



ASSESSMENT OF LEVEL OF AWARENESS FOR BREAST CANCER AMONG THE PATIENTS OF CARCINOMA BREAST REGISTERED AT TERTIARY CARE HOSPITAL OF CENTRAL INDIA

Oncology

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ABSTRACT

BACKGROUND: The incidence of breast cancer is increasing because of the increase in elderly population and increasing prevalence of established risk factors such as smoking, overweight, physical inactivity, changing reproductive pattern associated with urbanisation and economic development. With increasing incidence there should also be a parallel increase in knowledge and awareness in population regarding breast cancer.

AIM: To assess level of awareness for carcinoma breast among recently diagnosed patients registered at our centre.

MATERIAL & METHOD: This is a prospective, observational study conducted on 140 previously untreated histopathologically proven carcinoma Breast and their caregivers, from July 2015 to March 2016. These patients were interviewed and data regarding cancer awareness was obtained. The questionnaire was framed by modification of "The Breast Module of the Cancer Research UK Cancer Awareness Measure". The breast module was delivered by interview or self-complete questionnaire.

RESULTS: Average age = 46.5 ± 12.8 years. Presenting Symptoms: "Breast lump"(95%) and "pain in breast" (93.10% patients). Breast Self-Examination: No knowledge 98% patients. Well known and confident 2%. Average delay: 3.5 months. Major causes of delayed presentation: Emotional and social barriers (99%). Lack of awareness (98.7%), Difficulty to arrange transport and make out time to go to doctor (99.5%) Awareness of BC was decreasing with increasing age. Knowledge about age related risk was poor (20.68%).

CONCLUSION: Spreading awareness with screening camps and community education programs may help in their early presentation to the hospital for better treatment and thereby better QOL.

KEYWORDS

Breast cancer, breast self-examination, awareness, education

INTRODUCTION

Despite long-standing national programmes, such as the National Cancer Control Programme launched in 1975 and National Programme for cardiovascular disease, diabetes, cancer and stroke (NPCDCS launched under the 12th five year Plan from 2012 to 2017) [1], to increase awareness and early health-seeking behaviours, the mortality rates for breast cancer continue to remain the highest in the country [2]. Barriers such as scarcity of awareness among women, the presence of stigma, fear and reduced knowledge about screening behaviours, such as breast self-examinations, contribute to high mortality rates [3]. We conducted this study to evaluate cancer awareness in Indian women, of breast cancer risk factors, which include age, family history, age at first birth, parity, duration of breastfeeding, obesity and alcohol use. Efforts were made to understand what the patient knew about breast cancer before-hand, what she came to know after diagnosis and how previous knowledge of established risk factors could have helped her in seeking health-care earlier.

MATERIAL AND METHODS

Present study is based on the "Breast cancer knowledge, attitudes and practice scale" developed by the American Cancer Society's (ACS) International Affairs Department and "The Breast module of cancer research UK Cancer awareness measure." Knowledge of breast cancer risk factors and warning signs and comprehension were addressed using "Breast cancer knowledge, attitudes and practice scale". The knowledge assessment tool included questions about established breast cancer risk factors as well as questions regarding beliefs related to the disease, signs and symptoms. Demographic characteristics and information regarding preventive behaviour, comprehension of the subject's personal breast cancer risk, and severity of the disease were also collected. The section containing socio-demographic and epidemiological variables included sector (rural/urban), age (years), educational level (years of school completed), marital status (with a partner/no partner), menopause (yes/ no), pregnancy (yes/no), breast feeding for more than 1 month (yes/no), and hormone therapy (yes/no). The section related to help-seeking behaviour included having undergone a Pap-test in the past year (yes/no), the health system used (public only/private and/or a combination), and having a gynaecological assessment in the past 5 years (yes/no). The section related to comprehension of personal risk of developing breast cancer and severity of the disease included "having contact with someone with breast cancer" (yes/no), "likelihood of developing breast cancer"

(low/moderate/high), "would you like to know if you had breast cancer" (yes/no), "women with no relative with breast cancer may develop the disease" (yes/ no), "probability of death if someone has breast cancer" (fatal disease/probably/low probability), "how much early diagnosis may influence the chance of survival" (a lot/not much/nothing), "do you believe someone may have breast cancer without presenting a breast tumor/nodule" (yes/no), and "what are the chances of having a breast cancer if a women finds a nodule in her breast" (high/moderate/low).

Knowledge of breast cancer risk factors and early symptoms/signs was assessed by asking the respondents to answer 6 items included in the questionnaire on symptoms/ signs and 12 items on risk factors of breast cancer. Each correct response for early symptoms/ signs received two (2) points and each "do not know" received one (1), while the wrong response received zero (0) points. Each correct answer regarding whether a risk factor would "highly" increase the risk of breast cancer received two (2) points, "fairly" increase the risk received one (1) point, and "no increase" received zero (0) points. Total scores thus ranged from 0 to 36. Based on mean, median, and percent (33 and 66) breast cancer knowledge scores were categorised as "poor" knowledge (0-15 points), "fair" knowledge (16-22 points), and "good" (from 22 to 36 points).

Statistical Analysis

A descriptive analysis was run for the independent variables and the outcome, that is, knowledge regarding breast cancer risk factors, signs and symptoms considered as a continuous variable and further categorised as "good", "fair", and "poor" knowledge. The proportions of women having good, fair and poor knowledge were estimated.

SPSS Version 20.0 (Armonk, NY: IBM Corp) was used for analysis. Means, standard deviation, and median were estimated, and student's t-test were used to evaluate differences between means, according to independent variables. Mean score values of variables with more than two categories were analysed by ANOVA test. Chi-square tests were used to analyse the categorical responses according to the groups. Multivariate analysis of variance was used to examine group differences in response to the scale data (total risk score and total symptom score). Adjusted variable were included in the multiple analyses based on their potential confounding effect and p-valued on univariate analyses. Univariate and multivariate linear regression analyses were used to estimate the association

RESULTS

The mean age of presentation was 46.5 years. Most common presenting symptom was breast lump and pain in breast. Most of the ladies were unaware of breast self examination and about the signs and symptoms of breast cancer. A trend of decreasing knowledge with advancing age was observed in the study population.

Table 1 Distribution of knowledge risk factors and sign/symptoms of breast cancer

Risk factor	No increase (%)	Fairly increase (%)	Highly increase(%)
Old age of marriage increases the risk of breast cancer	56	24	20
Nulliparity increases the risk of breast cancer	34	45	21
Having children >5 increases the risk of breast cancer	57	23	20
Do not breast feeding increases the risk of breast cancer	52	34	14
Use of OCP increases the risk of breast cancer	46	33	21
Family history of breast cancer increases the risk of breast cancer	34	36	30
Obesity and high fat diet increases the risk of breast cancer	23	45	32
Physical inactivity increases the risk of breast cancer	45	19	36
Avoidance of fruits and vegetables increases the risk of breast cancer	23	32	45
Consumption of alcohol and tobacco increases the risk of breast cancer	6	23	71
Exposure to ionising radiation increases the risk of breast cancer	12	34	54
Lump in the breast is a sign of breast cancer	34	28	38
Redness of skin over the breast is a sign of breast cancer	34	43	23
Nipple retraction can be a sign of breast cancer	45	23	32
Change in the shape and size of breast can be a sign of breast cancer	41	34	25

Table 2

Variable	
Awareness of symptoms	
Lump in breast	95%
Pain in breast	93.1%
Bleeding/discharge through nipple	9%
Skin changes over the breast	2%
Cyclical breast tenderness	1%
Lump in axilla	1.2%
Awareness of general risk factors	
Early menopause	34%
Late menopause	20%
No Breastfeeding	19%
Old age	13%
Old age marriage	34%
Unmarried	23%
Old age pregnancy	45%
OCP use	21%
Obesity	12%
Family history	26%
HRT	16%
Awareness about tests for diagnosis	
Mammogram	60%
Histopathology	5%
CT/MRI	9%
USG	14%
Awareness about treatment of breast	
Surgery	80%
Chemotherapy	48%
Radiotherapy	12%
Ayurveda/other alternative medicine	79%
Awareness about whom to consult	
Gynaecologist	98%
General practitioners	67%
Surgeon	46%
Awareness about preventive factors	
Lifestyle modification	23%
Nutrition	34%
Avoiding alcohol & tobacco	56%
Source of information/awareness	
Media	89%
Patient with similar lesion	15%
Physician	20%
Social interaction	69%

Table 3 Mean Score of Risk Factors and Signs/Symptoms Knowledge and Univariate/Multivariate Analysis of Variables Related to Breast Cancer Knowledge (Linear Regression Model)

	N (%)	Mean (SD)	p-value	Adjusted	
				Crude	Adjusted
Sector			0.3	2.23(-0.78-4.76)	2.12(-0.78-4.56)
Urban	86	20.4(5.34)			
Rural	14				
Age			0.158	-0.56(-0.88-0.06)	-0.54(-0.78-0.04)
40-49	39	18.3(5.7)			
50-59	42	18.9(5.67)			
>60years	19	17(7.8)			
Educational level			0.178	0.27(-0.167-0.23)	0.273(-0.89-0.97)
Illiterate	71	18.3(6.4)			
Primary school	20	19.23(6.89)			
High school/graduation	9	4.7(5.3)			
Pregnancy			0.326	-1.56(-4.23-0.98)	0.87(-0.56-0.45)
Yes	97	18.78(7.12)			
No	3	19.76(6.89)			

Breast feeding			0.34	-1.45(-3.78- -0.67)	1.4(-3.56-0.69)
Yes	92	18.8(6.44)			
No	8	20(7.78)			
Menopause			0.89	-0.27(-1.82- -1.42)	1.3(-0.38- -2.92)
Yes	76	18.7(6.2)			
No	24	18.9(6.8)			
Hormonal therapy			0.84	0.09(-1.28- -1.62)	0.32(-1.10- -1.79)
Yes	21	18.2(6.54)			
No	79	19.6(6.58)			
Having undergone Pap smear			0.002	2.56(0.78- 4.9)	2.45(0.28- 4.6)
Yes	30	12.4(5.2)			
No	70	19.8(6.80)			
Health system used			0.854	-0.04(-1.24- -1.38)	0.11(-0.66- -0.94)
Public only	70	19.8(6.80)			
Private/public both	30	12.4(5.2)			
Have you had a 6consultation with gynaecologist in the last 5 years			0.001	1.94(0.72- 2.98)	1.28(0.35- 2.80)
Yes	60	18.2(6.5)			
No	40	14.8(5.4)			
Have any of your intermediate or extended family members ever had breast cancer			0.38	0.75(-1.18- 2.54)	0.67(-1.10- 2.5)
Yes	12	16(10.8)			
No	88	19.9(8.8)			

DISCUSSION

Breast cancer is the most common female cancer worldwide representing nearly one-fourth of all cancers in women [4,5]. With its growing proportions, it is estimated that the global burden of breast cancer might cross 2 million by the year 2030 [6]. Rates of incidence of breast cancer vary not only amongst countries but also within regions of the same country. In India, the northeastern states as well as metropolitan cities show highest rates of incidence as compared to other parts[4]. Incidence rates in our country might be less than other countries like United Kingdom, yet the mortality rates are comparable. This can be attributed to the advanced stage of the cancer at the time of diagnosis. Low levels of awareness, longer referral pathway and diagnosis, limited access to effective treatment at regional cancer centres and incomplete treatment regimens contribute majorly to such high mortality rates. [3,8-12] Therefore, it is essential to understand the level of cancer literacy because earlier the diagnosis, better is the prognosis. An assessment of existing levels of cancer awareness is a pre-requisite for planning comprehensive health programmes along with early detection and treatment campaigns, that will effectively engage communities of women and men. [13]

A review of the literature revealed low breast cancer literacy with regard to risk factors among Indian women, irrespective of their socio-economic and educational backgrounds, with little correlation between awareness levels and strength of evidence of the risk factors.[14]

Levels of literacy amongst the study population was low with maximum patients being illiterate. The level of education is directly proportional to levels of awareness and health-seeking behaviour. It is instrumental in developing attitude towards disease process. Low levels of education were also found in the study done by Gurdal SO et al. [15] Awareness regarding initial symptoms of breast cancer was assessed in this study. We found that most women were aware of lump in breast. However other symptoms such as pain, discharge/bleeding or skin changes were not identified by these patients. Similar results were found in the study done by Singh R et al.[16] Awareness regarding general risk factors were also found to be low. Information regarding role of advancing age, late menarche and early menopause, obesity, oral contraceptive pills and alcohol intake in the causation of breast cancer was low amongst the study population. The study conducted by Somdatta P et al also showed similar awareness. [17]

Regarding diagnosis and treatment, patients had less knowledge about histopathology and ultrasonography. However, some had heard about mammography for screening for breast cancer. Most of the patients considered surgery as the sole line of treatment. Some knew about availability of a few drugs and also possibility of cure via radiotherapy.[18] Use of Ayurveda and other alternative medicine was also considered by some patients as curative which is a misconception. On appearance of first symptoms, most patients preferred reaching out to gynaecologists. This asserts the need of awareness of the

gynaecologists as well as lady doctors and nurses to be updated regarding new emerging concepts about breast cancer as these are the people who first come in contact with a lady seeking help. Breast self-examination and proper line of referral is crucial in detection of early-stage cancers.

Knowledge about factors preventing breast cancer was also found to be low. Lifestyle modification, better nutrition and avoidance of tobacco and alcohol was known to only a few.

The main source of information to the patients was media , both digital and print. Few received information through their physicians and others through their social contacts.

CONCLUSION

Knowledge regarding various modifiable and non-modifiable risk factors is crucial in early screening and diagnosis of breast cancers. Formulation of intensive health promotion and intervention programmes for the public as well as training modules for doctors and nursing staff especially at primary care centre is required for proper education and awareness of the masses.

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