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Original Research Article

Assessment of quality of life among cancer patients in a cancer care center of Mysuru

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ABSTRACT

Background: Cancer is a non-communicable disease causing high mortality and morbidity. Most risk factors of cancer are preventable, but due to lack of awareness, ignorance, poor access to healthcare and changing lifestyle the burden of the disease is rapidly increasing. Cancer causes a lot of financial and emotional distress among the patients and their families. Measures focusing on reducing the financial burden and improving the quality of life (QoL) among cancer survivors is needed. This study was done to assess the quality of life among cancer patients.
Methods: A cross-sectional study was conducted in Bharat hospital and institute of oncology for a period of 5 months (February 2021 to June 2021). A total of 380 rural women diagnosed with cancer were included in the study. EORTC QLQ-C30 (European organization for research and treatment of cancer QoL questionnaire) was used to assess the quality of life among cancer patients. The data was coded and entered in MS excel and analysed using SPSS version 25. Descriptive statistical analysis was done. The quality of life scoring is done as per the EORTC QLQ-C30 scoring manual.
Results: The average functional score (AFS) was 60.14 which indicates most patients have better QoL. The average symptoms score (ASS) was 38.48 which indicated 255 (67.1%) had mild symptomatology/problems and 282 (74%) had a GHS score range of 50-75 which meant the majority had a good QoL.
Conclusions: Cancer causes a huge economic burden particularly in those with a low socio-economic background. Interventions and policies should be adopted to make treatment more affordable. The patient should be offered emotional strength and families should be counselled for a better understanding of patients' emotions.

Keywords: Cancer, Quality of life, EORTC QLQ- C-30 questionnaire

INTRODUCTION

The term cancer is used for a group of diseases that can affect any part of the body. They can also be known as malignant tumours and neoplasms. A defining characteristic of cancer is rapid abnormal cell growth, capable of invading adjacent parts of the body. When these cells spread to other organs, the process is called metastasis and the metastases at secondary sites are the major cause of cancer deaths.[1]

While there are regional and sex differences, globally, the main types of cancer are lung (1.8 million new cases diagnosed in 2012; 1.4 million deaths/year), stomach (952,000 new cases; 737,000 deaths), liver (782,000 new cases; 695,000 deaths), colorectal (1.4 million new cases;

609,000 deaths), breast (1.7 million new cases; 458,000 deaths).[1]

Cancer is becoming the leading cause of mortality and morbidity worldwide.

Cancer mortality is projected to increase to 11 million deaths in 2030, with the majority occurring in regions of the world with the least capacity to respond. However, cancer is not only a personal, societal and economic burden but also a potential societal opportunity in the context of functional life, the years gained through effective prevention and treatment and strategies to enhance survivorship. The disease resonates a sense of fear, denial and huge distress among the patients and their families. Cancer poses physical, emotional and financial challenges to the patients. In developed countries, the treatment outcome is better and can be attributed to early detection, access to healthcare, improved quality of treatment, health literacy and survivorship care.[2]

The WHO defines QoL as an individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards and concerns.[3]

The assessment of QoL is gaining a lot of importance as it focuses on the patients' physical ability, cognitive and emotional aspects, the intensity of symptoms and overall health status.

Among several aspects related to the disease, the quality of life had huge importance. The patients experienced a wide range of symptoms. Hence addressing the symptoms improved the overall QoL.

Interpretation and publication of these data can help identify needs for health policies and legislation, help to allocate resources based on unmet needs, guide the development of strategic plans and monitor the effectiveness of broad community interventions.

Objective

The objective was to assess the QoL among cancer patients.

METHODS

This was a cross-sectional study and it was conducted at Bharat hospital and institute of oncology, Mysore. A total of 380 patients were included in the study. The study was conducted over 5 months (February 2021 to June 2021). Data was collected by interviewing the patient and entered into Google forms.

The EORTC QLQ-C30 was used to measure QoL in the patients.

The QLQ-C30 was composed of both multi-item scales and single-item measures. These included five functional scales, three symptom scales, a global health status/QoL scale and six single items.[4]

This QOL scale had 25 items with 3 factors. Functional scale contained physical functioning (4 items), emotional functioning (3 items), cognitive functioning (1 item) and social functioning (2 items).[4] Symptoms scale contained fatigue (3 items), nausea and vomiting (2 items), pain (2 items), dyspnea (1 item), insomnia (1 item), appetite loss (1 item), constipation (1 item), diarrhoea (1 item) and financial difficulty (1 item).[4] Global health status (2 items). All of the scales and single-item measures ranged in score from 0 to 100.

Based on the patients perspective, scoring was done for all the questions and raw score (RS) which was the mean of component items was calculated for all the scales.

The formula for calculating the raw score was,

$$\text{raw score} = \frac{sum\ of\ scores\ of\ questions\ on\ each\ functioning\ or\ symptom}{number\ of\ questions\ on\ each\ functioning\ or\ symptom},$$

then, for functional scale,

$$\text{score} = 1 - \frac{(RS-1)}{range} \times 100,$$

and for symptom scales/items and global health status,

$$\text{score} = \frac{(RS-1)}{range} \times 100.$$

The scores were classified into the following categories, 0-25, 25-50, 50-75 and 75-100. Thus a high score for a functional scale represented a high/healthy level of functioning, a high score for the global health status/QoL represents a high QoL, but a high score for a symptom scale/item represented a high level of symptomatology/problems.

Based on the patients perspective, scoring was done for all the questions and RS which was the mean of component items was calculated for all the scales.

The data obtained was coded and entered into Microsoft excel. Descriptive statistics such as mean, frequencies and percentages were calculated. The QoL scoring was done as per the EORTC QLQ-C30 scoring manual.

Inclusion criteria and exclusion criteria

Patients diagnosed with cancer for at least 1 year and those who are on treatment for at least 6 months, patients who were conscious, mentally stable and cooperative, female patients from rural areas and patients who were willing to participate in the study were included. Female

cancer patients from urban areas and patients who were terminally ill and uncooperative were excluded.

RESULTS

Table 1: Distribution of study participants in relation to age.

Age (in years)	Number	Percentage
34-40	39	10.3
41-45	106	27.9
46-50	46	12.1
51-55	94	24.7
56-60	57	15.0
61-65	22	5.8
66-70	16	4.2
Total	380	100

Table 2: Distribution of study participants based on their socio-economic status.

Income class	Number	Percentage
Class I	279	73.4
Class II	94	24.7
Class IV	1	0.3
Class V	6	1.6
Total	380	100

Table 3: Distribution of study participants based on the site of cancer.

Site of cancer	Number	Percentage
Breast	119	31.3
Cervix	84	22.1
Ovary	44	11.6
Uterine	41	10.8
Other cancer sites	92	24.2
Total	380	100

In this study out of 380 women, the majority 27.9% were in the age group 41-45 years. The mean age of the participants was 50±7.9 years, 335 (88.2%) were married, 67.9% had received a basic education, 72.6% were housewives, 73.4% belonged to class I.

Out of 380 women, 31.3% were diagnosed with breast cancer, 84 (22.1%) were diagnosed with cervical cancer, 44 (11.6%) had ovarian cancer, 41 (10.8%) had uterine cancer and 92 (24.2%) were diagnosed with other types of cancer included AML, peri-ampullary cancer, gastric cancer, lung cancer, thyroid cancer and colorectal cancer.

In this study out of 380 participants, 4 (1.1%) patients had poor physical functioning, 63 (16.6%) had average physical functioning, 236 (62.1%) had good physical functioning and 77 (20.3%) had excellent physical functioning.

Table 4: Distribution of study participants based on their QoL score.

Variables	Category	Frequency	Percentage
Physical functioning score	0-25	4	1.1
	25-50	63	16.6
	50-75	236	62.1
	75-100	77	20.3
Emotional functioning score	0-25	50	13.2
	25-50	161	42.4
	50-75	148	38.9
	75-100	21	5.5
Cognitive functioning score	0-25	23	6.1
	25-50	29	7.6
	50-75	70	18.4
	75-100	258	67.9
Social functioning score	0-25	80	21.1
	25-50	191	50.3
	50-75	93	24.5
	75-100	16	4.2
Sypmtoms scale score	0-25	66	17.4
	25-50	255	67.1
	50-75	57	15.0
	75-100	2	0.5
Global health status/QoL	25-50	72	18.9
	50-75	282	74.2
	75-100	26	6.8

It was noted, 50 (13.2%) patients had poor emotional functioning, 161 (42.4%) had average emotional functioning, 148 (38.9%) had good emotional functioning and 21 (5.5%) had excellent emotional functioning

The cognitive assessment showed, 23 (6%) patients had poor cognitive functioning, 29 (8%) had average cognitive functioning, 70 (18%) had good cognitive functioning and 258 (68%) had excellent cognitive functioning.

In the social aspects, 80 (21.1%) patients had poor social functioning, 191 (50.3%) had average social functioning, 93 (24.5%) had good social functioning and 16 (4.2%) had excellent social functioning.

Overall the functional scores indicated, 8 (2.1%) patients had poor functioning, 73 (19.2%) had average functioning, 271 (71.3%) had good functioning and 28 (7.4%) had excellent functioning.

The symptoms scores indicated, 66 (17.4%) patients had low symptomatology/problems, 255 (67.1%) had mild symptomatology/problems, 57 (15%) had moderate symptomatology/problems and 2 (0.5%) had severe symptomatology/problems.

The global health status scores revealed, 72 (19%) patients had average GHS/QoL, 282 (74%) had good GHS/QoL and 26 (7%) had excellent GHS/QoL.

DISCUSSION

In the current study, 72 (19%) patients had average GHS/QoL, 282 (74%) had good GHS/QoL and 26 (7%) had excellent GHS/QoL. 282 (74%) had a GHS score range of 50-75. The study conducted by Nagasunanda et al which showed most patients 63.8% had GHS score between 26-50.[5]

In this study, on an average 8 (2.1%) patients had poor functioning, 73 (19.2%) had average functioning, 271 (71.3%) had good functioning and 28 (7.4%) had excellent functioning. The results were at par with a study which revealed, 47.8% and 42% of patients the AFS score in the range of 51-75 and 76-100. AFS results showed the majority of patients had good functioning.[5]

The results were at par with the study conducted by Nagasunanda et al which showed, the average functional score (AFS) was 60.14 which indicated most patients had better QoL. The average of all the scores was plotted as AFS. High AFS means good QoL.[5]

The average symptoms score (ASS) was 38.48 which indicated 255 (67.1%) had mild symptomatology/ problems. In this study, 74.5% experienced shortness of breath, 92.3% of them experienced pain of varying degrees, 93.4% experienced fatigue and all the participants experienced some amount of financial difficulties due to the disease and its treatment. High ASS means that patients have more symptoms and poor QoL and low ASS indicates good QoL. The study by Nagasunanda et al showed ASS was between 26-50 and 0-25 in 98 (43.8%) and (41.5%)

respectively. No patients had symptoms score >75 which means none of them had severe symptomatology.[5]

Despite good functional scores and few symptoms, patient's thought their QoL was not satisfactory. It could be mainly due to the repeated visits to the hospitals/treatment centres, high frequency of chemo/radiotherapy cycles, side effects of chemotherapy/radiations. It was necessary to repeatedly counsel the patients and attenders. Encouraging the patients to participate in recreational activities can be helpful.

Limitations

The results cannot be generalized to the whole population as it was a hospital-based study. The study focused only on rural women.

CONCLUSION

In this study, 74% had good GHS/QoL, 71.3% had good functioning, 67.1% had mild symptomatology/problems, 68% had excellent cognitive functioning, 42.4% had average emotional functioning.

The QoL in this study was found to be good and the major concern was financial difficulties faced by all participants. Though the quality of life was good in the majority of the participants, due to lack of knowledge, lack of resources for treatment, income loss and fear of the disease affected the patients emotionally and gave them a perspective of poor quality of life. Family plays a great role in providing emotional strength and motivation to cancer patients and survivors. Hence the family must be educated about the challenges of the patients and should be encouraged to understand and support them.

Recommendations

The treatment should be tailored according to the patient needs. Counselling the patients and their family is important. The promotion of social health insurance schemes is important to reduce the financial burden of the disease/treatment. Government and private joint ventures in healthcare for affordable treatment. Strengthening the public health system to provide affordable cancer care.

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