



Menopausal Symptoms in Breast Cancer Survivors; Prevalence and Impact on Quality of Life.

Manonai J, MD.¹, Chittacharoen A, MD.¹,
Kongdan Y, MD.², Udomsubpayakul U, M.Sc.³, Theppisai U, MD.¹

¹ Department of Obstetrics and Gynaecology, ² Department of Surgery, ³ Research Center,
Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Abstract

Objectives: To study the prevalence of menopausal symptoms and quality of life in breast cancer survivors comparing to age-matched healthy female volunteers.

Material and Method: From July 2004 to March 2005, a cross-sectional study was performed among samples of breast cancer survivors in Breast Clinic, Faculty of Medicine, Ramathibodi Hospital. One group for comparison was conducted on healthy women of the same age. Their menopausal symptoms were measured by using the Menopause Rating Scale. The menopause-specific quality of life questionnaire was used to evaluate their quality of life.

Results: A total of 97 breast cancer survivors and 95 age-matched healthy women completed the questionnaire. The study group had significantly experienced depressive symptoms more frequently than the control group. Comparing the median scores of quality of life between two groups, there was no significant difference except that vasomotor domain was higher in breast cancer survivors.

Conclusion: All breast cancer survivors had experienced menopausal symptoms which negatively correlated with their quality of life. Depressive mood was found more commonly comparing to women without breast cancer.

Key words: Breast cancer survivors, menopausal symptoms, quality of life

Corresponding author: Manonai J, MD.

Department of Obstetrics and Gynaecology, Faculty of Medicine, Ramathibodi Hospital, Bangkok 10400, Thailand. Telephone 0-2201-1412 Fax 0-2201-1416
E-mail address: rajmo@mahidol.ac.th

Introduction

Breast cancer is the second most common malignancy in the world⁽¹⁾ and the second most frequent female cancer in Thailand. As early diagnosis and timely treatments are possible today, the rate of 5-year relative survival of breast cancers has increased. During the past decade, the prevalence of breast cancer tended to increase and patients, subsequently, had much higher survival rate. A significant number of cases occur in climacteric women; therefore the number of women with a history of the disease during the menopausal transition is increasing. Treatment options including breast surgery, radiation therapy, chemotherapy, and tamoxifen can be associated with immediate and long-lasting side effects⁽²⁾, breast cancer survivors frequently experience some degree of interference with their normal function or quality of life. It was found that breast cancer survivors had poorer physical and psychological quality of life and high life stress⁽³⁻⁵⁾.

Several studies have shown that both menopause-related symptoms are common in breast cancer survivors⁽⁶⁻⁹⁾. Those studies have been conducted in developed countries with different socioeconomic and cultural settings, and focused on the occurrence of hot flushes. In addition, the results from a cross-cultural survey suggested that differences in demographic, cultural and medical characteristics might have affected the health-related quality of life in breast cancer patients⁽¹⁰⁾.

The objectives of this study were to study the prevalence of menopausal symptoms in women within few years after treatment for breast cancer and to determine how women perceive the effects of these symptoms on their quality of life comparing to age-matched healthy female volunteers.

Materials & Methods

Subjects

From July 2004 to March 2005, a cross-sectional

study was performed among samples of breast cancer survivors in Breast Clinic, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand. One hundred women who had received treatment for breast cancer within the last 5 years were recruited in this study. One group for comparison was conducted on healthy women of the same age who had not received hormone therapy during the last 6 months. This research project was reviewed and approved by the research ethics committee at Ramathibodi Hospital, Mahidol University in 1998. All participants gave written informed consent before the study was conducted.

Evaluation of menopausal symptoms and assessment of quality of life

Participants' menopausal symptoms were measured by using the Menopause Rating Scale (MRS)⁽¹¹⁾ that was formally standardized according to psychometric rules. MRS consists of 11 symptoms. To assess severity, the symptoms were measured in 5 levels ranging from no symptoms (0), mild (1), moderate (2), marked (3) and severe (4).

The menopause-specific quality of life questionnaire (MENQOL), a self-administered questionnaire⁽¹²⁾, was used to evaluate participants' quality of life. The Thai-version of this questionnaire was validated previously. Participants were asked to indicate whether they had experienced any menopausal symptoms within the past month and, if so, to rate how bothersome it was on a seven-point scale. This 29-question questionnaire contains four domains as follows: (i) vasomotor (ii) psychosocial (iii) physical and (iv) sexual.

Statistical analysis

Demographic data, stage of breast cancer, tamoxifen use, menopausal symptoms, and score of quality of life were analysed by using Chi-Square test and Mann-Whitney U test. $P < 0.05$ was considered as a level of significance.



Results

The main characteristics of all 192 participants are shown in Table 1. A total of 97 breast cancer survivors and 95 age-matched healthy women completed the questionnaire. They had a diagnosis of breast cancer from clinical stage I-IV and had completed therapy. The mean age were 52.41 ± 8.75 years (range; 29-72 years) and 52.53 ± 8.92 years (range; 29-72 years) for breast cancer survivors and age-matched healthy women, respectively ($P > 0.05$). The mean menopausal time were 6.85 ± 5.64 and 9.77 ± 8.32 years, respectively ($P > 0.05$). Most of them were married and being postmenopausal. Among the breast cancer survivors, percentage distribution according to tumor stage was: stage I (26.4%), stage II (57.1%), and stage III (16.5%).

The prevalence and severity of menopausal symptoms are shown in Table 2. Almost all women reported at least one symptom related to menopausal symptoms. Vasomotor symptom was experienced in 54.5% of the study group and 45.5% of the control group ($P > 0.05$). The 5 most common symptoms among breast cancer survivors were joint and muscular dis-

comfort, irritability, sleep problems, bladder problems, and anxiety. No significant difference was found regarding the prevalence of all symptoms except depressive mood. Breast cancer survivors had significantly experienced feeling down, sad, on the verge of tear, lack of drive, or mood swing more frequently compared to the control group. Differences between both groups were observed regarding the severity of sleep problems (mean score 2.27 ± 0.94 for the study group and 1.93 ± 0.80 for the control group) and physical and mental exhaustion (mean score 2.04 ± 0.80 for the study group and 1.73 ± 0.80 for the control group) ($P < 0.05$).

The menopause-specific quality of life (MENQOL) scores are shown in Table 3. Comparing to the control group, the median scores of vasomotor domain, including hot flushes, night sweats and sweating was higher in the study group ($P < 0.05$).

Age, marital status, stage of breast cancer, and current treatment with tamoxifen did not influence the menopause-specific quality of life in vasomotor, psychological, physical, and sexual domains ($P > 0.05$). The scores in four domains of MENQOL at different

Table 1 Demographic characteristics of women in number and percent

Characteristics	Breast cancer survivors (N = 97) No (%)	Healthy women (N = 95) No (%)	P value
Marital status			0.22
- single	24 (24.7)	18 (19.1)	
- married	61 (62.9)	56 (59.6)	
- divorced/widowed	12 (12.4)	20 (21.3)	
Occupational status			0.00
- government officer	27 (27.8)	50 (59.5)	
- Employee	19 (19.5)	16 (19.0)	
- Housewives	43 (44.3)	4 (4.8)	
- Others	8 (8.2)	1 (16.7)	
Menopausal status			0.011
- premenopause	11 (11.3)	20 (21.7)	
- perimenopause	15 (15.5)	24 (26.1)	
- postmenopause	71 (73.2)	48 (52.2)	

Table 2 Menopause Rating Scale in both groups

Symptoms	Breast cancer survivors (n=97)		Healthy women (n= 95)		P value
	%	Mean \pm SD	%	Mean \pm SD	
Hot flushes, sweating	54.5	2.10 \pm 0.89	45.5	1.96 \pm 0.83	0.358
Heart discomfort	56.3	1.76 \pm 0.69	63.4	1.71 \pm 0.67	0.699
Sleep problems	69.8	2.27 \pm 0.94*	63.2	1.93 \pm 0.80*	0.036
Joint and muscular discomfort	80.4	2.21 \pm 0.87	81.7	2.21 \pm 0.88	0.926
Depressive mood	56.8	1.89 \pm 0.83	42.6*	1.97 \pm 0.86	0.625
Irritability	71.1	2.14 \pm 0.91	67.4	1.94 \pm 0.77	0.170
Anxiety	61.1	1.91 \pm 0.77	53.2	1.78 \pm 0.73	0.335
Physical and mental exhaustion	58.3	2.04 \pm 0.80*	62.1	1.73 \pm 0.80*	0.023
Sexual problems	55.1	2.67 \pm 1.16	62.2	2.57 \pm 1.23	0.679
Bladder problems	63.0	2.41 \pm 0.89	55.9	2.08 \pm 1.00	0.075
Dryness of vagina	41.6	2.76 \pm 1.11	50.6	2.73 \pm 1.26	0.775

* Statistically significant difference between breast cancer survivors and healthy women (P<0.05)

Table 3 Menopause-specific quality-of-life questionnaire (MENQOL)

Domains	Breast cancer survivors (n=97)		Healthy women (n=95)		P value
	Median	(P ₂₅ - P ₇₅)	Median	(P ₂₅ - P ₇₅)	
Vasomotor	3.0	(1.0 - 7.0)	1.0	(0.0 - 5.0)*	0.004
Psychosocial	6.0	(2.0 - 14.0)	4.0	(1.0 - 10.0)	0.051
Physical	20.5	(11.8 - 39.0)	17.0	(11.0 - 30.5)	0.286
Sexual	3.0	(0.0 - 9.5)	3.0	(1.0 - 10.0)	0.428

* Statistically significant difference between breast cancer survivors and healthy women (P<0.05)

Table 4 Effect of menopausal status on quality of life (median)

Menopausal status	Quality of life (domain)				P value
	Vasomotor	Psychosocial	Physical	Sexual	
Premenopause	1.0	5.0	17.5	0.5	
Perimenopause	3.0*	6.0	18.0	1.5	0.026
Postmenopause	5.0*	6.0	21.0	3.0	0.038

* Statistically significant difference from premenopause (P<0.05)



menopausal status are shown in Table 4. The results showed that menopausal status was significantly associated with higher scores of vasomotor domain ($P < 0.05$).

Discussion

The results from this cross-sectional study showed that menopausal-related symptoms were common in breast cancer survivors and associated with menopausal status that were similar to previous studies^(3,6). According to the previous studies and this study, almost all menopausal symptoms both in breast cancer survivors and the age-matched healthy menopausal women were similar and quality of life seemed to be impaired in both groups^(13,14). The causal relationship between menopausal symptoms, quality of life and health effects of cancer treatment in breast cancer survivors is complicated and cannot be determined with this research. However, it is important for health care providers not to only focus on the curable outcome, but also on quality of life of breast cancer patients.

It has generally been known that cancer patients are often distressed by psychological disturbances even if they are free of cancer and no longer under treatment. They are often plagued by fear of cancer recurrence, by a feeling of uncertainty about their future, by depression, and by fear of being abandoned by family and friends⁽¹⁵⁾. This study confirmed that more than half of breast cancer survivors experience depressive symptoms and it is significantly higher in comparison to the age-matched healthy menopausal women without breast cancer. Although a cross-sectional study of menopausal symptoms in women aged 45 to 65 years with and without breast cancer in Brazil found that the prevalence of depression is similar between the groups⁽¹⁴⁾. A possible explanation for this difference is related to cultural and racial influences, which may affect the experience and perception of mood and another menopausal

symptoms⁽¹⁰⁾.

In general, the occurrence of hot flushes is concordant with hormonal changes at the time of menopause. The prevalence of flushing is usually highest in late perimenopausal and postmenopausal women⁽¹⁶⁾. The results from this study showed that the percentage of postmenopausal group including natural and chemotherapy induced menopause among breast cancer survivors was higher than in the age-matched healthy women. From this study and previous study⁽⁶⁾, perimenopausal and postmenopausal breast cancer survivors had higher chance of having hot flushes, night sweats and sweating, compared with premenopausal group. Therefore, vasomotor domain quality of life was significantly affected by menopausal status and breast cancer. Therefore, it might be postulated that breast cancer survivors who experienced a menopausal transition in relation to breast cancer therapy would be more likely to suffer from vasomotor symptoms than those who did not experience such a transition. Consequently, breast cancer survivors with severe hot flushes reported significant greater mood disturbance; higher negative affect; and more interference with daily activities, including sleep, concentration, and sexuality⁽⁹⁾.

The importance of counseling breast cancer patients regarding menopausal symptoms should not be overlooked. Furthermore, general approaches to improve overall health including balanced diet, exercise, limiting alcohol consumption, and religious belief, should also be promoted as an adjunctive method to improve quality of life in breast cancer survivors.

Conclusion

All breast cancer survivors had experienced menopausal symptoms which negatively correlated with their quality of life. Depressive mood is more common in breast cancer survivors. Vasomotor domain of the menopause-specific quality of life (MENQOL) seemed to be affected by therapy induced menopausal

status in breast cancer survivors. This study highlights the need for health care providers to be aware of potential symptoms in breast cancer survivors and the possible impact that adjuvant cancer therapy could have on their quality of life in particular menopause-

related symptoms.

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อาการบอวยัหมดประจำเดือนใน ผู้ป่วยมะเร็งเต้านมภายหลังได้รับการรักษา

จิตติมา มโนชัย¹, อภิชาติ จิตต์เจริญ¹, เยาวบุษ คงคำ², อุมาพร อุดมกรัพยากุล³, อรุษา เทพพิสัย¹

¹ภาควิชาสูติศาสตร์-นรีเวชวิทยา, ²ภาควิชาศัลยศาสตร์, ³สำนักงานวิจัย
คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล กรุงเทพฯ

บทคัดย่อ

วัตถุประสงค์: เพื่อศึกษาความชุกของอาการของวัยหมดประจำเดือนและผลกระทบต่อคุณภาพชีวิตในผู้ป่วยมะเร็งเต้านมภายหลังได้รับการรักษาโดยเปรียบเทียบกับอาสาสมัครสตรีอายุใกล้เคียงกันที่มีสุขภาพแข็งแรง

วัสดุและวิธีการ: เป็นการศึกษาแบบภาคตัดขวาง ตั้งแต่เดือนกรกฎาคม พ.ศ. 2547 ถึงเดือนมีนาคม พ.ศ. 2548 ในผู้ป่วยมะเร็งเต้านมภายหลังได้รับการรักษาที่คลินิกเต้านม คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี และในสตรีอายุใกล้เคียงกันที่มีสุขภาพแข็งแรง ประเมินอาการของวัยหมดประจำเดือนโดยใช้ Menopause Rating Scale และประเมินผลกระทบต่อคุณภาพชีวิตโดยใช้ menopause-specific quality of life questionnaire

ผลการศึกษา: ในจำนวนผู้ป่วยมะเร็งเต้านมจำนวน 97 รายและสตรีที่มีสุขภาพแข็งแรงจำนวน 95 รายที่ตอบแบบสอบถามพบว่าสตรีกลุ่มศึกษามีอาการซึมเศร้าบ่อยกว่าสตรีกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ เมื่อเปรียบเทียบมาตรฐานของคะแนนคุณภาพชีวิตของสตรีทั้งสองกลุ่มพบว่าผลกระทบต่อคุณภาพชีวิตด้านที่เกี่ยวข้องกับระบบประสาทอัตโนมัติมีค่าสูงในกลุ่มผู้ป่วยมะเร็งเต้านม

สรุป: ผู้ป่วยมะเร็งเต้านมภายหลังได้รับการรักษาทุกรายมีอาการของวัยหมดประจำเดือนและมีผลกระทบในทางลบต่อคุณภาพชีวิต รวมทั้งมีอาการซึมเศร้าบ่อยกว่าสตรีอายุใกล้เคียงกันที่มีสุขภาพแข็งแรงและไม่ได้เป็นมะเร็งเต้านม