

Study on Quality of Life of Breast Cancer Patients Receiving First Line Chemotherapy in a Tertiary Care Hospital Karachi, Pakistan

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Received: 07 June 2018; Accepted: 05 July 2018

Citation: Arifa Aziz. Study on Quality of Life of Breast Cancer Patients Receiving First Line Chemotherapy in a Tertiary Care Hospital Karachi, Pakistan. Cancer Sci Res. 2018; 1(3): 1-6.

ABSTRACT

Aim: The aim of our study is to assess how the quality of life of patients with breast cancer is affected by the side effects of chemotherapeutic drugs Doxorubicin, Cyclophosphamide and Taxane.

Method: Questionnaire form was developed which includes questions on side effects of chemotherapy, that ask presence and severity of psychological, spiritual and social wellbeing and extent of fear in patients receiving chemotherapy. The questionnaire forms are filled by patients after taking their written consent and explaining the study to them. The patients' data was collected from the Oncology daycare at the Aga Khan University Hospital.

Inclusion criteria

- Breast Cancer patients who are receiving chemotherapy with doxorubicin, cyclophosphamide and Taxanes (Paclitaxel/Docetaxel).
- Patients aged above 20 years and below 65 years.

Exclusion criteria

- Patients with chronic diseases such as diabetes, hypertension and known cardiac diseases.
- Patients who are suffering from depression and psychiatric illnesses.

Results: The most common problems for patients receiving chemotherapy for Breast cancers are fatigue, changes in appetite and generalized pain affecting more than 90 percent patients. More than eighty percent patients have fear of recurrence or spreading of their disease and financial burden. Around sixty to seventy percent patients have issues with their psychological wellbeing like lack of happiness and satisfaction in life, difficulty to concentrate and feeling usefulness of life. Ninety percent people feel stress in their family but on the other hand receive same amount of support too. Almost ninety percent people are markedly motivated towards religious activities.

Conclusion: This study can be concluded as that severely affecting problems to most of the patients are fatigue, pains, and changes in appetite, sleep and financial burden. Religion and spiritual activities becomes the primary point of interest, overall most of the people feel happy, hopeful and find their selves still useful.

Keywords

Breast cancer, Quality of life, Chemotherapy, Doxorubicin, Cyclophosphamide, Taxanes.

Introduction

Breast cancer is one of the most common cancers in females in Pakistan, this disease is mostly seen in young females, aged between thirty years to forty years of life. According to Western

reports, breast cancer is most often seen between ages fifty to sixty years of life [1]. Patients suffering from breast cancer have to face a multitude of problems psychological, social, and financial along with chemotherapy side effects and toxicities [2]. During chemotherapy cycles, the quality of life is affected by the side effects of chemotherapy which causes changes in lifestyle that lead towards anti-social behavior, disturbances in marital relationships, alopecia and disfigurement of the body after mastectomy these

changes are major reasons for depression, breaches in marital relations and anti-social behavior [3,4] (Figure 1-2).

According to the World Health Organization (WHO), quality of life is defined as “an individual perception of life values, objectives, standards and interest in the frame work of culture, the quality of life is increasingly being used as primary outcome measures in studies to evaluate the effectiveness of treatment [5-7] of patients. Generally, instead of using lipoprotein levels, blood pressure and electrocardiograms, decisions about health care can be made by means of the quality of life, which estimates the effects on outcomes important to the patients [8]. Many patients assume that the quality of life will improve once chemotherapy finishes, but a few symptoms like muscular pain, amenorrhea, vaginal problems and hot flashes persist for a long time, even up to a year.

On these issues in the journal of Clinical Oncology, Ganz et al. 2, 3, reported in his article two studies on the symptoms and quality of life within 1 to 2 years after primary treatment for early breast cancer. The overall findings reassure patients that post-treatment symptoms are generally mild and the quality of life recovers to a baseline level within 12 months of completing primary treatment [9-11]. Young patients tend to face more side effects which affect their quality of life more, as compared to older patients; one side effect of chemotherapy is prolong amenorrhea, which causes depression especially in young females who are planning pregnancies in the future to complete their families. Many patients who remain amenorrheic for a year develop permanent amenorrhea due to premature ovarian failure [12,13].

The cost of chemotherapy is very high especially in our population where people work very hard to earn money and in average population salary packages are very low, patients cannot afford chemotherapy especially people with low salary and end up suffering from socioeconomic burdens and the disease itself, both affecting their quality of life [14] (Figure 3). This disease is seen in all classes (upper, middle and lower classes) but due to the awareness of breast cancer in the literate classes and through careful screening, breast cancer is detected early in the middle and upper classes [15] however most lower class patients present the disease in a later stage.

When a patient arrives for chemotherapy in the daycare unit, they are worried about the treatment of breast cancer and effects of this treatment on their lifestyle. Therefore, there is a need to promote education on breast cancer in both urban and rural areas. It is seen that the quality of life is better in those patients in which breast cancer is detected early and they tolerate the side effects of chemotherapy better as compared to Stage IV cancer patients.

Oncology nurses can play a vital role in educating people in rural and urban areas to increase awareness of this disease [16-18]. Another most important issue is that females are afraid of this disease and when lump in the breast is detected incidentally by a patient, they hide this and during this time the disease progresses. Thus, there is a need for the proper education of females and the

proper explanations of the importance of early diagnosis and treatment of breast cancer, which can be cured if detected and treated early.

Improvement or deterioration in health and the quality of life of patients on chemotherapy helps physicians assess the disease response or progress with chemotherapy [19-21] therefore, when patients visit the clinic for checkups before each chemotherapy cycle, the physician evaluates the quality of life, which is associated with the response to treatment [22,23]. Chemotherapy side effects such as nausea, vomiting, altered taste, fatigue, alopecia, weight gain; muscular pain and peripheral neuropathy are common side effects that affect the quality of life negatively. During chemotherapy cycles, patient activity is decreased due to pain and numbness of hands and feet due to paclitaxel induced peripheral neuropathy, causing a decrease in movements and increased tiredness after doing normal routine work (Figure 4). When patients are unable to do normal routine work, they become depressed. Therefore, many patients want to leave chemotherapy incomplete and are unable to understand that these side effects are not permanent and will decrease and disappear slowly once chemotherapy is completed. Reassurance and counseling of these patients play a vital role during chemotherapy cycles so that patients do not leave chemotherapy incomplete due to the side effects of chemotherapy which affect their quality of life. Patients sometimes start thinking that they are becoming a burden, both physically and financially, on their families [24-26]. During chemotherapy patients become more religious (Figure 5).

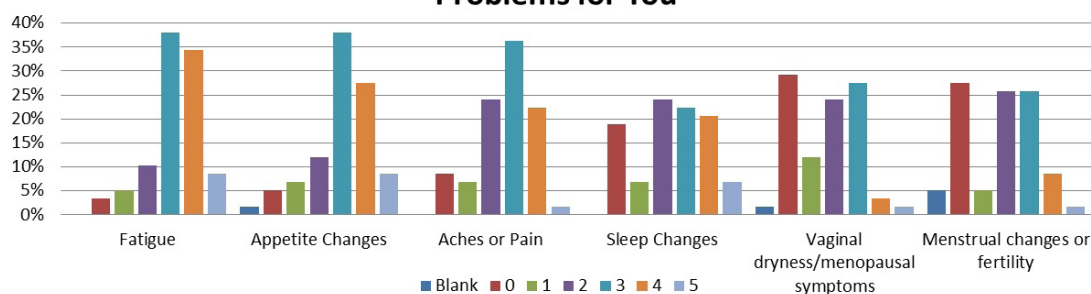
There is also a need to promote support groups that arrange workshops for patients on chemotherapy so that counseling and reassurance can be given to patients that their normal routines of life will return once chemotherapy is completed and side effects like the loss of hair, eyelashes and eyebrows (which are causes of depression and antisocial behavior) will return to normal. Support group members guide and educate patients that their normal routine of life will come back to normal once chemotherapy finish and guide them on how to stay beautiful by wearing scarves to cover their heads, or wigs, during chemotherapy cycles and how to become presentable so that these patients can resume social activities and obtain a good quality of life.

Discussion

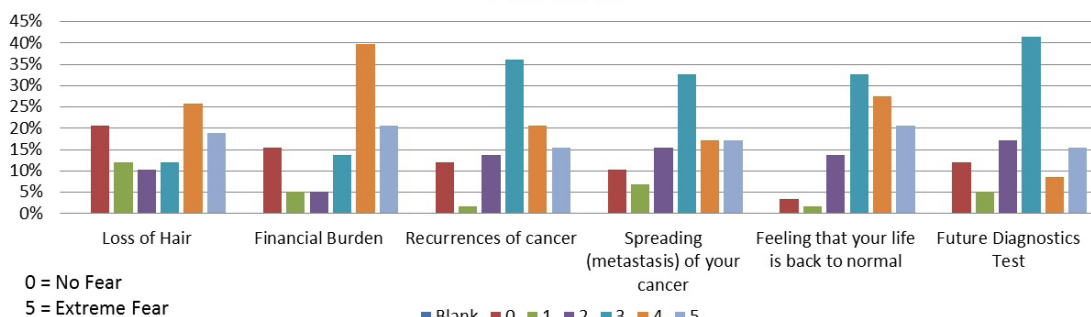
On analysis of the data and careful comprehension of the results, the following was concluded:

Most patients (37.9%) expressed mild fatigue while few (3.5%) stated they experienced no such symptoms. Similarly, the majority of patients expressed mild appetite changes (37.9%) and aches/pain (36.2%), while only a minority (1.7%) expressed severe pain symptoms. Patients expressed relatively mild changes in sleep (24.1%). The majority of patients experienced none or mild problems with menopausal symptoms/changes (29.3% expressed no problems while 27.6% expressed mild problems) and fertility (27.6% expressed no problems while 25.9% expressed mild problems) (Table 1).

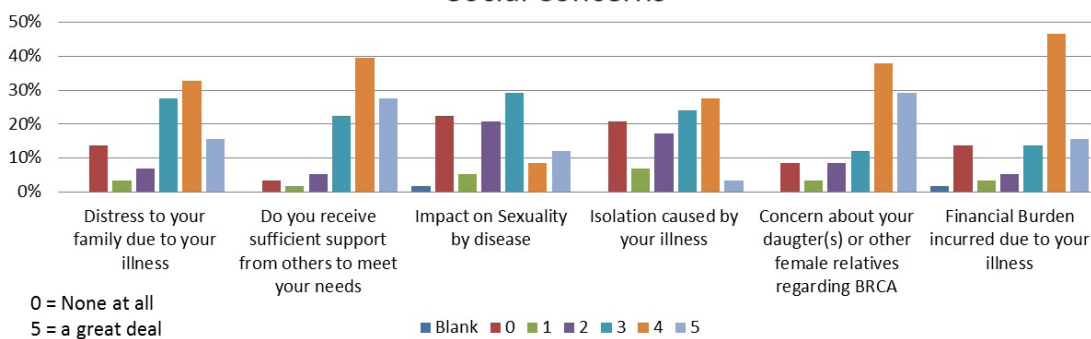
Problems for You



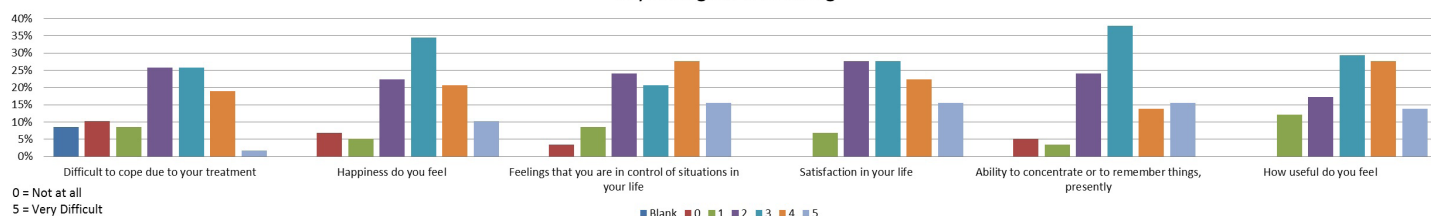
Fearful of



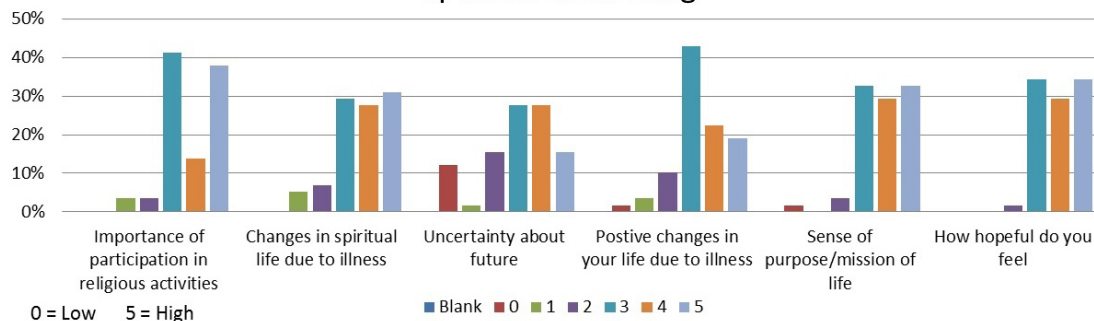
Social Concerns



Psychological Well Being



Spiritual Well Being



A majority of patients expressed none (20.7%) or almost extreme (25.9%) fear of hair loss. Most patients experienced near extreme (39.7%) or extreme fear (20.7%) of financial burden, but mild fear (36.2%) of disease recurrence. Most patients expressed mild fear of metastasis (32.8%), feeling their life was back to normal (32.8%) and future diagnostics tests (41.4%). Very few patients expressed little fear in all of these cases. The most common fear was a mild one of diagnostics tests (41.4%) and the least common fears were little fears of disease recurrence (1.7%) and feeling their life was back to normal (1.7%) (Table 2).

Most patients felt it somewhat difficult to feel happiness (34.5%) and to concentrate or remember things (37.9%). Besides this, a majority of patients felt it mildly difficult to cope due to treatment (25.9%), as well as to feel satisfaction in their lives (27.6%). It was also relatively difficult for patients to feel useful (29.3%) or in control of situations in their lives (27.6%). Very few patients found it very difficult to cope due to treatment (1.7%). Very few patients also found it not at all, or very slightly, difficult to feel in control (3.5%), happy (3.5%) and satisfied (0.0%), as well as to remember things (5.2%) (Table 3).

The majority of patients (39.7%) incurred somewhat high financial burdens due to their illnesses. This majority (37.9%) also expressed concern for female relatives regarding breast cancer. Most patients claimed to receive sufficient support to meet their needs (39.7%), but also experienced a mild-to-high amount of isolation due to their illness (27.6%). A minority of patients also expressed a relatively low amount of distress (3.4%), support received (3.4%), and concern about other female relatives regarding breast cancer (8.6%), and financial burden incurred (13.8%), as well as little to mild impact on sexuality by disease (22.4%-29.3%) (Table 4).

A majority of patients expressed mild well-being in terms of importance of participation on religious activities (41.4%), changes in their spiritual lives (31.0%), uncertainty (27.6%), positive changes (43.1%), sense of purpose (32.8%) and hopefulness (34.5%). Most patients expressed high hopefulness (34.5%), as well as sense of purpose (32.8%) and importance of participation in religious activities (37.9%). Very few experienced little (3.4%) or no (1.7%) positive changes or sense of purpose, however almost all expressed mild to high hopefulness (34.5%) (Table 5). Overall responses were positive in terms of being within the mild to high range for all questions asked in this part of the survey.

Problems (0 = no problem and 5 = severe problem)	Fatigue/%	Appetite Changes/%	Aches or Pain/%	Sleep Changes/%	Vaginal Dryness or Menopausal Symptoms/%	Fertility/%
Blank	0.0	1.7	0.0	0.0	1.7	5.2
0	3.5	5.2	8.6	19.0	29.3	27.6
1	5.2	6.9	6.9	6.9	12.1	5.2
2	10.3	12.1	24.1	24.1	24.1	25.9
3	37.9	37.9	36.2	22.4	27.6	25.9
4	34.5	27.6	22.4	20.7	3.5	8.6
5	8.6	8.6	1.7	6.9	1.7	1.7

Fearful of (0 = No Fear and 5 = Extreme Fear)	Loss of Hair/%	Financial Burden/%	Recurrences of cancer/%	Spreading (Metastasis) of your cancer/%	Feeling that your life is back to normal/%	Future Diagnostics Test/%
Blank	0.0	0.0	0.0	0.0	0.0	0.0
0	20.7	15.5	12.1	10	3.5	12.1
1	12.1	5.2	1.7	7	1.7	5.2
2	10.3	5.2	13.8	16	13.8	17.2
3	12.1	13.8	36.2	33	32.8	41.4
4	25.9	39.7	20.7	17	27.6	8.6
5	19.0	20.7	15.5	17	20.7	15.5

Psychological well being (0 = not at all and 5 = very difficult)	Difficult to cope due to your treatment/%	Happiness do you feel/%	Feelings that you are in control of situations in your life/%	Satisfaction in your life/%	Ability to concentrate or remember things, presently/%	How useful do you feel/%
Blank	8.6	0.0	0.0	0.0	0.0	0.0
0	10.3	6.9	3.5	0.0	5.2	0.0
1	8.6	5.2	8.6	6.9	3.5	12.1
2	25.9	22.4	24.1	27.6	24.1	17.2
3	25.9	34.5	20.7	27.6	37.9	29.3
4	19.0	20.7	27.6	22.4	13.8	27.6
5	1.72	10.3	15.5	15.5	15.5	13.8

Social concerns (0 = low and 5 = high)	Distress to your family due to your illness/%	Do you receive sufficient support from others to meet your needs/%	Impact on sexuality by disease/%	Isolation caused by your illness/%	Concern about your daughter(s) or other female relatives regarding BRCA/%	Financial burden incurred due to your illness/%
Blank	0.0	0.0	1.7	0.0	0.0	1.7
0	13.8	3.4	22.4	20.7	8.6	13.8
1	3.4	1.7	5.2	6.9	3.4	3.4
2	6.9	5.2	20.7	17.2	8.6	5.2
3	27.6	22.4	29.3	24.1	12.1	13.8
4	32.8	49.7	8.6	27.6	37.9	46.6
5	15.5	27.6	12.1	3.4	29.3	15.5

Spiritual well being (0 = low and 5 = high)	Importance of participation in religious activities/%	Changes in spiritual life due to illness/%	Uncertainty about your future/%	Positive changes in your life due to illness/%	Sense of purpose or mission of life/%	How hopeful do you feel/%
Blank	0.0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	12.1	1.7	1.7	0.0
1	3.4	5.2	1.7	3.4	0.0	0.0
2	3.4	6.9	15.5	10.3	3.4	1.7
3	41.4	29.3	27.6	43.1	32.8	34.5
4	13.8	27.6	27.6	22.4	29.3	29.3
5	37.9	31.0	15.5	19.0	32.8	34.5

Conclusion

On analysis of the data, it was concluded that the factors which mostly affect a patient's quality of life during chemotherapy cycles are fatigue, appetite changes, and loss of hair, as well as social, spiritual and psychological wellbeing, which includes happiness, satisfaction, usefulness and difficulties in carrying out routine work. Other problems such as vaginal dryness, infertility, menopause, mild fears of recurrence of disease and future diagnostics tests, are factors that affect the quality of life moderately. Religion and spiritual activities becomes the primary point of interest.

Way Forward

Support group meetings should be arrange for patients education about how to manage side effects of chemotherapy like alopecia and how to keep themselves happy and presentable. Questionnaire forms should be kept in clinics to asses quality of life and response of treatment.

Acknowledgments

The author wishes to acknowledge Dr. Nehal Masood, Dr. Sobia Tabassum, Taha Khan, Jahangir Rathore, Ghulam Rasool and Insiya Meherally and Farida Aleem for their substantial contributions to this manuscript.

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