International Journal of Community Medicine and Public Health
Sunderam S et al. Int J Community Med Public Health. 2016 Jan;3(1):281-286
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20151577

Research Article

Assessment of quality of life of cancer patients attending oncology clinic in a tertiary care hospital of Jharkhand, India

Shalini Sunderam, Shamim Haider, Mithilesh Kumar*, Vivek Kashyap, Shashi Bhushan Singh, Jeseena S.

Department of Preventive and Social Medicine, Rajendra Institute of Medical Sciences (RIMS), Ranchi, Jharkhand, India

Received: 06 November 2015
Revised: 22 November 2015
Accepted: 11 December 2015

***Correspondence:**
Dr. Mithilesh Kumar,
E-mail: dr.mithilesh@gmail.com

ABSTRACT

Background: Detection of cancer brings many changes in the life of a patient. For some of them it is a life changing experience. This study was done to assess the quality of life of the patients after the detection of cancer.
Methods: It was a cross sectional, descriptive and hospital based study. Total duration of study was 5 months (December2014-April2015), conducted in Oncology Department of Rajendra Institute of Medical Sciences (RIMS) Ranchi. A total of 59 cancer patients were selected as study subjects and interviewed by a validated questionnaire.
Results: A total of 59 cancer patients were included in the study, of which 26 (44.10%) were males and 33 (55.90%) were females. A majority of the patients (62.7%) were in the age range of 40-60 years. 76.3% of cancer patients were living a below average quality of life. The study population had different types of cancers. Among females 57.6% patients were suffering from CA Breast and among males 34.6% of the patients were suffering from CA lung.
Conclusions: Most of the patients who came to the oncology dept. of RIMS, Ranchi during our period of study had unsatisfactory quality of life.

Keywords: Quality of life, Cancer

INTRODUCTION

Cancers figure among the leading causes of morbidity and mortality worldwide, with approximately 14.1 million new cases and 8.2 million cancer related deaths in 2012 and five-year prevalence of 32.6 million cancers in individuals above the age of 15 years.[1] IARC world cancer report 2014 estimates indicate a substantive increase to 19.3 million new cancer cases by 2025[(2)]. Globally most common cancers in men are cancers of lung, prostate, colorectum, stomach and liver amounting to a total of 4.3 million cancer cases. In women, most common cancers are cancers of breast followed by colorectum, lung, and cervix, and corpus uteri with a total of 3.7 million cases.[1]

Cancer is a major public health concern in India with 1.01 million new cancer cases per year, indicating India as a single country contributing to 7.8% of the global cancer burden. The mortality figures were 6.83 lakh, contributing to 8.33% of global cancer deaths, and a five year prevalence of 1.8 million corresponding to 5.52% of global prevalence.[1] The burden of cancer is expected to further increase due to increase in life expectancy, demographic transitions and the effects of tobacco and other risk factors.[2]

Quality of life is vital health outcome measure that is relevant to care of cancer patients. Quality of Life is a general term integrating several aspects of life such as physical, psychological, social, economical, spiritual, cognitional & social dimensions. Disturbance in any one

of these aspects will in turn affect the other domains and this influences the overall Quality of Life.[3] The quality of life can only be described and measured in individual terms, and depends on present lifestyle, past experience, hopes for the future, dreams and ambitions. Quality of life must include all areas of life and experience and take into account the impact of illness and treatment. A good quality of life can be said to be present when the hopes of an individual are matched and fulfilled by experience. The opposite is also true: a poor quality of life occurs when the hopes do not meet with the experience. Quality of life changes with time and under normal circumstances can vary considerably. The assessment of a patient of cancer broadly includes two sets of endpoints – cancer outcomes and Patient outcomes. Cancer outcomes measure the response of a patient to treatment, duration of response, symptom free period, and early recognition of relapse. Patient outcomes, on the other hand, assess the survival benefit attained after treatment as measured by the increase in life span, and the QOL before and after therapy [(4)]. Unfortunately, physicians tend to concentrate on the cancer-related outcomes only. Consequently, assessment of QOL remains a neglected area.

METHODS

It was a cross sectional study done at oncology clinic in Rajendra Institute of Medical Sciences(RIMS), Ranchi which is situated in tribal dominant area in Jharkhand, India. Study was conducted between December 2014 to April 2015. All the patients attending oncology clinic both in OPD and indoor were included in the study who agreed to participate and gave written consent. Patients who were serious and didn't give consent were excluded from the study. Ethical clearance was taken from institutional ethical committee of RIMS.

The data including patient demographics, type of cancer, and duration of the disease at the time of assessment were obtained and entered in the data collection performa designed for the study. The quality of life of patients was assessed using a QOL questionnaire designed (with the help of EORTC guidelines) and validated in Indian scenario by Vidhubala E, et al (3) with a reliability of Cronbach alpha of 0.90 and Split-half reliability of 0.74 (using Alpha coefficient and Guttman Split-half reliability method).

The questionnaire consisted of 10 factors.

Factor 1evaluated the psychological well-being of the study population. It consisted of six items: Sadness or depression interfering with everyday function, Feeling lonely or remote, Feeling depressed, Physical condition reducing economic status, Feeling of nothing important to do in spite of too much free time, and Feeling of low performance compared to one′s ability.

Factor 2 of the QOL questionnaire evaluated the self-adequacy of patients, and it consisted of five items: Feeling of adequacy toward working capacity, Feeling of comfort in attending functions, Feeling of satisfaction with the body looks, Feeling of satisfaction with present health status, and Feeling of satisfaction with overall Quality of Life.

Factor 3 consisted of six items stating the physical well-being of patients: Need of rest, Satisfaction with sex life, Sleep problems, Losing temper and regretting, Effects on bowel movement and Difficulty in remembering things.

Factor 4 evaluated the confidence in the self-ability of study population. It consisted of four items: One′s efficacy in managing financial needs, Ability to fulfill family needs, Satisfaction in fulfilling responsibilities and ability to concentrate on daily activities.

Factor 5 assessed the external support attained by the patient. It consisted of four items: Support of doctor and informational support, Treatment adequacy, Support of family and spouse and Support of friends and relatives.

Factor 6 evaluated the extent of pain experienced by the study population and it consisted of three items: Experience of pain, Interference of pain in day to day life, and dependency on medication

Factor 7 assessed the mobility of the patients: Ability to interact with people, ability to move around as usual.

Factor 8 evaluated the optimism and belief of study population and it consisted of four items: Expectation of good things to happen, Self-importance, normal appetite and personal beliefs/religious belief.

Factor 9 assessed the interpersonal relationship and self-sufficiency and independence of the study population and consisted of two items: Interference of medical treatment in sexual life, relationship with family member.

Factor 10 assessed the independence of the study population and consisted of two items: Sharing of problems with family, requirement of assistance in day-to-day activities.

Scaling technique

Likert-type four-point rating scale was added to elicit responses from the respondents ranged from 1-4. Example- Do you feel lonely, 1-very much, 2-moderate, 3-a little, 4-not at all.

A few items were scored in reverse so as to make the questionnaire unidirectional and to yield a global QOL score. For example, ′Are you satisfied with your doctors? If the answer is ′very much′, it will be scored in reverse, i.e., 4 as 1 and 1 as 4 to obtain a positive QOL index. The direct and reverse scoring items are given below.

The responses obtained from the patients were scored as stated in the questionnaire and QOL was measured on the basis of it.

Interpretation of QOL scale
88 and below=significantly poor QOL
89-108=below average QOL
109-132=average QOL
133-144=above average QOL
Above 144=significantly high QOL

Statistical analysis

Data were entered in MS Excel and analysis was done with SPSS statistical software (20.0 versions). Chi-square test was performed to assess the effect of different socio-demographic factors on the QOL of the patients. $p<0.05$ was considered significant.

RESULTS

Major findings of the socio-demographic details are given in table1. Out of 59 patients, 55.9% were females and 44.1% were males. Mean age of the patient was 46.31±10.31 years. 71.2% of the patients were 40 years or above of age and 28.8% were below 40 years of age with minimum age was 25 and maximum was 75. 71.2% of the patients were Hindu. 49.2% of the patients were tribal, 76.2 % of the patients were married. Most of the patients (40.7%) were belonging to class 4 socioeconomic statuses according to modified BG Prasad classification.

Mean duration of the cancer detection was 8.93±8.33 months. Out of 59, 36 (61%) patients were on chemotherapy, 19 (32.2%) were on combined chemotherapy and radiotherapy and 4 (6.8%) patients were on radiotherapy alone (table 2). Among females 19 (57.6%) patients were suffering from CA Breast followed by CA cervix 9 (27.3%) and among males 9 (34.6%) of the patients were suffering from CA lung followed by oral cancer and stomach cancer 5 (19.2%) each (table 3).

Most of the patients i.e. 42 (71.2%) were leading below average quality of life. 3 (5.1%) patients and 14 (23.7%) patients were leading average and significant poor quality of life respectively. None of the patients were leading above average and significant high quality of life (table 4).

Out of total, 15 (25.4%) of the patients who were leading below average quality of life belonged to ca breast category followed by ca cervix (15.25%). Only 3 patients-ca breast, ca colon and ca lung one each were leading average quality of life which was better than other according to criteria of classification of quality of life in present study (table 5).

Table 1: Socio demographic details of the patients.

Sr. no.	Variables	Category	Frequency	Percentage
1	Gender	Male	26	44.1
		Female	30	55.9
2	Age	<30 years	4	6.7
		30-45	28	47.5
		46-60	22	37.2
		>60	5	8.4
3	Ethnicity	Tribal	29	49.2
		Non Tribal	30	50.8
4	Religion	Hindu	42	71.2
		Muslim	8	13.5
		Christian	3	5.1
		Sarna	6	10.2
5	Marital Status	Unmarried	7	11.9
		Married	45	76.2
		Widow/Widower/ others	7	11.9
6	Educational Status	Illiterate	8	13.5
		literate	18	30.5
		Up to Intermediate	26	44.1
		Above intermediate	7	11.9
7	Occupation	Service	3	5.1
		Business	13	22
		Daily wager	13	22
		Student	3	5.1
		Housewife	15	25.4
		Others	12	20.4
8	Type of family	Nuclear	28	47.4
		Joint	31	52.6
9	Type of house	Kuccha	18	30.5
		Pucca	29	49.1
		Semi pucca	22	20.4
10	Socioeconomic status (acc. To modified B G Prasad Classification)	Class 1	7	11.8
		Class2	5	8.5
		Class3	13	22
		Class4	24	40.2
		Class 5	10	16.9

Table 2: Therapy received of the patients.

Sr. No.	Therapy	No. (%)
1.	Chemotherapy	36(61%)
2.	Radiotherapy	19(32.2%)
3.	Both chemotherapy and radiotherapy	4(6.8%)
	Total	59(100%)

The responses given by the study population for all items were summed up and average responses for all the factors were calculated (table 6).

Table 3: Frequency of different cancers.

Gender	Disease suffering from									
	Multiple myeloma	CA Breast	CA Cervix	CA Colon	CA lung	CA Pancreas	CA Stomach	NHL	Oral Cancer	Total
Male (No. & %)	1 (3.8%)	1 (3.8%)	0 (0%)	4 (15.4%)	9 (34.6%)	0 (0%)	5 (19.2%)	2 (3.8%)	5 (19.2%)	26 (100%)
Female (No. & %)	0 (0%)	19 (57.6%)	9 (27.3%)	0 (0%)	0 (0%)	1 (3%)	1 (3%)	1 (3%)	0 (0%)	33 (100%)
Total (No. & %)	1 (1.7%)	20 (33.9%)	9 (17%)	4 (6.8%)	9 (15.3%)	1 (1.7%)	6 (10.2%)	3 (5.0%)	5 (8.5%)	59 (100%)

Table 4: Quality of life of cancer in total population under study.

Sr. no.	Quality of life (QOL)	No. of patients	Percentage
1.	Significant poor QOL	11	18.64
2.	Below average QOL	45	76.26
3.	Average QOL	3	5.10
4.	Above average QOL	0	0
5.	Significant high QOL	0	0

Factor 1 evaluated the psychological well-being of the study subjects. Out of total, 81.6 % of the study subjects were in the opinion that they were little or not affected by the feeling of sadness, loneliness or depression.

Factor 2 evaluated the self adequacy. A total of 67.8 % of the study participants reported that they were not adequately satisfied with their working capacity and body looks.76% of the patients were not satisfied with their overall quality of life.

Table 5: Type of cancer vs quality of life of the study population.

Sr. No.	Type of cancer	Significant poor QOL	Below Average QOL	Average QOL	Above Average QOL	Significant High QOL
1.	Ca Bone Marrow(n=1)	1	0	0	0	0
2.	Ca Breast(n=20)	4	15	1	0	0
3.	Ca Cervix(n=10)	1	9	0	0	0
4.	Ca Colon(n=4)	0	3	1	0	0
5.	Ca Lung(n=9)	1	7	1	0	0
6.	Ca Pancrease(n=1)	0	1	0	0	0
7.	Ca Stomach(n=6)	1	5	0	0	0
8.	Ca Thigh(n=1)	1	0	0	0	0
9.	Non Hodgkin Lymphoma(n=2)	1	1	0	0	0
10.	Oral Cancer(n=5)	1	4	0	0	0
Total	N=59(100%)	11(18.64%)	45(76.26%)	3(5.1%)	0	0

Factor 3 evaluated the physical well being. 72.9% of the participants reported that they were much affected physically. Sleep pattern was not favorable to 76% of the patients. Most had little satisfaction with their sex life. Most of them reported that they also feel difficulty in remembering things.

Factor 4 evaluated the confidence in self-ability. 72.8% of the study participants were confident about their self ability. 78% of the participants stated that they were able to perform their daily activities.

Factor 5 evaluated the external support attained by the patient. 72.9 % of the participants felt that they had adequate support from their family, friends and their doctors. Some of the participants had only little support.

Factor 6 evaluated the extent of pain experienced by the study population. 72% of the patients reported that they constantly needed medicines for pain and pain interferes with their day today activities.

Factor 7 evaluated the mobility of the patients. 60% of the participants were adequately satisfied with their ability to interact with people as well ability to move around.

Factor 8 evaluated the optimism and belief of the patients. Out of total 93.2% of the patients had good personal and spiritual belief which they thought vital for giving them strength to fight with their disease.

Table 6: Summary of responses for factors 1 to 10 of quality of life.

Factors	Responses (n=59)								Total	
	Very much		moderate		little		Not at all			
	n	%	N	%	n	%	n	%	n	%
Factor 1	3	5.1	8	13.6	30	50.8	18	30.8	59	100
Factor 2	9	15.3	10	16.9	19	32.2	21	35.6	59	100
Factor 3	18	30.5	25	42.4	10	16.9	6	10.2	59	100
Factor 4	8	13.6	8	13.6	21	35.6	22	37.2	59	100
Factor 5	18	30.5	25	42.4	10	16.9	6	10.2	59	100
Factor 6	20	33.8	23	39	9	15.3	7	11.9	59	100
Factor 7	18	30.5	17	28.8	12	20.3	12	20.4	59	100
Factor 8	23	39	32	54.2	3	5.1	1	1.7	59	100
Factor 9	18	30.5	25	42.4	10	16.9	6	10.2	59	100
Factor 10	5	8.5	9	15.3	31	52.5	14	23.7	59	100

Factor 9 evaluated the interpersonal relationship of the patients. Out of total participants 72.9% of study subject reported that they were satisfied with their relationship with their family members.

Factor 10 evaluated self sufficiency and independence of the patients. The result showed that 76.2% of the participants didn't require assistance in their day- to-day activities and shared their problems with family.

DISCUSSION

The World Health Organization defines QOL as "an individual's perception of their position in life, in the context of the culture and value systems in their life and in relation to their goals, expectations, standards and concerns."[5,6] QOL has been introduced as an endpoint for treatment.

Comparisons in many cancer types, particularly in advanced stages.[7] QOL also, as an early indicator of disease progression could help the physician in daily practice to closely monitor the patients.[8] QOL may be considered to be the effect of an illness and its treatment as perceived by patients and is modified by factors such as impairments, functional stress, perceptions and social opportunities.[9,10]

In the present study psychological well being of the patients was good as most of them were not affected by feeling of depression and loneliness. Similar results was found in the study conducted by Kannan, et al[11] and Chaturvedi S.[12] The reason could be that in Indian scenario family bonding is strong and patients are surrounded by family and friends in difficult situations.

The participants were much affected physically as their working capabilities being reduced; sleep pattern disturbed and less satisfaction with their sex life. Similar results were found in the study by Dehkordi A, et al[13] and Dubashi, et al,[14] but patients were able to perform their daily activities normally as found also in study done in breast cancer patients by Damodar et al.[15] Most of the participants were not satisfied with their body looks as mostly we had patients of Ca breast who had undergone surgery. Efforts should be made for reconstructive surgery of the cancer patients by the surgeons to improve their body looks.

Pain was affecting most patients in our study which was similar in study done by different researchers also like Kannan, et al.[11] Pain clinics are the need of the hour for these patients. This shows that these patients needed both pharmacological and non-pharmacological therapy for painful episodes as pain relief is the right of every cancer patient according to WHO.

Most of the patients had good personal and religious belief which they thought vital for giving them strength to fight with their diseases which was also affecting their Qol. Similar results were obtained by study done by Kandasamy, et al.[16] on advanced cancer patients.

In the present study, most of the patients were leading average and below average quality of life. None of the patients were leading significant high or above average quality of life. Some of the patients were leading significant poor quality of life. Thus we find that quality of life of these cancer patients were not up to the desired level. Kannan G et al[11] found in their study among cancer patients in a tertiary care hospital of South India that 84% of the total study population reported to have

average and below average quality of life. Pandey M et al in their study among patients with early and advanced carcinoma of the breast observed that surgery and adjuvant chemotherapy, which duly interferes with general health-related parameters and the social life of these patients, thereby adversely affecting the QOL.[17] In a study among newly diagnosed patients with lung cancer by Mohan C et al, it was found that these patients have an unsatisfactory quality of life.[18]

There was no correlation between the quality of life and variables such as age, gender, marital status, duration of disease, economic conditions, occupation and educational status as shown in different studies too.[13,19]

CONCLUSION

Cancer continues to claim thousands of lives every year globally. Several newer therapies have, as yet, failed to significantly prolong survival or offer curative benefit. In view of the high morbidity and short survival, assessment of QOL needs to be included as an end point in evaluation and treatment of cancer. As far as the patient is concerned, the primary goal of the physician should be to try and improve his overall QOL using all measures available.

ACKNOWLEDGEMENTS

The authors would like to thank the staff members of oncology department of Rajendra Institute of Medical Sciences, Ranchi, Jharkhand for their kind support in this research work.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Worldcancerfactsheets-2014byIARC/WHO (http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx) Assessed on 20.05.2015.
2. Report of the Working Group on disease burden for 12th five year plan.
3. Vidhubala. Validation of quality of life questionnaire for patients with cancer. Indian Journal of Cancer. 2005;42,(3).
4. Anant. Quality of life in lung cancer. Indian Journal of Cancer. 2005;42,(3).
5. Farquhar M. Definitions of quality of life: A taxonomy. J Adv Nurs. 1995;22:502-8.
6. World Health Organization. WHO Health Promotion Glossary. 1998.
7. Bottomley A, Flechtner H, Efficace F, Vanvoorden V, Coens C, Therasse P. European Organisation for Research and Treatment of Cancer (EORTC) Data Center and Quality of Life Group. Health related quality of life outcomes in cancer clinical trials. Eur J Cancer. 2005;41(12):1697-1709.
8. Velikova G, Awad N, Coles-Gale R, Wright EP, Brown JM, Selby PJ. The clinical value of quality of life assessment in oncology practice-a qualitative study of patient and physician views. Psychooncology. 2008;17(7):690- 8.
9. Spilker B. Quality of Life and Pharmaco economics in Clinical Trials. Philadelphia: Lippincott-Raven. 1996:1-1259.
10. Testa MA, Simonson DC. Assesment of quality-of-life outcomes. N Engl J Med. 1996;334(13):835-40.
11. Kannan. Quality of life of cancer patients. Journal of Cancer Research and Therapeutic 2011; 7: 275-9
12. 12. Chaturvedi S. What's important for quality of life to Indians-in relation to cancer. Indian J Palliat Care. 2003;9:62-70.
13. Dehkordi A. OMJ. 2009;24:204-207. doi:10.5001/omj.2009.40
14. Dubashi. Quality of life in young breast cancer patients . Indian Journal of Cancer. 2010;47,(2).
15. Damodar. Quality of life in breast cancer patients. Archives of Pharmacy Practice. 2013;4,(1).
16. Kandasamy. Spiritual well being in advanced cancer Indian Journal of Cancer. 2011;48,(1).
17. Pandey M, Singh SP, Behere PB, Roy SK, Singh S, Shukla VK. Quality of life in patients with early and advanced carcinoma of the breast. Eur J Surg Oncol. 2000;26(1):20-4.
18. Mohan C, Bhutani M, Pathak AK, Pal H, Das C, Guleria R. Quality of life in newly diagnosed patients with lung cancer in a developing country: is it important? Eur J Cancer Care (England). 2006;15 (3):293-816.
19. Heydarnejad MS, Hassanpour Dehkordi A, Solati Dehkordi K. Factors affecting quality of life in cancer patients undergoing chemotherapy. African Health Sciences. 2011;11(2):266-70.

Cite this article as: Sunderam S, Haider S, Kumar M, Kashyap V, Singh SB, Jeseena S. Assessment of quality of life of cancer patients attending oncology clinic in a tertiary care hospital of Jharkhand, India. Int J Community Med Public Health 2016;3:281-6.