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Original Article

Evaluation of Quality of Life and Menopausal Symptoms in Women with Breast Cancer in Northern Iran

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Breast cancer is one of the most common cancers in women and includes approximately 23% of all kinds of cancer. The main reason for evaluation of quality of life (QOL) is to access informations which result in improvement of treatment and health status of patients. The main purpose of this study was to determine menopause symptoms and QOLin postmenopausal patients with breast cancer. Eighty postmenopausal women with history of breast cancer and aged between 45-65 years who were referred to Shahid Rajayie and Ayatollah Rouhani health care centers, Babol University of medical sciences, for menopausal symptoms, filled an informed consent, a checklist including menopause symptoms and the European organization for research and treatment of cancer quality of life (EORTC QLQ-C30) questionnaire. Based on scoring criteria, each of the scale scores in the mentioned questionnaires was determined using SPSS 18 software. In this study, hot flashes and anxiety were the most prevalent symptoms in women with breast cancer. QOL in 36.3% of patients was evaluated as good. 6.3% of patients had physical dysfunction, 2.5% had role dysfunction, 16.3% had excitement dysfunction, 2.5 % had cognitive dysfunction and 3.8% had social dysfunction. The worst condition was related to the economic impact of the disease with 25% of patients suffering from this condition.The QOL of patients with a history of breast cancer was better in comparison to other studied societies with a similar culture.

Key Words: Quality of life, menopause symptoms, EORTC C30 questionnaire

Breast cancer is the second most prevalent malignant cancer in women worldwide and millions of dollars are spent each year for the costs of this illness (1). In America, approximately 215990 new cases for breast cancer were reported in 2004. A significant number of suffering women were between 40-60 years of age which is close to the mean age at menopause at 51.1 years in America (1, 2). With the decrease of mortality of women affected with breast cancer, the number of post-menopausal women with a history of breast cancer has increased (1). Most of the women show menopausal symptoms at the time of diagnosis (3).

Studies conducted on incidence of menopausal symptoms in women with breast cancer showed that 65%, 44%and 48%of them experienced hot flashes,

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night sweats, and vaginal dryness, respectively, which are the most important menopausal symptoms in these women who were also using tamoxifen (4-6). In another study, 68% hot flashes, 48% vaginal dryness, and 26% dyspareunia were reported in women with breast cancer who were using tamoxifen and aromatase inhibitors (7), which may also have a negative effect on quality of life (QOL) (8, 9). From 1974 to 2007, numerous studies using different questionnaires were conducted on QOLin women with breast cancer. Anxiety and depression in these patients were higher than healthy population. Symptoms of pain and fatigue were the most prevalent symptoms mentioned in these studies. Also poor sexual performance was one of the problems of these women (10).

Studies assessing QOL and menopausal symptoms in women with breast cancer have been conducted in developed countries where economic and cultural factors are different from developing countries (1).

Given the fact that cultural and ethnic differen--ces affect menopausal symptoms and QOL (2), the purpose of the present study was to evaluate the frequency of menopausal symptoms and QOL in women with breast cancer who did not use tamoxif--en or hormone treatment.

Materials & methods

Patients

This study was conducted on eighty women aged between 45-65 years with breast cancer, normal menopause or menopausal symptoms during the past four weeks, who were admitted to the medical centers of Shahid Rajayi hospital and Ayatollah Rouhani hospital related to Babol University of Medical Sciences, Babol, Iran. Inclusion criteria were having no cancer in other areas and no use of hormone therapy or tamoxifen during at least the past six months. Before filling the questionnaire, the mentioned project was described for all patients and after obtaining informed consents, they were enrolled into the study.

For all patients a checklist including age, age at menarche, body mass index, smoking (currently or quit smoking in the past 5 years only), age at menopause (at least 12 months of amenorrhea), hot flashes, perspiration, palpitations, dizziness (vasom--otor symptoms), anxiety, headache, depression, insomnia (psychological symptoms), dyspareunia, vaginal dryness (genital symptoms) was filled.

Quality of life assessment

In order to assess the QOL, the European organization for research and treatment of cancer quality of life (EORTC QLQ-C30) questionnaire which it's Persian translation's reliability and validity was confirmed by doctor Montazeri and colleagues was used (11). This questionnaire contained 30 questions including 9 multi questions parts. One part was related to QOL, 5 parts were related to performance (physical, role, anxiety, cognitive and social)status, 3 parts were related to signs and symptoms (fatigue, pain, nausea and vomiting) and 6 individual parts were related to shortness of breath, sleep disturbances, loss of appetite, constipation, diarrhea and financial impacts of the disease. From these 30 questions, answers for 28 of them were considered as no (1), slight (2), high (3), very high (6). Answers for the last two questions which were relevant to QOL, varied from 1 (poor) to 7 (perfect).

After filling the questionnaires, scores of different parts were calculated as follows:

Total score of relevant questions = Total score/ Total questions of relevant section

Score= (1-(Total score – 1)/ Range of questions of relevant section)*100

Range of questions in functional status, and signs and symptoms sections was "3" while it was "6" in QOL section.

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Table 1. Prevalence of menopausal symptoms in postmenopausal women with breast cancer

Symptoms	Prevalence of symptoms* N (%)
Hot flashes	51(63.8)
Sweating	44 (55.0)
Vaginaldryness	26 (32.5)
Palpitation	31 (38.8)
Dizziness	32 (40.0)
Anxiety	51 (63.8)
Headache	32 (40.0)
Depression	34 (42.5)
Insomnia	37 (46.3)
Dyspareunia	13 (16.3)

*Occurrence of these symptoms was considered within the last four weeks.

Thescore of each section was calculated numerically from zero to 100. For functional status, patients with a score less than 33.3 had "dysfunction" and those with a score greater than or equal to 66.7 had "good functioning". In functional statusassessment, higher score shows better functionality whereas in evaluating symptoms, higher score shows a worse situation. Data were analyzedafter being recorded.

Results

The results of this study indicate that subjects were aged 52.26±10.04 years, while their age at menarche, age at menopause and body mass index were 12.47±0.97 years, 46.97±6.99 years and 27.45±3.67 respectively. Menopausal symptoms in post-menopausal women with breast cancer are shown in Table 1. The most prevalent symptoms of menopause are hot flashes and anxiety (63.8%), perspiration (55%), and insomnia (46.3%).

In patients with breast cancer according to EORTC C30 questionnaire QOL was evaluated as good in 36.3 percent of the cases (Table 2). With the chosen cut-off point of 33.3%, 6.3% of patients had physical dysfunction, 2.5% had role dysfunction, 16.3% had anxiety dysfunction, 2% had cognitive dysfunction and 3.8% had social dysfunction. With the chosen cut-off point of 66.7%, except for anxiety functioning, in all the other four items of performance evaluation, more than half of the patients had good functionality. Concerning signs and symptoms, the worst status was related to economic impacts of the disease for which 25% of the patients presented poor criteria.

Discussion

Based on the results of evaluation of menopausal symptoms within the past four weeks, the most prevalent menopausal symptoms in patients with breast cancer were hot flashes and anxiety, respectively. Similar to the present study, Crandall et al. in California showed that 71% of women with breast cancer had hot flashes after menopausal symptoms (12). Also in the study of Hunter et al. on post-menopausal women with history of breast cancerin England, the frequencies of hot flashes and perspiration were 80% and 72%, respectively (13). Doringochoo et al. reported that 46.3% of post-menopausal women with history of breast cancer in China experienced menopausal symptoms (hot flashes, perspiration) at least once (14). Hot flashes are the most prevalent severe changes in menopausal period, which in some cultures occurs in more than 75% of women, but only 20% of these women refer to doctors for treatment (15).

While in the present study we noticed 2.5-16.3% dysfunction and 25% of patients presented poor economic impacts, in Kuwait, 5.8-11.2% had dysfunction and 12-40% had severe symptoms (16). However, when considering the total score, the functionality of breast cancer patients was below the average (16). In Germany, the QOL of women with

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Table 2. Evaluated scores of different aspects of QOL on the scale of EORTC QLQ-C30 in postmenauposal patients with breast cancer

Variables	No. of items	Mean±SD	% scoring < 33.3%	% scoring ≥ 66.7%
C-30 functional scales				
Global QOL scale	2	62.39±25.02	8.8	36.3
Physical functioning	5	68.83±21.63	6.3	55
Role functioning	2	75.41±23.57	2.5	52.2
Emotionalfunctioning	2	59.68±27.73	16.3	41.3
Cognitive performance	4	78.54±23.89	2.5	61.3
Social functioning	2	75.62±27.68	3.8	55
C – 30 symptoms/scales				
Fatigue	3	40.31±26.61	35	12.5
Nausea and vomiting	2	14.37±2.47	23.8	2.5
Pain	2	35.12±3.07	40	11.3
Dyspnoea	1	17.08±2.71	62.5	0
Insomnia	1	39.16±3.78	31.3	12.5
Appetite loss	1	22.92±3.22	55	2.5
Constipation	1	14.16±2.57	67.5	1.3
Diarrhea	1	6.67±1.82	83.8	0
Financial impact	1	51.67±35.53	18.8	25

breast cancer was similar to the general population but functionality status and symptoms were worse in all sections. While economic items were worse in general population (17). In a systematic review conducted by Montazeri in 2008, several studies onQOL using different questionnairesin women with breast cancer were reviewed from 1974 to 2007. Anxiety and depression in these patients were higher than healthy population. Pain and fatigue symptoms were the most prevalent symptoms pointed in this systematic review. Also, poor sexual performance was one of the problems of these women (10). In Sweden, QOL of women with breast cancer was worse compared to general population (18). In Vietnamese and Chinese residents of the United States, the most prevalent severe symptoms in women with breast cancer included: unpleasantness (38%), fatigue (26%), pain (18%), anorexia (14%), anxiety (14%) and depression (14%) (19). In another study conducted in Brazil,the score of physical functioning in patients with breast cancer was significantly lower than those without the disease (2). In a study in two large metropolitan areas in USA, authors concluded that fatigue, physical functioning, physical limitations, vitality, emotional problems, physical pain, depression and overall health in patients with breast cancer had no significant difference with those without the disease (20).

Obviously, there is a controversy about the QOLinpatients with breast cancer compared to the general population in different studies. In the present study, women with breast cancer had better QOL in different aspects when comparedtoa similar study conducted in Kuwait (16). However, severities of some symptoms like economic impacts of the

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disease and also some functionality statuses like anxiety are relatively bad and demand greater attention to these patients.

In conclusion, based on the results of the present study, the most prevalent menopausal symptom in women with history of breast cancer like other studies is hot flashes and also the QOL of these women was better compared to other studies conducted in populations with similar cultures.

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Conflict of interests

The authors declared no conflict of interests.

References

1. Conde D M, Pinto-Neto A M, Cabello C, et al. Quality of life in brazilian breast cancer survivors age 45–65 years: Associated factors. Breast J. 2005; 11:425-32.

2. Conde D M, Pinto-Neto A M, Cabello C, et al. Menopause symptoms and quality of life in women aged 45 to 65 years with and without breast cancer. Menopause. 2005;12:436-43.

3. Schultz P N, Klein M J, Beck M L, et al. Breast cancer: Relationship between menopausal symptoms, physiologic health effects of cancer treatment and physical constraints on quality of life in long-term survivors. J Clin Nurs. 2005;14:204-11.

4. Fisher B, Costantino J, Redmond C, et al. A randomized clinical trial evaluating tamoxifen in the treatment of patients with node-negative breast cancer who have estrogen-receptor–positive tumors. N Engl J Med. 1989;320:479-84.

5. Fisher B, Costantino J P, Wickerham D L, et al. Tamoxifen for prevention of breast cancer: Report of the national surgical adjuvant breast and bowel project p-1 study. J Natl Cancer Inst. 1998;90:1371-88.

6. McCall-Hosenfeld J S, Jaramillo S A, Legault C, et al. Correlates of sexual satisfaction among sexually active postmenopausal women in the women's health initiative-observational study. J Gen Intern Med. 2008;23:2000-09.

7. Couzi R J, Helzlsouer K J, Fetting J H. Prevalence of menopausal symptoms among women with a history of breast cancer and attitudes toward estrogen replacement therapy. J Clin Oncol. 1995;13:2737-44.

8. Carpenter J S, Johnson D, Wagner L, et al. Hot flashes and related outcomes in breast cancer survivors and matched comparison women. Oncol Nurs Forum. 2002;29:E16-25.

9. Stein K D, Jacobsen P B, Hann D M, et al. Impact of hot flashes on quality of life among postmenopausal women being treated for breast cancer. J Pain Symptom Manage. 2000;19:436-45.

10. Montazeri A. Health-related quality of life in breast cancer patients: A bibliographic review of the literature from 1974 to 2007. J Exp Clin Cancer Res. 2008;27:32.

11. Montazeri A, Harirchi I, Vahdani M, et al. The european organization for research and treatment of cancer quality of life questionnaire (eortc qlq-c30): Translation and validation study of the iranian version. Support Care Cancer. 1999;7:400-06.

12. Crandall C, Petersen L, Ganz P A, et al. Association of breast cancer and its therapy with menopause-related symptoms. Menopause. 2004;11:519-30.

13. Hunter M S, Grunfeld E A, Mittal S, et al. Menopausal symptoms in women with breast cancer: Prevalence and treatment preferences. Psycho-Oncology. 2004;13:769-78.

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14. Dorjgochoo T, Gu K, Kallianpur A, et al. Menopausal symptoms among breast cancer patients 6 months after cancer diagnosis: A report from the shanghai breast cancer survival study (sbcss). Menopause (New York, NY). 2009;16:1205.

15. Health N I o. National institutes of health state-of-the-science conference statement: Management of menopause-related symptoms. Ann Intern Med. 2005;142:1003.

16. Alawadi S A, Ohaeri J U. Health–related quality of life of kuwaiti women with breast cancer: A comparative study using the eortc quality of life questionnaire. BMC Cancer. 2009;9:222.

17. Waldmann A, Pritzkuleit R, Raspe H, et al. The ovis study: Health related quality of life measured by the eortc qlq-c30 and-br23 in german female patients with breast cancer from schleswig-holstein. Qual Life Res. 2007;16:767-76.

18. Høyer M, Johansson B, Nordin K, et al. Health-related quality of life among women with breast cancer-a population-based study. Acta Oncol. 2011;50:1015-26.

19. Jenny K Y, Swartz M D, Reyes-Gibby C C. English proficiency, symptoms, and quality of life in vietnamese-and chinese-american breast cancer survivors. J Pain Symptom Manage. 2011;42:83-92.

20. Bower J E, Ganz P A, Desmond K A, et al. Fatigue in breast cancer survivors: Occurrence, correlates, and impact on quality of life. J Clin Oncol. 2000;18:743-43.

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