

Awareness of Mammographic Screening Amongst Females Visiting Breast Clinic at a Tertiary Care Hospital of Karachi

Summayyah Shawana, Sehrish Shafique, Sarah Rabbani, Sobia Hassan, Santosh Kumar Sidhwani, Rafia Siddiqui

ABSTRACT:

Objective: To assess the awareness of mammographic screening among women visiting the breast clinic at a tertiary care facility in Karachi.

Study Design and Setting: This cross-sectional study was conducted at Jinnah Post Graduate Medical Centre Karachi over one month period from 1-10-2019 to 31-10-2019.

Methodology: After receiving ethical approval, relevant information from patients coming to the breast clinic over the study period, regarding age, level of education, family history, diagnosis and awareness regarding mammographic screening was recorded on specially designed proformas and was statistically analyzed on SPSS 23. P value \leq to 0.05 was considered as statistically significant.

Results: Out of the 100 participants included in the study 68 patients had malignant lesions, 18 had a benign diagnosis while 14 patients were undiagnosed. Only 42 had at least some knowledge of mammographic screening of breast cancers and only 15 patients actually had a screening mammogram performed. Of those aware of the screening majority were informed regarding the procedure by health care professionals or through media sources. Only 4 out of 17 participants with a positive history of breast cancer in the family had the screening done. 12 patients diagnosed with malignant breast lesions were under the age of 40 years.

Conclusion: Awareness of mammographic screening for breast cancer among females in our setup is still unsatisfactory and calls for improvements in the awareness programs for breast cancer screening. An early age at diagnosis for malignant breast lesions should prompt the concerned to revise the recommended lower age limit for commencing mammographic screening.

Keywords: Breast cancer, Mammogram, Screening, Pakistan

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INTRODUCTION:

Breast cancer is the most common malignancy in women and is the leading cause of cancer-related deaths worldwide.

Summayyah Shawana

Associate Professor, Department of Pathology
Bahria University Medical and Dental College, Karachi
Email: shawana75@yahoo.com

Sehrish Shafique

Assistant Professor, Department of Medicine
Bahria University Medical and Dental College, Karachi

Sarah Rabbani

Resident
Agha Khan University Hospital
Karachi

Sobia Hassan

Assistant Professor, Department of Pathology
Altamash Institute of Medicine, Karachi

Santosh Kumar Sidhwani

Assistant Professor, Department of Pathology
Ziauddin Medical University, Karachi

Rafia Siddiqui

Associate Professor, Department of Pathology
Karachi Medical and Dental College, Karachi

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There were over 2 million new cases in 2018¹. It was a major cause of cancer related deaths in the year 2018 with approximately 626000 deaths due to breast cancer. This figure amounts to about 15% of cancer related deaths in women worldwide in 2018². Breast cancer is on the rise in Pakistan but due to insufficient data collection, research on this issue has been minimal. According to published data one in every nine women in Pakistan is at risk for developing breast cancer and kills approximately 40,000 women per year.³ Incidence of breast cancer in Pakistani women is 2.5 times higher as compared to neighboring countries.⁴ The prevalence of breast cancer in Pakistan and other Asian countries has been observed at a relatively younger age when compared with the western world.^{5,6} The Shaukat Khanum Collective cancer registry report (1994-2018) has documented Breast cancer as the most common malignancy amongst all age groups.⁷ Assimilation of genetic and environmental factors with age are the most significant risk factors as concluded by many studies. The risk of developing breast cancer increases with age. Women with first degree relatives suffering from breast cancer have been reported to be at an increased risk of developing breast cancer.⁸

Early detection is critical for improving breast cancer

outcomes and survival and late diagnosis is the major reason for mortality in women with breast cancer. This factor can be overcome only with early detection through an effective screening for breast cancers⁹. The various methods for early detection include self-breast examination, clinical breast examination and mammography. Mammography however, is considered to be a gold standard for early detection of breast cancer.¹⁰ Early detection of malignant breast lesions on mammography has been observed to reduce breast cancer mortality by 20 to 35%, particularly among the women of age 50 year and above⁹. Mammographic screening is recommended for all women 50 years and above.¹¹ However in many countries, including Pakistan, the knowledge and acceptance of mammographic screening remains poor. Previous studies have demonstrated poor knowledge, attitudes and utilization of mammographic screening.^{12,13}

As the knowledge regarding screening of breast cancer is still negligible in our part of the world, this study aims at contributing to the current situation regarding awareness of mammographic screening among females of our population, especially those with a positive family history of breast cancer. The present study would hopefully contribute in devising policies regarding screening programs for breast cancer.

METHODOLOGY:

A cross-sectional study was carried out from 1st October 2019 to 31st October 2019. A total of 100 females visiting the breast clinic at a tertiary care hospital in Karachi during the study period were included using convenience sampling. Ethical approval for the study was received from the ERC at BUMDC prior to commencing the study. Subjects were selected using convenient sampling technique. The information was collected on a structured questionnaire. Data regarding age, level of education, family history, diagnosis and awareness regarding mammographic screening was recorded on the designed proforma. The questionnaire was subjected to peer-review prior to data collection and data was entered during one to one interview. Informed consent was obtained from all the subjects before the interview. Confidentiality was maintained and names of patients were not recorded on the questionnaires. Data was entered and analyzed using SPSS 23. P value \leq to 0.05 was considered as statistically significant.

RESULTS:

Mean age of the patients was 47.8 + 12.1 years. The age range was 24 to 80 years. The patients reported to the breast clinic for various benign and malignant breast pathologies. Majority (82) of the patients had a diagnosed lesion while 18 were undiagnosed at the time of study. Out of the diagnosed cases 68 patients had malignant lesions while 18 had a benign diagnosis. 12 patients with malignant lesions were under 40 years of age. As far as education status is concerned majority, i.e. 45, of the patients had completed

matriculation while 22 patients had studied up to the fifth grade. 15 of the patients were uneducated. 18 patients had a positive family history of breast cancer with at least one immediate family member diagnosed with malignant breast lesion. Out of the 100 patients included in the study, 42 were aware of mammographic screening for breast cancers and only 15 patients had a screening mammogram done. Of these 42 patients, majority (23) were informed regarding mammographic screening by health professionals while 14 came to know through media sources and 5 were informed by family members or friends. Out of the 17 patients with a positive family history, 10 were aware of mammographic screening and only 4 actually underwent a screening mammography. When enquired why the patients who were aware of mammographic screening did not have a mammogram done (27 patients), majority (19 patients) said that they found the procedure embarrassing. Further among these 27 patients, majority (20) were above the age of 50 years.

DISCUSSION:

The present study is in line with various studies done in the country in the past and shows a general lack of awareness regarding screening procedures for breast cancers.^{13,14,15,16} Even though 17 patients had a positive family history of breast cancer only 4 actually underwent a mammographic screening. This reveals the extreme lack of awareness and compliance

Table-1: Association of variables with knowledge and practice of mammographic screening

Variable	N=100	Knowledge of screening n=42	Underwent screening n=15
Age in years			
20-30	12	02	00
31-40	18	10	05
41-50	29	14	06
51-60	30	12	02
61-70	08	02	01
70-80	03	02	01
Education			
Uneducated	15	05	01
Primary	22	08	04
Secondary	45	17	04
Intermediate	12	07	03
Bachelors (or above)	06	05	03
Diagnosis			
Undiagnosed	18	05	01
Benign	14	26	08
Malignant	68	11	06
Family history of Breast cancer			
Yes	17	10	04
No	82	32	11
Don't know	01	00	00

to medical advice as far as screening of family members for breast cancer is concerned. Previous studies conducted in Pakistan have shown similar results and a persistent lack of awareness shown by the present study points towards an extremely poor situation as far as awareness programs for breast cancer screening are concerned¹⁷. Further, 12 patients with malignant breast lesions in the present study were under the age of 40 years. In Pakistan mammographic screening is recommended for women 40 years of age or above. An early age at diagnosis for breast cancer observed in the present and previous studies strongly argues against the recommended age limit for commencing screening mammogram in Pakistan.¹⁸The level of education was observed to influence knowledge of screening mammography, as 29 out of 42 patients who were aware of the screening procedure had at least completed matriculation. Hence one cannot emphasize enough the importance of education. Studies carried out in the developed countries show a significant reduction in breast cancer mortality with improved screening programs.^{19, 20} Results of effective screening programs being carried out worldwide are an evidence of the utmost importance of effective awareness programs and easy access to screening procedures. The single centered nature of the study, small sample size and cross sectional nature of the study are among the limitations of the study. The various socioeconomic can be addressed to portray the real findings of the breast cancer awareness.

CONCLUSION:

A lack of awareness of mammographic screening for breast cancer among the participant females residing in a metropolitan city of Pakistan reflects the ineffectiveness and lack of awareness programs. Further, an early age at diagnosis for malignant breast lesions should prompt the concerned to revise the recommended lower age limit for commencing mammographic screening.

Author Contribution:

Summayyah Shawana: Manuscript writing data collection analysis
 Sehrish Shafique: Manuscript writing data collection
 Sarah Rabbani: Manuscript writing data collection
 Sobia Hassan: Manuscript writing analysis
 Santosh Kumar Sidhwani: Data collection analysis
 Rafia Siddiqui: Manuscript writing

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