

CLINICAL BREAST CANCER SCREENING- A CAMP-BASED STUDY AMONG RURAL WOMEN IN NORTH KERALA

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ABSTRACT

BACKGROUND

Early diagnosis of breast cancer is of extreme significance in improving the survival rates and quality of life. Unfortunately, studies have revealed that a major proportion of women from low-income countries are still not breast aware.

MATERIALS AND METHODS

In this study, Clinical Breast Examination (CBE) was done. In addition, we assessed the knowledge, attitude and practice of Breast Self-Examination (BSE). A cross-sectional study with quantitative method of data collection was conducted in a village in North Kerala. The study population was all women aged 20 years and above and who resided in the village for 6 months and more and they were motivated to attend the camps by community health workers from the same village.

RESULTS

Out of the 319 women who attended the CBE camps, 301 (94%) had heard of breast cancer and 113 (36%) had heard of it from community workers during their survey. Around 63% of the women knew at least one symptom of breast cancer while 73% did not know any risk factor. Only 234 (73%) had heard of BSE. Only 137 (43%) knew the right technique of BSE. Out of the 184 women who did BSE, 124 (67.4%) did it to examine breasts regularly, 5 (2.7%) did it because they had a family history of breast cancer, 52 (28.3%) following classes by community workers, 2 (1.1%) because their friends had breast cancer and 1 (0.5%) following a resected lump. Out of the 135 women who did not practice BSE, 36 (26.7%) did not know the method, 85 (63%) did not think it was important, 10 (7.4%) had no symptoms and 4 (2.9%) were scared of finding a lump. The women with either breast or axillary lumps (3.4%) were referred for mammography.

CONCLUSION

Utilisation of the services of primary healthcare facilities for opportunistic screening and health awareness classes by trained nonmedical community personnel should become main activities in our future policies. They should be trained for providing BSE training to women at their doorstep. This simple approach could reduce the burden of the disease to a significant extent.

KEYWORDS

Breast Self-Examination, Clinical Breast Examination, Community Workers.

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BACKGROUND

Breast cancer is a heterogeneous group of malignant disease with more than one natural history.¹ Breast cancer can affect lobules, ducts and connective tissue and spread via blood and lymph vessels. Symptoms include lump in the breast or axilla, thickening, swelling or change in shape of

breast, irritation or dimpling of breast skin, redness or flaky skin in the nipple area or the breast, retraction of the nipple or pain in the nipple area, nipple discharge other than breast milk including blood.²

Risk factors include old age, genetic mutations, early menstrual period, late or no pregnancy, starting menopause after age 55, not being physically active, being overweight or obese after menopause having dense breasts using combination hormone therapy or oral contraceptives, personal history of noncancerous breast diseases, family history of breast cancer, previous treatment using radiation therapy and drinking alcohol.²

Breast cancer is the second most common cancer in the world and, by far, the most frequent cancer among women with an estimated 1.67 million new cancer cases diagnosed in 2012. It is the most common cancer in women both in

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more and less developed regions. Incidence rates vary nearly four-fold across the world regions with rates ranging from 27 per 1,00,000 in Middle Africa and Eastern Asia to 92 in North America.³ In India, it is 5 per 1,00,000 female population per year in rural areas to 30 per 1,00,000 female population per year in urban areas. The incidence of breast cancer increases with age and this is true in India also. With the exception of 5-10% breast cancers where the main risk factor is genetic predisposition in the remaining 90% of sporadic breast cancers, the identified risk factors are reproductive, lifestyle or environmental factors.⁴ In India, as a result of change in lifestyle, the burden of breast cancer will continue to grow not only in terms of the absolute number of cases, but also in terms of incidence.⁵

Early diagnosis of breast cancer is of extreme significance in improving the survival rates and quality of life. Unfortunately, studies have revealed that a major proportion of women from low-income countries are still not breast aware. Among screening techniques, mammography requires specialised equipment and technical expertise and Clinical Breast Examination (CBE) requires a hospital visit, while Breast Self-Examination (BSE) is a cost-free, simple, noninvasive intervention carried out by women themselves.

It has been established in developing countries that BSE is one of the most reasonable and feasible approach in early detection of breast cancer. It is also highly effective in increasing sense of ownership about health, healthcare-seeking behaviour, preventive health behaviours and awareness about breast cancer among women. Women, who regularly perform breast self-examination present with smaller neoplasm and rare involvement of axillary lymph nodes.⁶

In this study, CBE was done. In addition, we assessed the knowledge, attitude and practice of BSE.

MATERIALS AND METHODS

A cross-sectional study with quantitative method of data collection was conducted in Karindalam, a village in Kasaragod, Kerala, from August 1, 2014, to October 31, 2014. The study population was all women aged 20 years and above and who resided in the village for 6 months and more. In the first stage, the investigators conducted a training program for Anganwadi and Kudumbashree workers and Accredited Social Health Activists (ASHA) (community workers) from the same village. They were told in simple terms about breast cancer, its signs and symptoms, its risk factors, how it could be prevented about BSE, CBE and its significance in identifying disease at a very early stage. They were handed pamphlets to be distributed to women during the home visits. The main purpose of these visits was to motivate women and increase the number of attendees to the CBE camps. Sampling technique used was convenient sampling. Women not willing to be examined were excluded.

In the second stage, 3 CBE camps were conducted each at the primary health center and two subcentres. A

pretested semi-structured questionnaire, which included a section on demography, knowledge of breast cancer and BSE, attitude and practice of BSE, motivators for the camp and finally the section on the CBE findings was prepared. After data collection, brief knowledge about breast cancer, BSE and CBE was given to the respondents of the camp.

Those who needed followup were referred for mammography and other investigations. Descriptive statistics like mean, standard deviation, frequencies and percentages were used. Epi-info version 7.0 was used for statistical analysis. Institutional ethical committee clearance was obtained.

RESULTS

The mean age of the women who participated was 42.46 with a standard deviation of 8.52 years.

Age	Number	Percent
20-29	13	4
30-39	121	38
40-49	116	36.4
50-59	58	18.1
60-65	11	3.5
Religion	Number	Percent
Hindu	270	84.6
Christian	27	8.5
Muslim	22	6.9
Caste	Number	Percent
Tribe	23	7.2
Other classes	296	92.8

Table 1. Age, Religion and Caste of the Respondents

Education	Number	Percent
Illiterate	22	6.9
Primary	84	26.3
Secondary	51	16
High school	113	35.4
+2	42	13.2
Diploma	2	0.6
Graduate	5	1.6
Occupation	Number	Percent
Unemployed	146	45.8
Unskilled	101	31.6
Semiskilled	43	13.5
Skilled	20	6.3
Clerical/business/farming	9	2.8
Socioeconomic Status	Number	Percent
Upper middle class	84	26.3
Middle class	70	22
Lower middle class	41	12.8
Lower class	124	38.9

Table 2. Education, Occupation and Socioeconomic Class of the Studied Population

From table 2, it is seen that 6.9% of the women are illiterate and 77.7% have studied up to 10th grade.

Modified B G Prasad socioeconomic scale 2014 was used to assess the socioeconomic status of the studied population.⁷ Almost, 46% are unemployed/homemakers and 74% belong to middle and lower class.

Marital Status	Number	Percent
Married	275	86.2
Widowed	34	10.7
Separated	9	2.8
Unmarried	1	0.3
Age at Marriage	Number (318)	Percent
11-15	15	4.7
16-20	164	51.6
21-25	107	33.7
26-30	24	7.5
31-35	8	2.5
Age of 1 st Childbirth	Number (318)	Percent
No children	10	3.1
1-15	2	0.7
16-20	112	35.2
21-25	133	41.8
26-30	50	15.7
31-35	8	2.5
36-40	2	0.7
41-45	1	0.3
No. of Living Children	Number (318)	Percent
0	10	3.1
1	37	11.6
2	191	60.1
3	69	21.7
4	9	2.8
5	2	0.7

Table 3. Marital Status, Age of Marriage, Age of 1st Childbirth and Number of Living Children of Respondents

Risk Factors	Number	Percent
Don't know	233	73
Fat intake	3	0.9
More than 35 years	6	2
All women prone	1	0.3
Heredity	3	0.9
Inactivity and obesity	11	3.5
Menopause	2	0.6
Not given breastfeeds	31	9.7
Nulliparous	17	5.3
Smoking	1	0.3
Heredity being fat and not given breastfeeds	11	3.5

Table 4. Knowledge of Risk Factors of Breast Cancer

Symptom	Number	Percent
Don't know	108	33.9
Lump	133	41.7
Discharge	14	4.4
Lump, discharge, pain	57	17.9
Retracted nipple	4	1.2
Bleeding	3	0.9

Table 5. Symptoms of Breast Cancer

Source	Number	Percent
Doctor	17	5.3
Health staff	80	25.2
Family/friends	69	21.6
Books/magazines	16	5
TV/Radio	6	1.9
Community workers	113	35.4
Have not heard	18	5.6

Table 6. Source of Information (301)

Though, only 234 out of the 319 women had heard of BSE, everybody gave an answer to the awareness questions about BSE.

Age of Onset	Number	Percent
Don't know	212	66.5
From menarche onwards	33	10.3
From 21 years	8	2.5
From 30 years	65	20.4
After delivery	1	0.3

Table 7. Awareness about when to Start BSE

Frequency	Number	Percent
Don't know	168	52.7
Once a year	4	1.3
Once in 6 months	3	0.9
Once a month	105	33
Bimonthly	10	3.1
Once a week	24	7.5
Daily	5	1.5

Table 8. Awareness about Frequency of BSE

Procedure	Number	Percent
Using one finger	21	6.6
Using palm and 3 fingers	137	43
Pressing/squeezing	2	0.6
Don't know	159	49.8

Table 9. Awareness about Procedure of BSE

Only 184 women practiced BSE.

Reason for Doing BSE	Number	Percent
To examine breasts regularly	171	93
Family history of breast cancer	5	2.7
Impact of awareness class	5	2.7
Friend has breast cancer	2	1.1
Already lump resected	1	0.5

Table 10. Motivation for Doing BSE (Number 184)

Reason for not Doing BSE	Number	Percent
Don't know about it	36	26.7
Not important/good enough	85	63
Don't have any symptoms	10	7.4
Scared to find a lump	4	2.9

Table 11. Reasons for not Doing BSE (Number 135)

Frequency of Performance of BSE	Number	Percent
Monthly and sustained	31	16.9
Once or twice a year	7	3.8
Infrequently	94	51
Only once so far	52	28.3

Table 12. Frequency of Doing BSE (184)

Place of Performance	Number	Percent
Front of mirror	12	6.5
Bathroom	163	88.6
Lying on bed	9	4.9

Table 13. Where BSE is Performed (184)

BCE Findings	Number	Percent
Lump in the breast	9	2.8
Discharge per nipples	4	1.3
Axillary lump	2	0.6
Retracted nipple/nipples	2	0.6
Normal	302	94.7

Table 14. Results of Breast Clinical Examination (319)

DISCUSSION

The CBE camps which were conducted on 3 days at three places in a single village had an attendance of 319 women, out of which, 70% were motivated by the women volunteers directly or indirectly. Camps such as these had only achieved an attendance rate of 20 to 30 in the past. From this, it is clear that mobilising women with the help of community workers is a very good strategy to increase the attendance in screening camps. Camps which have used volunteers to mobilise women have achieved success in breast clinical examination camps.⁸

The mean age of the women was 42.46 years with a standard deviation of 8.52 years. Out of these, 99.7% were ever married. A survey of 15 to 45 year old rural women in Kerala show that almost 20% marry by 18 years.⁹

295 (92.5%) of the women belonged to 30-60 age group. Our studied population included a wider age range (15-65), since cancer of the breast is bimodal in nature.^{10,11} Another reason for inclusion was to ensure attendance in future organised camps. Almost, 100% women were ever married and 56.3% were married before 20 years of age and 36% had their first child before 20 years of age. The mean number of children was 2.1 per woman and 25% had more than 3 children. Almost, 100% of the newborns were breastfed. None of the women were using hormonal contraceptives.

Around 50% studied up to 10th standard and 46% were housewives. Eighty five percent were Hindus and a few tribal women (7.3%) also participated in the study.

More than 50% of the women belonged to the lower socioeconomic status. Socioeconomic status is lower among rural population. Generally, rural people with lower educational status and economic status have a poor knowledge of symptoms, risk factors and preventing screening tests compared to urban developed population.¹³

Awareness

Among the 319 women who attended the camp, 301 (94%) had heard of breast cancer and 110 (34%) thought it was common for a woman to get breast cancer. Around 36% (113) had heard of it recently from Anganwadi and Kudumbashree workers during their house to house visit. Around 65% of the women knew at least one symptom of breast cancer, while 73% did not know the risk factors of breast cancer. Studies done in Kerala and other parts of India show that level of knowledge about symptoms, risk factors of the disease is inadequate.^{13,14}

While 234 women (73%) thought it could be detected early, while 49 (15%) did not think so. The rest 36 (11%) did not know. Also, 261 women (82%) said that early detection increases the chance of survival, while 33 (10%)

did not think so and 25 (7.8%) did not answer. Out of the 319 women, 234 (73%) had heard of breast self-examination.

Breast cancer survival is associated with a fall in mortality by creating awareness of signs and symptoms through well-organised screening programs.¹⁵ Though American Cancer Society no longer recommends BSE in the USA as per its guidelines, BSE should be started by 20 years of age.¹⁶ Only 8 (2.5%) women said BSE should start at 20 years of age, 105 (33%) women knew it should be done every month and 137 women (43%) knew the right technique of BSE.

Attitude

When asked whether they thought BSE was important, 275 (86.2%) said yes, while 44 (13.8%) had not given it a thought or were indifferent.

Practice

Among the 319 women, 184 (57.6%) had done BSE at least once until the camp was conducted. Out of this, 124 (67.4%) did it to examine breasts regularly, 5 (2.7%) did it because they had a family history of breast cancer, 52 (28.3%) just did it once after the awareness class by the community workers, 2 (1.1%) did it because their friends had breast cancer and 1 (0.5%) did it because a lump had already been resected. Though more than half the women did BSE, they were not fully aware about the procedure and frequency. Other studies done in India also show a lack of awareness of the procedure.¹⁷

Only 33 women (16.5%) did it on a monthly basis. Studies done in India showed that only less than 15% of the women practiced BSE on a monthly basis.¹⁸

Out of the 135 (42.4%) women who didn't do it, 36 (26.7%) did not know the method, 85 (63%) did not think it was important, 10 (7.4%) did not do it as they had no symptoms and 4 (2.9%) were scared of finding a lump. Studies done in India and among South Asian women also obtained lack of knowledge of method of performance and fear of finding a lump as reasons for not performing BSE.^{19,20}

One hundred and sixty three women (88.5%) did it in the bathroom, while 12 (6.5%) did it in front of a mirror and 9 (5%) did it while lying down on bed.

Those women who had a breast or axillary lump or discharge per nipple were referred for mammography.

CONCLUSION

In India, industrialisation and urbanisation are possibly contributing to a gradual increase in the incidence of breast cancer in the country. The burden of breast cancer will continue to grow not only in terms of the absolute number of cases, but also in terms of incidence. Now, in India, cancer of the breast is the most common cancer among women in many regions and has overtaken cervix cancer, which was the most frequent cancer, a decade ago.⁵

The majority of breast cancer patients in western countries are postmenopausal and in their sixties and

seventies, while in India premenopausal patients constitute about 50% of all patients. A significant proportion of Indian breast cancer patients are younger than 35 years of age.²¹

Young age has been associated with larger tumour size, higher number of metastatic lymph nodes, poorer tumour grade, low rates of hormone receptor-positive status, earlier and more frequent recurrences and poorer overall survival.²²

Compounding the problem is that the healthcare is low on priority for breast cancer in India. In comparison to cervical cancer, the opportunistic screening program for breast cancer in India has not taken off so well. Most of the time, disease is totally asymptomatic in the earlier stage with a painless lump. Women from low socioeconomic strata, having low-income and less education may not seek care upon feeling a breast lump. This may be attributed to their unawareness about what the lump represent, stigma of being rejected by the community and partner, potential fear of losing the breast, the prevailing taboo of not discussing breast cancer topic openly and no knowledge of existence of any effective therapy for the disease. Thus, most people present only when symptomatic, and on an average, at stage 2B and beyond.²³

Organised breast cancer screening services have showed a decrease in mortality in the Western world. Mammography and regular CBE are more sensitive tools, but the expensiveness and cumbersomeness hinders its use in countries like India. BSE can be used as a reasonable and feasible approach in early detection and reduction of breast cancer mortality in developing countries.²⁴ Studies from India suggest, BSE can be used as a tool of creating breast health awareness among women and trained female health workers can play a promising role in disseminating this knowledge among women and increasing compliance to carry out BSE.^{25,26,27}

Utilisation of the services of our existing primary healthcare infrastructure and its facilities for opportunistic screening and health awareness classes by trained nonmedical community personnel such ASHA, anganwadi workers and Kudumbashree workers should be mentioned as one of the main activities in our future policies. They should be trained for providing BSE training to women at their doorstep. They can easily establish a rapport with the beneficiaries and could overcome a number of cultural obstacles and custom barriers faced by women from remote areas of the country such as feeling of shyness during examination by a male doctor and need of male to escort them to the healthcare facilities as the service would be available at their doorstep itself.²⁸ This simple approach could be a promising way to reduce the burden of the disease to a significant extent.

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