IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Quality of life of cancer patients undergoing chemotherapy

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ABSTRACT

Background: The quality of life of cancer patients undergoing chemotherapy includes assessing the quality of life in different domains i.e. physical, emotional, sexual and psychological.
Objectives: to assess the quality of life of cancer patients undergoing chemotherapy.
Materials and methods: The research design was descriptive methodology with 68 cancer patients who had undergone 4th,5th and 6th cycle of chemotherapy were selected by convenient sampling. The tools used were the baseline Performa and EORTC QLQ C-30 standardized rating scale. The collected data was analyzed by the descriptive and inferential statistics.
Result: The study result shown that majority of the cancer survivors (64.70%) had neither good nor poor QOL and 19.1%had good quality of life. Study result shows that place of residents and type of cancer had a significant association with QOL of the cancer survivors.
Conclusion: Findings of the study imply that there is need to assess the QOL of cancer patients who is receiving chemotherapy. This study helps the health professionals to understand the need of creating awareness on the quality of life of cancer patients.
Keywords: quality of life; cancer patients

INTRODUCTION

Cancer is a major public health problem in developed and developing countries; it is the second most common disease in India. This is estimated that by 2020, the number of new cases per year will be nearly 15 million, of which about 60% occur in developing countries.

According to the World Health Organization (WHO), quality of life (QOL) is defined as individual perception of life, values, objectives, standards, and interests in the framework of culture. In this study QOL is being used as a primary outcome measure to evaluate the effectiveness of treatment.

The quality of life (QOL) is a multidimensional, multifaceted measure that includes the impact of the diagnosis, treatment and progression of the disease on the daily living and rehabilitation of patients with various type of cancer.

Chemotherapy can be used alone or as part of a treatment plans that could include surgery, radiation therapy or biotherapy. It is understandable that patients may be anxious about starting chemotherapy. Gaining a better understanding of how the medications work, what it does to our body, and what changes they may cause which can help the patient to overcome some of his fears and anxiety.

Cancer needs a unique approach to its treatment and this is individually planned by an oncologist. Surgery to cut as much as possible of the cancer is often the first step. Some cancer responds well to chemotherapy or radiotherapy. While, other treatments include hormones and vaccines. If the patient is prescribed chemotherapy the patient will be given a combination of drugs by injection or orally, but usually it is given as tablets. This continues for a period of days, weeks or months, interspersed with recovery periods. After the initial course of therapist maybe necessary to continue with long term drug treatment, known as 'maintenance therapy', to avoid the risk of recurrence.

Cancer can produce many different symptoms, some subtle and some not at all subtle. In this study based on the concept developed by European Organization for the Research and Treatment of Cancer (EORTC QLQ-C30) quality of life is measured by the aspects of age,sex,chemotherapy protocol, type of surgery, stage of disease, education level and emotional intelligence.

METHODOLOGY

A descriptive research was used in this study to assess the quality of life of cancer patients undergoing chemotherapy in different physical, emotional, sexual and psychological domains. The sample of the study consisted of 68 cancer survivors who are receiving 4th, 5th and 6th cycle of chemotherapy. Convenient sampling was used to select the cancer survivors based on inclusion criteria from FMMCH Mangalore. Prior to data collecting, researcher first sat research ethical clearance test in Father Muller medical college institutional ethics committee. Instruments of research were questionnaires of two categories. The first category is demographic data and the second category is of EORTC QLQ C-30 standardized tool containing 30 items. The tool was developed by EORTC QLQ C-30.Reliability of the tool was established before the final study. Split half technique was used to find out the reliability of the tool. The reliability, coefficient of QOL of life was r = 0.85.

RESULTS

Master data sheet is prepared and the coded data was entered .SPSS-16 version was used to analyze coded data. Frequency and percentages of baseline variables were analyzed. Chi- square test was used to find the association. The study result were organized as follows

Section I: Baseline Performa

Convenient sampling method was used in this study. 68 cancer survivors who are receiving 4th, 5th and 6th cycle of chemotherapy were selected from a selected hospital Mangalore. It consisted of 13 baseline characteristics of cancer patients such as age, sex, religion, occupation, education, marital status, place of residence, annual income, source of payment, type of cancer, stage of caner, duration of illness, and cycle of chemotherapy.

Table1: frequency and percentage distribution of the sample characteristics. N=68

Variables	Frequency	Percentage
1.Age (in years)		
a.21-30 years	3	4.4
b.31-40 years	5	7.4
c.41-50 years	17	25.0
d.above 50 years	43	63.2
2.Religion		
a.Hindhu	36	52.9
b.Muslim	17	25.0
c.Christian	15	22.0
3.Education		
a. Illiterate	22	32.4
b.Primary school	25	36.7
c.High school	17	25.0
d.Graduation/diploma	3	4.4
e.Post graduate	1	1.5
4.Occupation		
a.Unemployed	35	51.5
b.Self employed	20	29.8
c.Professionl	12	17.6
d.Any other	1	1.5
5.Marital status		
a.Single	9	13.2
b.Married	59	86.8
6.Place of residence		

a. Rural	46	67.6
b.Urban	22	32.4
7.Family income		
a. Below 50000	48	70.6
b.51000-75000	18	26.5
c.Above 75000	2	2.9
8.Type of family		
a. Nuclear family	54	79.4
b.Joint family	14	20.6
9.Duration of illness		
a.<1 year	41	60.3
b.1-2 year	21	30.9
c.3-4 year	4	5.9
d.>4 year	2	2.9
10.sources of payment of hospital treatment bills		
a. Insurance	10	14.7
b.Self or family	37	44.4
c.Government aided schemes	21	30.9
11.Type of cancer		
a. Breast cancer	14	20.6
b.Uterine cancer	15	22.1
c.Head and Neck	13	19.1
c.Intestine cancer	18	26.5
d.Any other	8	11.7
12.Stages of cancer		
a.1st stage	12	17.7
b.2nd stage	26	38.2
c.3rd stage	21	30.9

d.4th stage	9	13.2
13.Chemotherapy		
a.4th cycle	27	39.7
b.5th cycle	13	19.1
c.6th cycle	28	41.2

Table I shows that the majority of the cancer survivors (63.2%) in the present study were in the age group of above 50 years of age. About religion (52.9%) were Hindu. About (36.7%) had finished primary school education. Majority of the subjects (86.8%) were married and about (67.6%) were from rural area. About (70.6%) were having family income below Rs 50,000 Majority (79.4%) of subjects belongs to nuclear family .Majority (60.3%) of subjects was belongs to below 1year of duration of illness. Majority (54.4%) were subjects had paid the treatment cost through self .Majorities (26.5%) were suffering from intestine cancer. Majorities (38.20%) of cancer survivors belong to the second stage of cancer. Majority (41.2%) were undergoing 6th cycle of chemotherapy.

SECTION II: QUALITY OF LIFE OF CANCER PATIENTS

Table 2: Distribution of subjects according to their grading of quality of life score

N=68

Category	Range of score	Range of score in percentage	Frequency	Percentage
Good	83-108	76-100%	13	19%
Neither good nor bad	57-82	51-75%	44	65%
Poor	29-56	26-50%	11	16%
Very poor	≤28	≤25%	-	-

Maximum score= 108

The data in the table 2 shows that 64.70% had neither good nor bad quality of life and 19.12% had good quality of life and 16.18 of cancer patients had poor quality of life.

Table 3: Mean standard deviation and mean percentage of quality of life of the cancer patients.

N=68

Mean	S.D	Mean%
71.23	13.27	56.5%

The data in table 3 reveals that cancer patients undergoing chemotherapy had neither good nor bad quality of life with the mean score of 71± 56.5% and mean percentage of 56.5%.

SECTION III

Association of the quality of life of patients undergoing chemotherapy with selected baseline variables.

Table 4: Association between quality of cancer patients with the selected baseline variable

N=68

Variables	(<72)below median	(>72)above median	x	p
1.Age (in years)				
a.21-30 years	1	2	.915(fishers exact test)	.88
b.31-40 years	3	2		
c.41-50 years	9	8		
d.above 50 years	20	23		
2.Religion				
a.Hindhu	18	18	.60	.76
b.Muslim	9	8		
c.Christian	6	9		
3.Education				
a. Illiterate	11	11	2.37(fishers exact test)	.73
b.Primary school	10	15		
c.High school	9	8		
d.Graduation/diploma	2	1		

e.Post graduate	1	0		
4.Occupation				
a.Unemployed	15	20	2.41(fishers exact test)	.51
b.Self employed	12	8		
c.Professionl	6	6		
d.Any other	0	1		
5.Marital status				
a.Single	6	3	(fishers exact)	.29
b.Married	27	32		
6.Place of residence				
a. Rural	27	19	5.88	.20*
b.Urban	6	16		
7.Family income				
a. Below 50000	25	23	1.89	.52
b.51000-75000	8	16		
c.Above 75000	0	2		
8.Type of family				
a. Nuclear family	28	26	1.15	.37
b.Joint family	5	9		
9.Duration of illness				
a.<1 year	23	18	2.89(fishers exact)	.43
b.1-2 year	8	13		
c.3-4 year	1	3		
d.>4 year	1	1		
10.sources of payment of hospital treatment bills				
a. Insurance	3	7	1.99	.42
b.Self or family	18	19		
	12	9		

c.Government aided schemes				
11.Type of cancer	5	9		
a. Breast cancer	3	12	10.74	.02*
b.Uterine cancer	8	5		
c.Head and Neck	13	5		
c.Intestine cancer	4	4		
d.Any other				
12.Stages of cancer	7	4	7.0(fishers exact)	.10
a.1st stage	16	40		
b.2nd stage	6	15		
c.3rd stage	5	5		
d.4th stage				
13.Chemotherapy	16	11	3.64(fishers exact)	.26
a.4th cycle	5	8		
b.5th cycle	12	16		
c.6th cycle				

Note: NS= non-significant, S*= significant, p= 0.05 level of significance.

The data in the above table shows that the p value (Fisher's exact test and Chi Square Test) computed between the quality of life of cancer patients undergoing chemotherapy and the selected baseline variables like place of residence $\square^2_{(1)}$=5.88 (p=.02) and type of cancer $\square^2_{(2)}$=10.74 (p=.02)were significant at 0.05 level. Therefore there was a significant association between the quality of life and these variables.

DISCUSSION

The present study was organized to assess the quality of life of the cancer patients who had undergone 4th, 5th&6th cycle of chemotherapy treatment in selected hospital at Mangalore. A standardized EORTC QLQ C-30(VERSION 3.0) tool was used to find out the quality of life of the cancer patients .The research design adopted for the study was descriptive study design. Convenient sampling technique was used to select the sample and the study was conducted over a period of two weeks. The data was collected from the 68 respondents who are at the age of 21years and above.

The findings of this study are discussed under following sections along with other studies and similar concerns:

Section I: Sample characteristics

Section II: Quality of life of cancer survivors

Section III: Association of the quality of the life with the baseline variables of cancer survivors undergoing 4th, 5th&6th cycle of chemotherapy

Section I: Sample characteristics of the study shows that the majority of the cancer survivors (63.2%) in the present study were in the age group of above 50 years of age and about (52.9%) were belongs to Hindu religion. About (36.7%) survivors had completed their primary school education. Majority of the patients (86.8%) were married and about (67.6%) were from rural area and about (70.6%) were having family income below Rs 50,000. Majority (79.4%) of the survivors belongs to nuclear family .Majority (60.3%) of them had duration of illness is below 1year. Majority (54.4%) them paid their treatment cost through self. From the subject majority (26.5%) of them are suffering from intestine cancer. Majorities (38.20%) of them belong to the second stage of cancer. There were (41.2%) were undergoing 6th cycle of chemotherapy.

These findings supported by a study conducted in Qiana University at Upper Egypt with the objectives to evaluate factors affecting the quality of life (QOL) among cancer patients with solid tumors and at different chemotherapy (CT) cycles Methods. A descriptive study was conducted using structured questionnaire among 205 in Cancer Patients with Chemotherapy at Qiana University Hospital in Upper Egypt from the first of March (2016) to the end of August (2016). The majority of patients (55.1%) were male, aged 22-75 years, with a mean age of (46.16), (56%), unmarried insufficient income (78%) and low education. GI (gastrointestinal (36.6%) cancer at stage III was the most common cancer, (35.6%) in all the patients. Most of the patients had (90.2%) were aware of their disease. The quality of life was lower in the patients with pain compared to those had no pain. In addition, statistical analyses indicated that there was a significant relationship between the pain intensity with reducing or losing body performance and QOL ($p < 0.05$) for all tests.

Section II: Quality of life of cancer patients

The present study findings showed that majority of cancer patients (64.70%) had neither good nor poor quality of life, 19.12% had good quality of life and 16.18% had poor quality of life.

The mean score of quality of life was 71 which revealed that the cancer patients had neither good nor poor quality of life and the mean percentage of quality of life was 56.5% which revealed that cancer patients had neither good nor poor quality of life.

Section III: Association of the quality of life with baseline variables of the cancer patients undergoing chemotherapy.

In the study p value was computed between quality of life of cancer patients undergoing chemotherapy and the selected variables. Variables like place of residence and type of cancer showed a significant association with QOL at ($p= 0.05$) level of significance. The association found between these variables and quality of life. Place of residence combined with the type of cancer goes a long way in helping them to improve their quality of life.

These results are congruent with result of another study which was conducted to assess and investigate the quality of life of breast cancer patients. A total of 522 adult patients who were admitted to the hospital with breast cancers were collected during the period of Jun 2007 to Dec. 2009. Regression analysis indicated patients with young age, low stage cancer; high education and income were more likely to have high score of QOL.

CONCLUSION AND RECOMMENDATIONS

In line with prior description above, conclusion is that good quality of life is the key indicator to success of the cancer survivors. This study help the health professionals especially nurse to understand the need of creating awareness on the Quality Of Life of cancer patients. This study recommendates that the study can be conducted on a large sample and also improves the knowledge of cancer survivors and helps to improve the quality of life status.

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