The Prevalence and Related Factors of Complementary and Alternative Medicine Used in Thai Breast Cancer Patients

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Objective: *This study's aim is to identify the prevalence and types of complementary and alternative medicine (CAM) used among Thai breast cancer patients and investigate the factors influencing the use of CAM by these patients.*
Material and Method: *We interviewed 220 Thai breast cancer patients who visited the HRH Princess Maha Chakri Sirindhorn Medical Center and the Maha Vajiralongkorn Cancer Center during the period from October 2008 to September 2010 and collected data about their socio-economic status, history of cancer treatments and complications, the cancer staging, their Quality of life (QoL) and types and reasons of CAM used.*
Results: *The prevalence of CAM usage in Thai breast cancer patients was 560 in every 1,000 patients. Factors which influenced CAM usage were; the patients' educational level, amount of income per month, the duration of the individuals' breast cancer diagnoses, menopausal status, the type of axillary surgery used in the course of their treatment, the incidences of systemic recurrence and physical components as measured by the SF-36.*
Conclusion: *The results have shown that most Thai breast cancer patients used CAM for the treatment of their breast cancer and had used CAM after being diagnosed with breast cancer. Healthcare providers should recognize and provide pros and cons to patients and their family if CAM were used during breast cancer treatment.*

Keywords: *Complementary and alternative medicine (CAM), Breast cancer, Prevalence*

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The incidence of breast cancer has been increasing worldwide. In Thailand, breast cancer has become the most common type of cancer diagnosed in women. A nationwide study found that the age-standardized incidence rate (ASR) of breast cancer in Thai women increased from 20.9 in 2001[1] to 26.4 per 100,000 in 2008, a number which has been on the rising phase during the past ten years[2]. WHO gave the definition of Complementary and Alternative Medicine (CAM) as " The term CAM often refer to a broad set of healthcare practices that are not part of a country's own tradition and are not integrated into the dominant healthcare system. Other there sometimes used to describe these healthcare practices include "nature medicine", "non-conventional medicine" and "holistic medicine"[3] While receiving conventional treatments, breast cancer patients are also using Complementary and Alternative Medicine (CAM) as is shown in Ernst E, et al[4], with results from 13 countries, has shown the use of CAM therapies among cancer patients range from 7-64%. National Health Interview Survey (NHIS)[5] has also shown that 38% of American adults use CAM. The conference on Traditional Medicine in ASEAN Countries reported that the wide use of traditional medicine in hospitals all over Thailand ranges from 68-83%. Money spent on CAM increased from 10.8 million USD in 1997 to 16.7 million USD in 1999. CAM was widely studied and used in conjunction with modern medicine in the treatment of chronic diseases, especially cancer. In breast cancer treatment, many types of CAM were accepted as alternative treatments. Acupuncture was used for pain relief[6], control of postmenopausal symptoms[7] and relief of post-chemotherapy nausea[8]. Pommier P, et al[9] reported a lower occurrence rate of acute dermatitis as a result of radiation therapy in breast cancer patients receiving the homeopathic remedy, calendula ointment, as compared to similar results of conventional

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treatments. Many studies[10-12] also report on the use of hypnosis, music therapy and reflexology in breast cancer patients with the aim of controlling pain, reducing nausea, vomiting, and reducing postmenopausal symptoms. Massage therapy[13] has proven to be effective in reducing lymph edema in breast cancer patients. Although herbs, vitamins, and food supplements are the most common types of CAM in use, the pros and cons have not been thoroughly studied. Many ingredients used in conventional medicine originated from herbs; for example Aspirin; which is derived from white willow, morphine from the opium poppy and Capsaicin from cayenne. One complication is that some substances have been reported to have interactions with the metabolism of certain drugs[14-16]. Astin JA[17] proposed some of the reasons for the use of CAM. These include the experiences of chronic health problems, consistencies with their beliefs and the unsatisfaction with conventional treatments.

Although breast cancer treatment outcomes in Thailand are not far different from the international standards in terms of recurrence and survival rates, the numbers of Thai breast cancer patients taking advantage of the use of CAM has risen. With the aim of developing multi-disciplinary treatments and to improve the quality of life for Thai breast cancer patients, this study intends to identify the prevalence and types of complementary and alternative medicines (CAM) used among Thai breast cancer patients and will investigate the reasons and factors associated with CAM users.

Material and Method

In the period from October 2008 to September 2010, we recruited 220 breast cancer patients who had been diagnosed within 10 years, who have completed their course of chemotherapy and/or radiation treatments, and whose ages varied from 27 to 80 years. We excluded patients previously diagnosed with mental and psychological disorders, and those who had had a Karnofsky Performance Scale of less than 80%.

After obtaining ethical approval from the Institutional Review Board of the Faculty of Medicine, Srinakharinwirot University and Maha Vajiralongkorn Cancer Center, eligible breast cancer patients who were attending these out-patient clinics during their routine follow-up were invited, consecutively, to participate in this study. All participants were given detailed research objectives before obtaining informed consent and then, were interviewed by trained interviewers. Demographic data and breast cancer treatment history were collected from medical records and interviewed. The interview was performed at day of clinic attendance. Thai version of SF-36 (2^{nd} version)[18] were used to evaluate quality of life. CAM user were interviewed about type, duration, cost, satisfaction, reasons and related factors for using CAM. Data were analyzed by SPSS statistics for Windows. The prevalence of CAM usage was calculated, and respondents were categorized as CAM users or non-CAM users. Patients' demographic data were reported in the two groups according to CAM users and non-CAM users. The relationship of CAM usage to other independent variables was examined by the Chi-square test and t-test for parametric data and Wilcoxon-sign rank test and Mann-Whitney test for nonparametric data.

Results

The prevalence of CAM usage in Thai breast cancer patients was 123 of 220 participants (560 per 1,000 Thai breast cancer patients (95% CI = 50-62%)). Most of participants are Buddhist and the average age was 50 years, ranged from 27 to 80 years. Forty-eight percent of the participants attended primary school and 67 percent had an income of less than 10,000 Baht per month. Sixty-seven percent of the participants had regular jobs and 32.7% were housewives. The mean duration after diagnosis of their breast cancer was 24 months, varied from 1 to 106 months. Most of the participants had been diagnosed as early breast cancer. Eighty-nine percent of the participants had undergone a mastectomy while 11% had lumpectomies in an effort as classified as breast conserving therapy. Ninety-one percent of patients received chemotherapy, 62.7% underwent radiation, and 62.3% received hormonal treatments. Characteristics of study participants were similar to previous data recorded from breast cancer patients in Thailand[2].

The data categorized according to CAM and Non-CAM user were summarized in Table 1. The CAM users had higher education and more income than non-CAM group. However, CAM user had lower score of Physical component in SF-36 comparing to non CAM; 74.8 and 80.8 respectively. While age, cancer staging, the type of breast surgery performed and other treatment modalities were not different between two group.

Breast cancer patients frequently used CAM after and between treatments while only 16% of the patients used CAM before being diagnosed with breast cancer. Eighty two percent of CAM users received

Table 1. Demographic and clinical characteristics of participants

Variable	CAM users (123)		Non-CAM users (97)		*p*-value
	n	%	n	%	
Age (Mean (SD))	51.4 (9.96)		50.2 (11.33)		0.400
Duration after diagnosis					
≤60 months	114	92.7	96	99.0	0.026
>60 months	9	7.3	1	1	
Education					
College or lower	87	70.7	85	87.6	0.006
Bachelor or higher	34	27.6	10	10.3	
Other	2	1.6	2	2.1	
Income					
<10,000 Bath	74	60.2	73	75.3	0.027
≥10,000 Bath	49	39.8	24	24.7	
Menopausal status					
Premenopause	6	5.3	16	17.8	0.013
Peri-menopause	17	14.9	9	10.0	
Menopause	91	79.8	65	72.2	
Surgery (breast)					
Mastectomy	106	86.2	90	92.8	0.180
BCT	17	13.8	7	7.2	
Axillary surgery					
Sentinel LN biopsy	21	17.4	1	1.0	<0.0001
AXLD	100	82.6	96	99.0	
Chemotherapy	112	91.1	88	90.7	0.930
Radiation	76	61.8	62	63.9	0.750
Hormonal treatment	72	58.5	65	67.9	0.190
Breast cancer staging					
Early	87	70.7	61	62.9	0.270
Advanced	36	29.3	36	37.1	
Local recurrence	5	4.1	1	1.0	0.340
Systemic recurrence	1	0.8	6	6.2	0.024
Treatment related complication	46	37.4	38	39.2	0.890
SF-36 Mean (SD)					
Physical component	74.8 (14.2)		80.8 (15.4)		0.003
Mental component	78.2 (12.9)		81.4 (13.6)		0.080

CAM information from friends and family members and 56% received their information from the Media. Thai herbs are the most common CAM used in Thai breast cancer patients which account for 66.7% of the patients (Fig. 1). Thirty-three percent of patients; 41 in 123 participants, using CAM to treat their breast cancer directly and others used CAM for enhancement of their immune system (23%), while 9% use for controlling their cancer (Fig. 2). Seventy percent of CAM users did not inform their health professional about their use of CAM because they thought it is unnecessary. Eighty percent of CAM users were satisfied with the use of CAM and 67% stated they will introduce the use of CAM to others (Table 2).

Discussion

The authors reported the prevalence of CAM users in patients at 560 per 1,000 breast cancer patients here in Thailand which is relatively high when compared to America (380 per 1,000)[19] and in Denmark (401 per 1,000)[20]. In recent years, Thai herbs have been widely supported and recognized as an alternative or an additional treatment for chronic diseases and cancer; this may result in a higher prevalence of CAM users

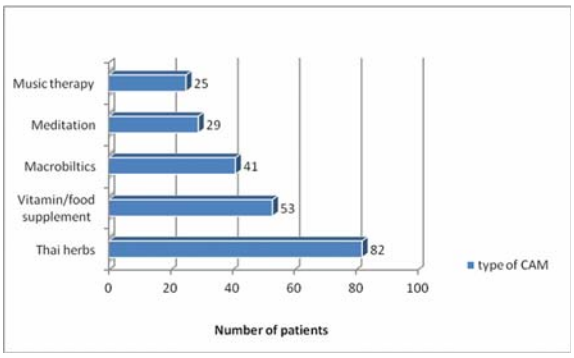

Fig. 1 Categories of CAM use*.
* One patient can choose more than one answer

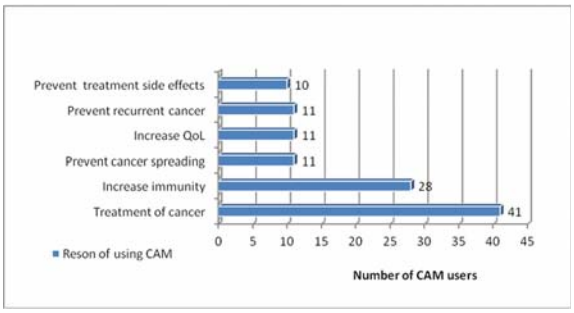

Fig. 2 Reasons of CAM use*.
* One patient can choose more than one answer

among Thai. Mean age of patients using CAM and the patients labeled as non-CAM users in Thai with breast cancer is similar, 50 years of age. Previous studies[20-22] reported that younger patients tend to use CAM more often than older patients. The results also showed that Thai CAM users had a lower income and a higher educational level which was different from earlier studies stating that CAM users had a higher income and a higher level of education[23,24]. The different culture and norms of our participants may cause different results from others. Moreover, the study found a correlation between axillary lymph node dissection and the physical components reported from the results of their SF-36 with CAM usage. History of lymph node dissection and a lower score in the physical component may presume higher cancer staging and a higher morbidity resulting from axillary surgery. The study could not define the correlation of CAM usage with complications from breast cancer treatments and cancer staging. This result was similar to previous studies[23].

Thirty-seven percent of Thai breast cancer patients used CAM between breast cancer treatments

Table 2. Use of CAM by breast cancer patients

Variable	CAM users (n = 123)	%
Time of CAM use related to diagnosis of breast cancer		
Before diagnosis	24	19.5
During treatment	45	36.6
After treatment	54	43.9
Consult with medical personals		
Yes	36	29.3
No	86	69.9
Not answer	1	0.8
Source of CAM (more than 1 answer)		
Friends or family members	101	82.1
Medias	56	45.5
Patients own experiences	19	15.4
Medical personals	16	13.0
Cost of CAM therapy (per treatment course)		
0-5,000 Bath	104	84.5
5,000-10,000 Bath	7	5.7
>10,000 Bath	12	9.8
Satisfaction with CAM		
Very much	30	24.4
Quite a bit	70	56.9
Little	6	4.9
Not at all	2	1.6
No answer	15	12.2
Introduce CAM to others		
Yes	82	66.7
No	21	17.1
Not know	20	16.3

while 44 percent used after completion of their breast cancer treatments. Earlier studies[24,25] also reported that 60-70% of breast cancer patients started CAM therapies after the diagnosis of their cancer. Consistent with previous studies[20,26,27], the reasons for using CAM in Thai were helpful to cure the cancer patients (33.3%) and an effort to improve their immune system's response (22.8%). Thai herbs were the most common CAM used while vitamins and food supplements were the second most common. This may result from their habituation with traditional Thai herbs and their availability. The result was similar to other studies[28,29] indicating that herbs and vitamins were used as part of the CAM regimen in breast cancer patients from their studies. Money spent on CAM is relatively lower when compared to other studies. This result may be from the

types of CAM found in this study.

This study has some limitations that should be considered when interpreting the results. Firstly, our study was cross-sectional so there may be some limitations in the interpretation of the results over time and could not demonstrate trend of CAM usage during breast cancer progression. Second, we enrolled every participant who visited the clinic and every patient who showed an interested in our study, so it may result in selection bias. Future studies should be prospective study and random selection of participants into our studies.

Conclusion

The results suggest that more than half of Thai breast cancer patients use CAM as an adjunct to conventional treatments; this should alert clinicians to routinely question their patients about possible CAM use, and give advice about the possible side effects and interactions when used in conjunction with chemotherapy and radiation. Additionally, more research about the efficacy of Thai herbs and their side effects should be conducted to facilitate the use of CAM as an adjunct to conventional medicine.

What is already known on this topic ?

Although the advanced in cancer treatment increased both survival and quality of life in Thai breast cancer, the patient still seek alternative treatment. CAM was widely used among Thais but the prevalence of CAM user and reason of using in Thai breast cancer patients is unknown

What this study adds ?

The prevalence of CAM users in Thai breast cancer is relatively high comparing to western country and Thai herbs are the most common type. Thirty-three percent used CAM for treatment of breast cancer.

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Potentail conflicts of interest

None.

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ความชุกและปัจจัยที่เกี่ยวข้องของการใช้แพทย์ทางเลือกในสตรีไทยที่ป่วยเป็นมะเร็งเต้านม

ดลฤดี สองทิศ, ปริญญา อัครานุรักษ์กุล, วรรณา ฉายอรุณ

วัตถุประสงค์: เพื่อศึกษาความชุกและชนิดของการใช้แพทย์ทางเลือกในสตรีไทยที่ป่วยเป็นมะเร็งเต้านม และเพื่อศึกษาปัจจัยที่มีผลต่อการเลือกใช้แพทย์ทางเลือก

วัสดุและวิธีการ: เก็บข้อมูลโดยใช้แบบสอบถามในสตรีจำนวน 220 คนที่ได้รับการวินิจฉัยว่าเป็นมะเร็งเต้านม ณ โรงพยาบาลศูนย์การแพทย์สมเด็จพระเทพรัตนราชสุดาฯ สยามบรมราชกุมารี และศูนย์มหาวชิราลงกรณ ธัญบุรี ระหว่าง เดือนตุลาคม พ.ศ. 2551 ถึง เดือนกันยายน พ.ศ. 2553 โดยเก็บข้อมูลส่วนตัว, ประวัติและผลข้างเคียงจากการรักษามะเร็งเต้านม, ระยะของโรค, คุณภาพชีวิตของผู้ป่วย, เหตุผลและปัจจัยที่มีผลต่อของการเลือกการรักษาด้วยแพทย์ทางเลือก

ผลการศึกษา: *ความชุกของการใช้แพทย์ทางเลือกในสตรีไทยที่ป่วยเป็นมะเร็งเต้านมอยู่ที่ 560 ต่อประชากร 1,000 คน พบว่าระดับการศึกษา, รายได้ต่อเดือน, ระเวลาหลังได้รับการวินิจฉัยว่าเป็นมะเร็งเต้านม, ภาวะหมดประจำเดือน, การผ่าตัดเลาะต่อมน้ำเหลืองที่รักแร้, การกลับเป็นซ้ำของมะเร็งเต้านม และ physical component ในการประเมินคุณภาพชีวิตมีผลต่อการเลือกใช้แพทย์ทางเลือกในสตรีไทยที่ป่วยเป็นมะเร็งเต้านม*

สรุป: *ผลการศึกษาพบว่าสตรีไทยที่ป่วยเป็นมะเร็งเต้านมส่วนใหญ่เลือกใช้แพทย์ทางเลือกเพื่อรักษามะเร็งเต้านม โดยเริ่มใช้หลังได้รับการวินิจฉัย บุคลากรทางการแพทย์ควรตระหนักและให้ข้อแนะนำทั้งข้อดีและข้อด้อยของการใช้แพทย์ทางเลือกแก่ผู้ป่วยและครอบครัว ถ้าใช้ระหว่างรับการรักษามะเร็งเต้านม*