

## Evaluation of Quality of Life of Breast Cancer Patients During Adjuvant Treatment at a Tertiary Care Teaching Hospital

Pritanjali Singh<sup>1</sup>, Rahul Singh<sup>2\*</sup>

<sup>1</sup>Associate Professor, <sup>2\*</sup> Junior Resident,  
Department of Radiotherapy, All India Institute of Medical Sciences, Patna, Bihar, India.

### ABSTRACT

**Background:** Breast cancer is a condition in which malignant cancerous cells begin to form in the breast tissue. It is heterogenous in nature with different type of cells in different age groups, individual and even in same breast. The present study was conducted with the aim to determine the effect of adjuvant treatment for breast cancer on the quality of life of females.

**Materials and Methods:** The present descriptive survey was carried out for a period of 6 months at Department of Radiotherapy, All India Institute of Medical Sciences, Patna, Bihar, India. Total of 100 subjects were included in the study. The study was approved by the institutional ethical board. All the patients were given a predesigned and pre tested questionnaire to evaluate their quality of life. Student t test was used for statistical analysis. Probability value of less than 0.05 was considered as significant.

**Results:** The study included 100 subjects, out of which 50 were undergoing radiotherapy and 50 chemotherapy. The mean age of the subjects was 45.38 $\pm$ 3.87 years. 71% females undergoing chemotherapy had no difficulty in doing work whereas 44% females undergoing radiotherapy encountered severe difficulty in working. There was significant

difference between the two as p value was less than 0.05. The mean 2.70  $\pm$  0.34 subjects with chemotherapy and 2.65  $\pm$  0.69 with radiotherapy who were worried about their appearance.

**Conclusion:** From our study it can be concluded that quality of life is altered to a great level amongst females with breast cancer. Females receiving chemotherapy are better off with the life quality compared to subjects receiving radiotherapy.

**Key words:** Cancer, Quality Life, Radiotherapy.

### \*Correspondence to:

**Dr. Rahul Singh,**  
Junior Resident,  
Department of Radiotherapy,  
AllIMS, Patna, Bihar, India.

### Article History:

**Received:** 15-06-2018, **Revised:** 07-07-2018, **Accepted:** 29-07-2018

Access this article online	
Website: <a href="http://www.ijmrp.com">www.ijmrp.com</a>	Quick Response code 
DOI: 10.21276/ijmrp.2018.4.4.053	

### INTRODUCTION

Breast cancer is a condition in which malignant cancerous cells begin to form in the breast tissue. It is heterogenous in nature with different type of cells in different age groups, individual and even in same breast. Breast cancer is mostly associated with mortality, but it can be eradicated and curable which can be a new ray of hope for females suffering from cancer.<sup>1,2</sup> It is one of the most common reason of cancer-associated deaths amongst women around the globe. It is seen amongst 31% of cancers in females, and 19% of deaths amongst females are due to cancer<sup>[3]</sup>. There is significant variation in the incidence rate of the condition with geographic area, its lowest in middle east and asia.<sup>3-5</sup> Subjects with cancer are exposed to varying rate of stress, lifestyle changes, type of treatment. The success of cancer treatment is not only dependent on the survival rate but also on the life quality. Evaluation of quality of life is based on the social, functional and psychological health of the subject.<sup>5-7</sup> Different authors have evaluated different criteria's for estimating the quality of life like social life, emotional wellbeing, functioning. In cancer subjects, it

is important to evaluate the quality of life as cancer affects the emotional as well as physical wellbeing of the subjects.<sup>8-10</sup> Chemotherapy and radiotherapy form an important part of the adjuvant treatment strategy for females with early stage of breast cancer. The adjuvant therapy in today's days comprises of hormonal alterations, combination of chemotherapeutic agents, immunotherapy and experimental agents. The use of chemotherapy is generally based on the subject's risk of recurrence and the expected benefit from the therapy as well as its impact on the psychosocial and physical disorders.<sup>11-13</sup> The present study was conducted with the aim to determine the effect of adjuvant treatment for breast cancer on the quality of life of females.

### MATERIALS AND METHODS

The present descriptive survey was carried out for a period of 6 months at Department of Radiotherapy, All India Institute of Medical Sciences, Patna, Bihar, India. Total of 100 subjects were

included in the study. Out of which 50 were taking chemotherapy and 50 took radiotherapy. The subjects with diagnosis of breast cancer who under mastectomy and who were taking some adjuvant treatment were included in the study. Patients with chronic disorder like diabetes, heart disorder were excluded from the study. Subjects taking treatment for more than 6 months were included in the study. All the subjects were informed about the study and a written consent was obtained from all. The study was approved by the institutional ethical board. All the patients were

given a predesigned and pre tested questionnaire to evaluate their quality of life. A complete detailed about their demography, medical history, family history, the type of treatment and stage of breast cancer was noted. They were checked upon their ability to perform daily activities like eating, walking etc. Subjects satisfaction with the treatment was also assessed. All the data was arranged in a tabulated form and analyzed using SPSS software. Student t test was used for statistical analysis. Probability value of less than 0.05 was considered as significant.

**Table 1: The stage of the disease**

Adjuvant therapy	Stage III	Stage IV	Total
Chemotherapy	39	11	50
radiotherapy	41	9	50

**Table 2: The daily activities for patients receiving chemotherapy and radiotherapy**

Activities	Chemotherapy patients			Radiation therapy patients			Significant test
	Non %	Moderate %	Severe %	Non %	Moderate %	Severe %	P value
Able to work	71	25	4	41	15	44	<0.05
Able to eat	83	17	0	0	3	97	<0.05
Able to have fun	7	13	80	76	13	11	<0.05
Able to communicate	75	10	15	56	23	21	>0.05
Able to sleep	59	25	16	39	16	45	<0.05

**Table 3: The psychosocial well-being domain for patients receiving chemotherapy and the radiotherapy**

Activities	Chemotherapy patients	Radiation therapy patients	Significant test
Is your life satisfying	1.11 ± 0.34	1.23 ± 0.57	>0.05
Do you feel useful	1.17 ± 0.38	1.29 ± 0.54	>0.05
Do you worry about the cost of medical	2.72 ± 0.36	2.52 ± 0.60	<0.05
Do you worry about the future	2.85 ± 0.39	2.82 ± 0.51	>0.05
Do you have normal life	1.07 ± 0.26	1.26 ± 0.49	>0.05
Do you feel you are dependent	2.73 ± 0.61	2.69 ± 0.58	>0.05
Are you able to concentrate	1.41 ± 0.68	1.87 ± 0.81	<0.05
Are you worried about your appearance	2.70 ± 0.34	2.65 ± 0.69	>0.05

**RESULTS**

The study included 100 subjects, out of which 50 were undergoing radiotherapy and 50 chemotherapy. The mean age of the subjects was 45.38±/3.87 years. There were 39 females with stage III cancer undergoing chemotherapy and 41 females with stage III cancer undergoing radiotherapy. There were 11 females with stage IV cancer taking chemotherapeutic drugs and 9 patients with stage IV cancer taking radiotherapy. (table 1)

Table 2 shows the ease of daily activities amongst subjects receiving chemotherapy of radiotherapy. 71% females undergoing chemotherapy had no difficulty in doing work whereas 44% females undergoing radiotherapy encountered severe difficulty in working. There was a significant difference between the two as p value was less than 0.05. There was severe eating difficulty with subjects undergoing radiotherapy (97%) whereas subjects with chemotherapy had no difficulty eating (83%). There was a significant difference between the two groups. There was no significant difference in the ability to communicate between the two groups as the p value was more than 0.05. Ability to sleep

was better amongst 59% subjects receiving chemotherapy. Whereas 45% subjects were unable to sleep who received radiation therapy. There was a significant difference between the two groups.

Table 3 shows the psychosocial and emotional wellbeing of the subjects. The mean 2.70 ± 0.34 subjects with chemotherapy and 2.65 ± 0.69 with radiotherapy who were worried about their appearance. There was no significant difference between the two groups. The mean 1.41 ± 0.68 subjects with chemotherapy and 1.87 ± 0.81 with radiotherapy who were not able to concentrate at their work. There was no significant difference between the two groups. The mean 2.73 ± 0.61 subjects with chemotherapy and 2.69 ± 0.58 with radiotherapy who felt dependency. There was no significant difference between the two groups. The mean 1.07 ± 0.26 subjects with chemotherapy and 1.26 ± 0.49 with radiotherapy who thought they were having normal life. There was no significant difference between the two groups. There was a significant difference in the cost of treatment between both the groups.

## DISCUSSION

Breast cancer is the most often diagnosed cancer amongst women, with an estimated incidence of 1.38 million new malignant cases diagnosed in the year 2008.<sup>14,15</sup> Advancement in diagnostic and treatment can lead to an increased survival rate. Therefore, managing with breast as a chronic condition is becoming a common phenomenon. The increased survival rate of breast cancer subjects, the fresher age at diagnosis, due to which more emphasis should be given on quality of life of the patients. Previous studies indicated that breast cancer patients may not show the evidence of disease, but they are affected from a number of issues which persevere long after start of treatment,<sup>16-18</sup> such as physical issues like pain and fatigue, psychological issues like fear of recurrence and psychosocial issues like family worries and sexual problems.<sup>19</sup>

Hence, there is a need to provide education, evidence and support over time. There are very less studies amongst Chinese subjects regarding the quality of life amongst breast cancer patients. As per the World Health Organization, quality of life is well-defined as subject's perception of life, values, standards, objectives and interests in the agenda of culture. It has been used as a point for judgement of treatments amongst different types of cancer.<sup>9,10</sup> It is regarded a primary indicator of progression of disease which may help the physicians in daily practice to monitor the subjects.<sup>20</sup> It can also be the indicator for the consequence of the disease and its management as perceived by the subjects and is altered by factors like physical damages, functional load, perception and social factors.<sup>21,22</sup>

In our study, 71% females undergoing chemotherapy had no difficulty in doing work whereas 44% females undergoing radiotherapy encountered severe difficulty in working. There was a significant difference between the two as p value was less than 0.05. There was severe eating difficulty with subjects undergoing radiotherapy (97%) whereas subjects with chemotherapy had no difficulty eating (83%). There was a significant difference between the two groups. There was no significant difference in the ability to communicate between the two groups as the p value was more than 0.05. Ability to sleep was better amongst 59% subjects receiving chemotherapy. Whereas 45% subjects were unable to sleep who received radiation therapy. There was a significant difference between the two groups.

Arora et al.<sup>23</sup> conducted a study amongst 103 patients receiving adjuvant therapy, they found that the quality of life is especially less related to the daily and cancer had ill effects on life irrespective of its origin or type. As per our study, the mean  $2.70 \pm 0.34$  subjects with chemotherapy and  $2.65 \pm 0.69$  with radiotherapy who were worried about their appearance. There was no significant difference between the two groups. The mean  $1.41 \pm 0.68$  subjects with chemotherapy and  $1.87 \pm 0.81$  with radiotherapy who were not able to concentrate at their work. There was no significant difference between the two groups. The mean  $2.73 \pm 0.61$  subjects with chemotherapy and  $2.69 \pm 0.58$  with radiotherapy who felt dependency. There was no significant difference between the two groups. The mean  $1.07 \pm 0.26$  subjects with chemotherapy and  $1.26 \pm 0.49$  with radiotherapy who thought they were having normal life. There was no significant difference between the two groups. There was a significant difference in the cost of treatment between both the groups.

According to Newell<sup>24</sup> mutilation caused by mastectomy Leads to a woman face great emotional distress, chemotherapy and radiation Therapy may lead to depression and anxiety. Also, bad feeling about losing hair and alteration in appearance can be a result of physical and psycho-social distress.

## CONCLUSION

Breast cancer brings to great emotional, psychological and physical distress. It is very challenging for a woman to face such difficulties. During this period female needs great empathy and support from the society. From our study it can be concluded that quality of life is altered to a great level amongst females with breast cancer. Females receiving chemotherapy are better off with the life quality compared to subjects receiving radiotherapy.

## REFERENCES

- Hürny C, Bernhard J, Coates AS, Castiglione-Gertsch M, Peterson HF, et al. (1996) Impact of adjuvant therapy on quality of life in women with node-positive operable breast cancer. International Breast Cancer Study Group. *Lancet* 347: 1279-1284.
- Wetherby SM, Muss HB (2005) Update in medical oncology for older patients: focus on breast cancer: management of early breast cancer. *Cancer J* 11: 506- 517.
- Jemal A, Siegel R, Ward E, Murray T, Xu J, et al. (2005) Cancer statistics, 2006. *CA Cancer J Clin* 56: 106-130.
- American Cancer Society Cancer Facts and Figures 2002. New York: American Cancer Society 3-15.
- Testa MA, Simonson DC (1996) Assessment of quality-of-life outcomes. *N Engl J Med* 334: 835-840.
- Shapiro SL, Lopez AM, Schwartz GE, Bootzin R, Figueredo AJ, et al. (2001) Quality of life and breast cancer: relationship to psychosocial variables. *J Clin Psychol* 57: 501-509.
- Hatam N, Ahmadloo N, Ahmad Kia Daliri A, Bastani P, Askarian M (2011) Quality of life and toxicity in breast cancer patients using adjuvant TAC (docetaxel, doxorubicin, cyclophosphamide), in comparison with FAC (doxorubicin, cyclophosphamide, 5-fluorouracil). *Arch Gynecol Obstet* 284: 215-220.
- Ochayon L, Zelker R, Kaduri L, Kadmon I (2010) Relationship between severity of symptoms and quality of life in patients with breast cancer receiving adjuvant hormonal therapy. *Oncol Nurs Forum* 37: E349-E358.
- Mauer ME, Bottomley A, Taphoorn MJ (2008) Evaluating health-related quality of life and symptom burden in brain tumour patients: instruments for use in experimental trials and clinical practice. *Curr Opin Neurol* 21: 745-753.
- Casso D, Buist DS, Taplin S (2004) Quality of life of 5-10 year breast cancer survivors diagnosed between age 40 and 49. *Health Qual Life Outcomes* 2: 25.
- Bernhard J, Zahrieh D, Zhang JJ, Martinelli G, Basser R, et al. (2008) Quality of life and quality-adjusted survival (Q-TWiST) in patients receiving doseintensive or standard dose chemotherapy for high-risk primary breast cancer. *Br J Cancer* 98: 25-33.
- Karamouzis MV, Ioannidis G, Rigatos G (2007) Quality of life in metastatic breast cancer patients under chemotherapy or supportive care: a singleinstitution comparative study. *Eur J Cancer Care (Engl)* 16: 433-438.
- Dorval M, Maunsell E et al. (1998) Long-term quality of life after breast cancer: comparison of 8-year survivors with population controls. *J Clin Oncol* 16: 478-94.

14. DeSantis C, Siegel R, Bandi P, Jemal A. Breast cancer statistics, 2011. *CA Cancer J Clin.* 2011;61:409-418.
15. Shin HR, Boniol M, Joubert C, Hery C, Haukka J, Autier P, et al. Secular trends in breast cancer mortality in five East Asian populations: Hong Kong, Japan, Korea, Singapore and Taiwan. *Cancer Sci.* 2010;101:1241-1246.
16. Dow KH, Ferrell BR, Leigh S, Ly J, Gulasekaram P. An evaluation of the quality of life among long term survivors of breast cancer. *Breast Cancer Res Treat.* 1996;39:261-273. Holzner B, Kemmler G, Kopp M, Moschen R, Schweigkofler H, Dünser M, et al. Quality of life in breast cancer patients- not enough attention for long term survivors? *Psychosomatics.* 2001;42:117-123.
17. Hartl K, Schennach R, Muller M, Engel J, Reinecker H, Sommer H, et al. Quality of life, anxiety, and oncological factors: a follow up study of breast cancer patients. *Psychosomatics.* 2010;51:112-123.
18. Capiello M, Cunningham RS, Knobf MT, Erdos D. Breast cancer survivors: information and support after treatment. *Clin Nurs Res.* 2007;16:278-301.
19. Bower JE, Ganz PA, Desmond KA, Rowland JH, Meyerowitz BE, Belin TR. Fatigue in breast cancer survivors: occurrence, correlates, and impact on quality of life. *J Clin Oncol.* 2000; 18: 743-753.
20. Velikova G, Awad N, Coles-Gale R, Wright EP, Brown JM, et al. (2008) The clinical value of quality of life assessment in oncology practice-a qualitative study of patient and physician views. *Psychooncology* 17: 690-698.
21. Spilker B (1996) Quality of life and Pharmacoeconomics in Clinical Trials. (2nd edn), Philadelphia: Lippincott-Raven.
22. Testa MA, Simonson DC (1996) Assessment of quality-of-life outcomes. *N Engl J Med* 334: 835-840.
23. Arora NK, Gustafson DH, Hawkins RP, McTavish F, Cella DF, et al. (2001) Impact of surgery and chemotherapy on the quality of life of younger women with breast carcinoma: a prospective study. *Cancer* 92: 1288-1298.
24. Newell RJ (1999) Altered body image: a fear-avoidance model of psycho-social difficulties following disfigurement. *J Adv Nurs* 30: 1230-1238.

**Source of Support:** Nil.

**Conflict of Interest:** None Declared.

**Copyright:** © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Cite this article as:** Pritanjali Singh, Rahul Singh. Evaluation of Quality of Life of Breast Cancer Patients During Adjuvant Treatment at a Tertiary Care Teaching Hospital. *Int J Med Res Prof.* 2018 July; 4(4):228-31. DOI:10.21276/ijmrp.2018.4.4.053