Effects of Breast Self-examination (BSE) Program for Detection Early Stage of Breast Cancer

Sasichol Kamproh MSc*,
Somjade Fungpong MD **

** Research and Development Unit, Queen Sirikit National Institute of child Health, Bangkok*
*** Department of General Surgery, Singburi Hospital, Singburi*

Background: *Breast cancer is the most common site-specific cancer in women and is the leading cause of death from cancer disease, patients were needed to diagnose at an early stage of disease for better prognosis.*
Objective: *To determine the effects of breast self-examination (BSE) training program of Provincial Public Health Office in Singburi.*
Material and Method: *After the BSE program in Singburi Province was started in July 2005, the female breast cancer patients at Singburi Hospital during the period of two and a half years after BSE training program were recruited into the study. All samples completed questionnaires and thorough physical examination. The questionnaires included sociodemographic data, history of village health volunteer consultation about breast self-examination and the practice themselves of breast self-examination. The data from medical records, including the staging of the disease were collected. The data of female breast cancer patients at the same hospital during the period of two and a half years before the implement of BSE program were used to compare the results.*
Results: *There were 43 patients of female breast cancer before and 39 patients after BSE training program recruited into the study. The demographics data in both groups were not difference. The majorities of patients were wageworker, low family income, married and had only elementary education level. There was no previous history of BSE practice in both groups before the BSE training program started. Before BSE training program, the early stage of female breast cancer disease was diagnosed in 81.4% but after BSE training program, it was increasing to 89.7%. Almost patients found their breast masses by themselves. There were 2 patients whom their breast mass were found by village health volunteers consultation and 10 patients detected their breast mass by themselves after received information about breast self-examination from primary health care providers.*
Conclusions: *The proportion of early stage female breast cancer disease in this study was increasingly after BSE training program. This program may help to promote the detection of early stage of female breast cancer. The further evaluation of this program is needed.*

Keywords: *Breast cancer, Breast self-examination*

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Breast cancer is the most common in the female worldwide, with 1,151,298 new cases identified throughout the world each year and age-standardized incidence rate 37.4 per 100,000 women population[1]. It accounts for 33% of all female cancers and is responsible for 20% of the cancer related deaths in women[2]. The incidence rate of breast cancer began to raise by the age above 30 years old[3]. In Thailand breast cancer is a major health problem among Thai women. During the year 1995-1997, female breast cancer was the second most common after cervical cancer. The estimate incidence rate is 17.2 per 100,000 population[4], and 14.7% of new cancer patients have breast cancer[5].

Although breast cancer can be cured and patients had high survival rate if it is detected at an

Correspondence to : Kamproh S, Research and Development Unit, Queen Sirikit National Institute of child Health, Bangkok 10400, Thailand.

early stage, unfortunately many of the patients presented with advance stage of the disease. The prognosis of the patients related to the staging of the disease at the presentation. The 5-year survival rate of female breast cancer is 94% for stage I, 85% for stage IIa and 70% for stage IIb. While the advanced stage breast cancer, the 5-year survival rate is 52% for stage IIIa, 48% for stage IIIb, and 18% for stage IV patients[6].

A commonly used staging system is the TNM (Tumor, Nodes and Metastasis) system. For breast cancer disease, the TNM system was modified by the American Joint Committee on Cancer[7]. The American Cancer Society (ACS)[8] recommended three methods for breast cancer screening: mammogram, clinical breast examination, and breast self-examination. Although mammography is the most sensitive screening method but so far still have a problem of the accessibility for Thai people, most breast masses have been discovered by women themselves[9]. Although effectiveness of breast self-examination limited by skill[10], but breast self-examination (BSE) unlike the other methods, it is free, relatively easy, simple, painless, non invasive, self-care action, and can be performed privately. For these reasons breast self-examination practice could be such a practical method for all women to early detection of breast cancer and may decrease the number of women those are diagnosed the advanced stage of the disease [11]. Several investigators showed that self-examiners could detected smaller primary tumors, earlier clinical staging or fewer axillary nodes metastasis compared to non-examiners[12,13]. Although breast self-examination has been widely promoted but the publication of the randomized controlled trials in Shanghai[14] and Russia[15] showed no reduction in mortality or changed the staging of breast cancer at the diagnosis.

Singburi Province is a small province of Thailand which had 63,646 families, with a population of 227,608. Fifty one percent (117,507) of the people were females and about twelve percent of the female (14,012) were older than 30 years[16]. Since June 2005, the Provincial Public Health Office of Singburi Province started breast self-examination training program for village health volunteers. The training program composed of lectured by the physician, breast self-examination movie, demonstration of breast self-examination with synthetic breast and live demonstration by nurse and practice of breast self-examination by village health volunteers. Since that time, the authors interested in any changing of the prevalence of the early stage breast cancer disease of the patients in Singburi province.

Material and Method

The breast cancer patients who were first diagnosed during the two and a half year period from July 2005 to December 2007, post breast self-examination program were enrolled in the study. All patients had pathological confirmed diagnosis and lived in Singburi Province. They completed questionnaires, history of the knowledge information, practice of breast self-examination and thorough physical examination. The medical record of female breast cancer patients who visited at Singburi Hospital from January 2003 to June 2005 for the same period of times (30 months) before breast self-examination training program were studied to compare the data, including the staging of disease at the first diagnosis.

Results

From July 2005 to December 2007, there were 39 female patients who lived in the province and were diagnosed of breast cancer, with pathological confirmed at Singburi Hospital. These patients were diagnosed after the implement of BSE training program. Another group of 43 female breast cancer patients who were diagnosed before BSE training program during January 2003 to June 2005 were studied as a comparison group. The authors founded that the most common age group of female breast cancer disease at Singburi Hospital was 40-60 years old both before and after BSE program.

Table 1. Number of the female breast cancer patients at difference age and stage of the disease at the presentation before and after BSE

	Before BSE program (n = 43) (%)	After BSE program (n = 39) (%)	p-value
Age (yr)			
31-40	6 (14)	2 (5.1)	
41-50	13 (30.2)	10 (25.6)	
51-60	12 (27.9)	16 (41)	
61-70	7 (16.3)	7 (17.9)	
71-80	3 (7)	4 (10.3)	
> 80	2 (4.7)	0	
Stage of disease (%)			
Early stage (I, IIa, IIb)	35 (81.4)	35 (89.7)	0.474
Late stage (IIa, IIIb, IVa)	8 (18.6)	4 (10.3)	

When divided breast cancer patients according to early invasive breast cancer stage (stage I, IIa IIb) and advance breast cancer stage (stage IIIa, IIIb and IV), the percentage number of early invasive stage breast cancer disease were increasing after BSE training program from 81.4% to 89.7% but not significantly($p = 0.474$) (Table 1).

The demographic characteristics of the patient who presented at early stage and late stage in those patients after BSE training program are shown in Table 2. There was no difference in mean age, occupational, family income, educational level and marriage status between the patients who presented early or late stage of the disease. There were 10 in 39 patients who had knowledge about BSE and no difference in those groups who presented early stage (25.7%) and late stage (25%). There were only 4 in 39 patients who had history of frequent BSE and no difference in those groups who presented early (8.6%) and late stage (25%). Thirty six of thirty-nine patients detected mass by their own-selves. The others three patients, whom their mass were detected by public health village volunteer, which were presented in the early stage.

Table 2. Demographic characteristics of the patients presented at the early stage and late stage in those patients after BSE training program

	Early stage (n = 35)	Late stage (n = 4)
Age		
Mean (SD)	54.28 (10.40)	55.50 (7.59)
Median (min-max)	53 (33-75)	57.5 (45-62)
Occupation		
Wageworker (%)	10 (28.6)	1 (25)
Housewife (%)	11 (31.4)	1 (25)
Merchant (%)	5 (14.3)	1 (25)
Farmer (%)	5 (14.3)	1 (25)
Government office (%)	4 (11.4)	1 (25)
Family income (per month)		
< 4,680 baht	22 (62.9)	3 (75)
> 4,680 baht	13 (37.1)	1 (25)
Education level		
No education (%)	5 (14.3)	0
Primary (%)	21 (60)	3 (75)
High school (%)	7 (20)	0
Higher (%)	2 (5.7)	1 (25)
Marital status		
Single (%)	8 (22.9)	0
Married (%)	23 (65.7)	2 (50)
Widowed, separated or divorced	4 (11.4)	2 (50)
Knowledge of BSE		
Yes (%)	9 (25.7)	1 (25)
History of frequent BSE		
Yes (%)	3 (8.6)	1 (25)
Mass detected		
Own-self	32 (91.4)	4 (100)
Public health village volunteer	3 (8.6)	0
Stage of disease (%)		
Stage 1 (%)	6 (17.1)	0
Stage 2 (%)	29 (82.9)	0
Stage 3 (%)	0	3 (75)
Stage 4 (%)	0	1 (25)

Discussion

From this study, after BSE training program from one of the province in the rural area showed that there were more cases presented in early stage after the implement of this program. Although the number of increasing was not significantly the long term data may help to prove a better result. This data showed that 3 patients cases were detected breast mass in early stage by public health village volunteer, resulted from BSE training program. Anyway there were small number of the patients who knew and practice BSE, it meaned that this program needs more often to stimulate the public health village volunteer to teach people in the village to know and practice their BSE. Regarding to the knowledge of BSE, there can be provided by the others public channels such as radio, television, VCD, but the experience of BSE of the people needs consultation or teach by the public health village volunteer.

Conclusion

The proportion of early stage of breast cancer disease was increasing during the last two and a half years period, but not significantly compare to before BSE training program. This may be the result from the implement of breast self-examination training program obtained. Anyway there are some other factors involved. BSE training program should be promoted for breast cancer awareness and screening because of a low cost, low risk method and easily performed at home by their own. It is probably suitable for the rural area in Thailand. The further study to evaluate BSE training program is needed.

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ผลของการอบรมการตรวจเต้านมด้วยตนเองเพื่อค้นหาโรคมะเร็งเต้านมระยะแรก

ศศิชล คำเพราะ, สมเจตน์ ฟุ้งพงษ์

ภูมิหลัง: *โรคมะเร็งเต้านมเป็นโรคมะเร็งที่พบได้บ่อยมากในผู้ป่วยเพศหญิง และเป็นสาเหตุการตายอันดับต้น ๆ ของผู้ป่วยโรคมะเร็ง เพื่อให้มีการพยากรณ์โรคที่ดีผู้ป่วยจำเป็นต้องได้รับการวินิจฉัยตั้งแต่ระยะแรกของโรค*

วัตถุประสงค์: *เพื่อศึกษาผลของการอบรมการตรวจเต้านมด้วยตนเองเพื่อค้นหาโรคมะเร็งเต้านมระยะแรกของสำนักงานสาธารณสุข จังหวัดสิงห์บุรี แก่อาสาสมัครสาธารณสุขประจำหมู่บ้าน (อ.ส.ม.) จำนวน 108 คน โดยโครงการประกอบด้วยการบรรยายความรู้เรื่องมะเร็งเต้านม, การสาธิตและฝึกตรวจเต้านม เมื่อเดือน กรกฎาคม 2548*

วัสดุและวิธีการ: *เป็นการศึกษาในผู้ป่วยโรคมะเร็งเต้านมในช่วงเวลา 2 ปีครึ่ง ก่อนและหลังโครงการฝึกตรวจเต้านมด้วยตนเองของสำนักงานสาธารณสุขจังหวัดสิงห์บุรี โดยศึกษาถึงระยะของโรคมะเร็งเต้านมที่เป็นอยู่เมื่อได้รับการวินิจฉัยครั้งแรก และประวัติการตรวจเต้านมด้วยตนเอง การได้รับการสอนตรวจเต้านมด้วยตนเองจากอาสาสมัครสาธารณสุขประจำหมู่บ้าน หรือจากสื่ออื่น ๆ รวมทั้งข้อมูลเบื้องต้นของผู้ป่วย*

ผลการศึกษา: *ก่อนเริ่มโครงการอบรมฝึกตรวจเต้านมด้วยตนเองมีผู้ป่วยมะเร็งเต้านม 43 ราย ขณะที่ได้รับการวินิจฉัยพบว่าเป็นมะเร็งเต้านมระยะแรก 35 ราย (81.4%) เปรียบเทียบกับช่วงเวลา 2 ปีครึ่งภายหลังโครงการฝึกตรวจเต้านมด้วยตนเองมีผู้ป่วย 39 ราย พบว่าเป็นโรคมะเร็งเต้านมระยะแรก 35 ราย (89.7%) ส่วนใหญ่มีอายุอยู่ในช่วง 41-60 ปี จำนวน 26 ราย (66.67%) มีสถานภาพแต่งงานแล้ว 25 ราย (64.10%) มีระดับการศึกษาภาคบังคับ 24 ราย (61.54%) มีอาชีพรับจ้าง 13 ราย (33.33%) และเป็นแม่บ้าน 11 ราย (28.21%) และมีรายได้น้อยกว่าค่าแรงขั้นต่ำ 25 ราย (64.10%)*

สรุป: *ในช่วงเวลา 2 ปี ครึ่ง ภายหลังโครงการฝึกตรวจเต้านมด้วยตนเอง พบว่าความชุกของโรคมะเร็งเต้านมในระยะแรกเพิ่มขึ้นแต่ไม่มีนัยสำคัญทางสถิติ ซึ่งน่าจะเป็นผลมาจากฝึกตรวจเต้านมด้วยตนเอง แต่อาจมีปัจจัยอื่นที่มีผลร่วมด้วย อย่างไรก็ตามการตรวจเต้านมด้วยตนเองก็ควรจะได้รับการสนับสนุนให้ดำเนินการต่อไปเนื่องจากเป็นวิธีที่ลงทุนต่ำ มีความเสี่ยงน้อย และง่ายต่อการปฏิบัติด้วยตนเองที่บ้าน ซึ่งอาจจะเหมาะสมสำหรับประชากรในส่วนภูมิภาคของประเทศไทย จากการศึกษาในหลายๆแห่ง พบว่าการตรวจมะเร็งเต้านมด้วยตนเองมีส่วนช่วยทำให้สามารถตรวจพบมะเร็งเต้านมในระยะแรกได้ จึงควรส่งเสริมการตรวจเต้านมด้วยตนเอง โดยผ่านสื่อแบบอื่น ๆ เช่น โทรทัศน์ วิทยุชุมชน ฯลฯ เพื่อให้มีการตรวจมะเร็งเต้านมด้วยตนเองมากขึ้น และควรมีการศึกษาเพื่อประเมินผลโครงการฝึกตรวจเต้านมด้วยตนเองต่อไป*