treated as expected answer. And least answered is considered as least expected answer.

The above table consists of all the questions and the most expected answer and the least expected answers. The following inferences can be drawn from the above table (table 2.)

A total of 278 patients completed the questionnaire, the critical issues found in the questionnaire were 1) when questioned about the pain 153 (55%)subjects had pain and pain is negligible in 86 (30.9%) subjects. 2) appetite levels – good appetite 163 (58.6%), diminished in 72 (25.8%). 3) depression about having cancer – 114 (41%) stated yes and 37 (13%) were normal. 4) family relationship – 199 reported that their family relationship was not disturbed and in contrary 54 subjects were neglected by them.

Questions related to patient's psychological assessment like can walk, doing regular activities, future perspectives etc. were statistically significant indicative that they are having a positive attitudes towards their illness.

The subjects participated in this present study belongs to middle to lower socio – economic status who were unable to get the proper awareness regarding the cancer and its treatment. The subjects were coherent enough to complete the questionnaire.

Table – 3 denotes the responses of the subjects according to the options.

Q. no	Definitely yes	Yes	No answer	No	Definitely no
1	8 (2.9)*	41 (14.7)	-	186 (66.8)	43(15.5)
2	14(5)	153(55)	-	108(38.8)	3(1.1)
3	-	86(30.9)	-	153(55)	39(14)
4	28(10.1)	72(25.9)	-	163(58.6)	15(5.4)
5	3(1.1)	174(62.6)	-	76(27.3)	25(9)
6	39(14)	162(58.3)	-	77(27.7)	-
7	-	75(27)	-	150(54)	53(19)
8	-	33(11)	3(1.1)	154(55.4)	88(31.7)
9	38(13.7)	142(51.1)	-	95(34.2)	3(1.1)
10	-	37(13.3)	20(7.2)	107(38.5)	114(41)
11	13(4.7)	127(45.7)	12(4.3)	126(45.3)	-
12	-	54(19.4)	17(6.1)	199(71.6)	8(2.9)
13	15(5.4)	143(51.4)	-	115(41.4)	5(1.8)
14	-	92(33.1)	2(.7)	116(59.7)	18(6.5)
15	12(4.3)	63(22.7)	-	157(56.5)	46(16.5)
16	3(1.1)	142(51.1)	-	9(3.2)	124(44.6)
17	2(.7)	148(53.2)	-	125(45)	3(1.1)
18	-	84(30.2)	174(62.6)**	20(7.2)	-
19	3(1.1)	56(20.1)	77(27.7)	142(51.1)	-
20	-	42(15.1)	11(4)	153(55.6)	72(25.9)
21	-	41(14.7)	113(40.6)**	72(25.9)	52(18.7)
22	-	24(8.6)	139(50)**	69(24.8)	46(16.5)
23	-	50(18)	33(11.9)	179(64.4)	16(5.8)
24	-	109(39.2)	-	155(55.8)	14(5)
25	-	53(19.1)	31(11.2)	183(65.7)	11(4)
26	49(17.6)	192(69.1)	5(1.8)	29(10.4)	3(1.1)

*The inputs in the brackets were the percentage.

The importance of dividing the responses into 5 options is to exactly find out the accuracy of answering/understanding the question by the subjects for accurate results. If only three/ two responses present false results were evident.

According to table 3 most of the answers are yes/no but there are few respondents who have accurately distinguished their answer by choosing definitely yes/ definitely not in most of the questions. These will bring change in the result in accordance with statistics.

Question no 18, I do not worry about health insurance – most of the response was no answer as the most people were illiterate and do not have the knowledge about insurance.

Question no 21,22 were pertinent to their job – most of the subjects had already lost their job before the diagnosis and were depressed lack of job so unwilling to answer the question.

Discussion:

Traditionally, the success of cancer treatment has been measured by temporal clinical endpoints, particularly long-term, overall, or relapse-free survival, as well as response rate, time to treatment failure, and time to progression. However, as we all know, both the cancer and its treatment have other effects on the patient, particularly in the setting of multidisciplinary care where surgery, radiation therapy, and chemotherapy can each have adverse consequences.

Most measures of QOL are psychosocially oriented, structured questionnaires which can be scored and quantified. QOL, however, has multiple other dimensions which embrace pain, mobility, capacity for sexual relationships, even cost effectiveness of treatment alternatives, and, depending on the site and nature of cancer treatment.[6]

In our study we primarily focused about the patient's attitude towards the treatment and his/her psychological, social circumstances that may affect his life. Laura Q. Rogers et.al. (2009)[7]conducted a questionnaire study of QoL stated that screening and treating underlying depression is critical to addressing HRQOL in many patients with head and neck cancer. Previous studies have reported that approximately one third of H&N cancer patients have mood disorders as assessed by the HAD Scale.[8]It was found that at diagnosis most of the patients with mood disorders were anxious, and during and after treatment, most were depressed. In another longitudinal study (n - 232 patients) 21% of the patients were depressed at diagnosis and 9% after3 years.[9]in our study (n=278) 38.5 % of the patients were depressed about their disease.

This is of importance, because it has been suggested that a correlation exists between QoL and depression and that depression probably affects QoL negatively.[10]It has also been suggested that patients with H&N cancer are at a higher risk for depression because of the lasting and debilitating effects of treatment.

Questions of the psychological section showed statistically significant results so, emphasis should be given to motivate patients regarding their condition and proper emotional support should be given by the medical and paramedical staff to the patients apart from their respective treatment strategy.

In our present study the role of the family is included and was not disturbed in most of the subjects, as stated by Mesters et al (1997)[11]role of family is still unclear, but more open communication on the diagnosis of cancer within the family positively effects rehabilitation outcome. Long et al[12]found that married patients and those living in a relationship had higher health-related QOL (HRQOL) ratings. Mathieson et al[13] established that support from family was predictive of a better HRQOL rating. The majority of the tested population acknowledged the importance of family behavior toward QOL.

Most of the subjects did not answer the questions of the section sexual relationship; this may be due to the social restrictions in answering these questions. Questions regarding the financial status were not answered as expected as they think that cancer treatment is expensive and cannot afford it and no health insurance will be present. But many government and NGO organizations are working tirelessly to help the cancer patients financially and emotionally.

The limitations of the present study are pertinent to the literacy of the subject, ability to understand the questionnaire, express his/her views in the correct format. There may be variations in the answering ability of the individuals. So the results may vary accordingly.

Conclusion:

It is important to identify factors that are predictors of a poor physical and psychological outcome after treatment for head and neck cancer because rehabilitation programs could then be optimized on an individual basis and health-care workers could focus better on restoring function and assisting patients to achieve an acceptable QOL.

Patients with depressive symptoms, a low performance status, or both who receive combination treatment for head and neck cancer are at specific risk for physical and psychological morbidity after treatment. More attention for these problems will maximize patient compliance[14, 15] and outcome.

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