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Original Reseach Article

BREAST CANCER SCREENING : ROLE OF AN OBSTETRICIAN AND GYNECOLOGIST

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ABSTRACT

Background: This study was undertaken to determine how many patients are screened by obstetrician and gynecologist and how many undergo biopsy with positive result for malignancy or benign disease, to determine stage of breast cancer diagnosed during screening.
Aim: The main aim of the study is to assess how many patients are diagnosed with breast cancer during routine screening and their stage.
Methods: It is a study conducted from 1st April 2022 till 31st March 2023. All women who presented to obstetrician / gynecologist with breast symptoms or concerns were included. The breast cancer screening methods employed were: mammography or ultrasonography, breast self-examination (BSE), and physical examination. To confirm diagnosis, if indicated by BI-RADS staging in mammography or ultrasonography, core –needle biopsy was done.
Results: Out of 132 cases, most patients presented with breast pain. Breast biopsy was done for 30 patients. Biopsy results showed, 21 were benign breast disease and 9 cases of breast cancer. Most of the patients were pre-menopausal (103, 78.03%), with a median age of 40 years. The most type of benign breast disease on biopsy was Fibroadenoma (11 out of 21, 52.38 %). The most common type of breast cancer found on biopsy was Intraductal (8 out of 9). Out of 9 cases of breast cancer, most cases were of early breast cancer, with stage II (4 out of 9) being most common and only one patient was detected in stage IV.
Conclusion: Breast cancer screening can most effectively detect breast cancer in early stages, if done timely and properly. But the awareness regarding breast cancer screening is still low.

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Keywords: Breast cancer screening, obstetrician / gynecologist , mammography, breast cancer, breast self-examination.

INTRODUCTION

Breast cancer is a global problem, and 1.7 million new cases are diagnosed per year. Despite advances in medicine, breast cancer is diagnosed in the advanced stages in countries with limited resources because early detection, diagnosis, and treatment cannot be efficiently promoted. Specifically, at the basic level, breast self-examination is encouraged. At the increased level, patients have access to mammography and examination by trained personnel or physician. Breast cancer incidence rates within India display a 3–4-fold variation across the country, with the highest rates observed in the Northeast and in major metropolitan cities such as Mumbai and New Delhi. (1)

Breasts are an integral part of the female reproductive system. If not most, many women will consult their obstetrician/ gynecologist when they have any breast symptoms or concerns. Breast screening is performed in women without any signs or symptoms of breast cancer so that disease can be detected as early as possible. The components of a breast screening evaluation depend on patient age and other factors, such as medical and family history, and can include breast awareness (i.e., patient familiarity with her breasts), physical examination, risk assessment, screening mammography, and, in selected cases, screening MRI. Therefore, obstetrician / gynecologist should be able to diagnose and manage benign breast problems and make appropriate referrals as indicated. It is however important to bear in mind that most patients who present with breast symptoms do not have malignancy.

The breast screening methods used in this study are mammography or ultrasonography, breast self-examination (BSE), and physical examination. Screening mammography is recommended for every woman above 40 years of age. Breast ultrasonography can be a useful screening adjunct to mammography in evaluating young women with dense breasts.

This study was conducted to see the role of obstetricians/ gynecologist in breast cancer screening, and whether patients are detected in early stages through screening.

AIMS AND OBJECTIVES

The main aim of the study is to assess how many patients are diagnosed with breast cancer during screening and their stage.

MATERIALSW & METHODS

All the women who visited the obstetrician / gynecologist with breast symptoms or concerns from 1st April 2022 to 31st March, 2023, were taken in the study. The methods used for screening are, mammography or ultrasonography and physical examination. The other method, that is, breast self-examination (BSE), is taught to the women by trained personnel.

If indicated by the BIRADS staging in mammography or ultrasonography or even if clinically indicated, the patients underwent core-needle biopsy.

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Clinical Breast Examination (2)

The method for clinical breast examination included :

1. Proper position for palpation of the breast with the patient comfortably supine
2. Outline of the breast and surrounding area to be palpated systematically
3. Pads of the second, third, and fourth fingers are the most sensitive for breast palpation
4. Precise location and measured size of a mass can be effectively described using the clock position.

Mammography

In screening mammography, reports were formulated according to the American College of Radiology Breast Imaging-Reporting and Data System (ACR BI-RADS). In ACR BI-RADS, breast density is classified into four subcategories: A ("almost entirely fatty"), B ("scattered areas of fibro glandular density"), C ("heterogeneously dense breasts, which may obscure small masses"), and D ("extremely dense breasts, which lowers the sensitivity of mammography"). The BI-RADS scoring is given below.

BIRADS mammographic assessment categories

Cateogory		Management	Likelihood of cancer
0	Need additional imaging evaluation	Recall for additional imaging and/or await prior examination	n/a
1	Negative	Routine screening	Essentially 0%
2	Benign finding	Routine screening	Essentially 0%
3	Probably benign finding	Short interval follow-up (6 month)	>0% but <2%
4	Suspicious abnormality	Tissue diagnosis	4a : >2% to ≤ 10% 4b : >10% to ≤50% 4c : >50% to <95%
5	Highly suggestive of malignancy	Tissue diagnosis	≥95%
6	Known – biopsy proven malignancy	Surgical excision when appropriate	n/a

Ultrasonography

Breast ultrasonography can be a useful screening adjunct to mammography in evaluating young women with dense breasts. They are usually ACR BI-RADS category C & D in mammography screening. Breast ultrasound reporting also done according to BI-RADS. (3)

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Breast self- examination (BSE)

Breast self-examination is taught to the women. In simple language and with the help of charts and diagrams they are made to understand the steps.

The information given to the women at the clinic is as follows -

The best time to do a monthly breast self-exam is about 5 to 7 days after initiation of menstruation and to do it at the same time every month.

If the woman has gone through menopause, BSE to be done on the same day every month (4).

Biopsy

Core needle biopsy was used for tissue diagnosis when indicated, mostly after BI-RADS reporting of the imaging done. Aspiration of the breast lesion was also done when indicated by clinical or imaging findings. Histopathological examination and culture sensitivity was used accordingly.

RESULTS

One hundred and thirty two women (132) were screened in the breast cancer screening clinic from 1st April 2022 to 31st March 2023. Out of the 132 women, 76 (57.58 %) women underwent screening mammography and 56 (42.42%) women underwent ultrasonography. (Table 1)

Most of the women were premenopausal, 103 out of 132 (78.03%). The median age was 40 years. 17 (12.87%) out of 132 women had history of breast cancer in first degree relative. 48 (36.66%) out of 132 women were nulliparous. (Table 2)

The most common presenting complain in the women who were screened was lump in breast, 20 (15.15%) out of 132. Among this 20 presenting with breast lump, 7 turned out to be malignant and 8 turned out to be benign. The other presenting complains was pain in the breast, 31 (23.48 %) out of 132. Among those who had pain in breast, 2 turned out to be malignant and 11 turned out to be benign. The least common presenting symptom was nipple discharge, 5 (3.78%) out of 132 and among these only 2 turned out to have benign breast disease. (Table 3)

A total of 21 (15.09%) out of 132 women had benign breast disease. Among the women with benign breast disease, the most common was fibroadenoma, 9 (42.86%) out of 21. A total of 9 (0.76%) out of 132 women were diagnosed with breast cancer. The most common histological type of breast cancer was intraductal carcinoma in 8 (88.89%) out of 9 patients. (Table 4)

Among the women diagnosed with breast cancer, the most common stage was II, in 4(44.45%) out of 9. Only 1 women was detected with stage IV or metastatic disease. (Table 5)

Table 1 : Breast imaging modality used for screening

Imaging	n=132	%
Mammography	76	57.58
Ultrasonography	56	42.42

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Table 2: Clinical features of all women who were screened

Clinical features	(n=132)	Malignant (n=9)	Benign (n=21)
AGE			
18-25	36	0	13
26-40	53	4	7
41-65	43	5	1
Parity			
Nulliparity	48 (36.66%)	3	
Family History			
Breast Cancer	17 (12.87%)	2	4
Menopausal Status			
Premenopausal	103 (78.03%)	5	19
Postmenopausal	29 (21.97 %)	4	2

Table 3 : Presenting complain in women who were screened

Presenting complain during screening	N=132	Malignant (n=9)	Benign (n=21)
Lump in breast	20 (15.15%)	7 (77.78 %)	8 (38.10 %)
Pain in breast	31 (23.48 %)	2 (22.22 %)	11 (52.38 %)
Nipple discharge	5 (3.78%)	-	2 (9.52 %)
	=56* (42.41%)		

*(the rest of the women who were screened, 76 (57.59 %) out of 132, didn't have any complain)

Table 4 : Histopathology diagnosis

Benign	n=21	%
Fibroadenoma	9	42.86
Giant Fibroadenoma	2	9.52
Fibroadenosis	2	9.52
Intraductal papilloma	1	4.76
Chronic abscess	3	14.30
Galactocele	1	4.76
Tuberculous mastitis	2	9.52
Antibioma	1	4.76
Malignant	(n=9)	%
Intraductal	8	88.89
Mucinous	1	11.11

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Table 5 : Stage of disease in women diagnosed with breast cancer

Stage among Malignant	(n=9)	%
I	3	33.33
II	4	44.45
III	1	11.11
IV	1`	11.11

DISCUSSION

There is a low cancer literacy of breast cancer risk factors among Indian women, irrespective of their socio-economic and background. On average, nurses reported higher, still varied awareness levels for risk factors such as family history, reproductive history and obesity. (5)

Screening and early detection of breast cancer has been well established through consolidated research efforts of many decades. As a consequence of mammographic screening for women aged 50-69, a decrease in breast cancer mortality has been clearly depicted. It is increasingly being realized that detecting breast cancer early and efficiently must be the cornerstone of preventing morbidity and mortality due to breast cancer. In spite of this, the evidence base for implementing early detection/screening of Breast cancer is extremely thin. This is unacceptable given the rising populations and the demographic and epidemiological shifts. (6) In the present study the 132 women presented to obstetrician / gynecologist with breast symptoms or concerns in a year, among the total population. This proves as described by other studies, that there is a low awareness for breast cancer screening among women irrespective of socio-economic background.

Mammography was done because it not only gives an impression of the palpable lump, but it also helps in the evaluation of the remaining breast tissue for presence of nonpalpable lesions. Mammography is not done in younger women because of low incidence of carcinoma in them and the technical difficulties in evaluating their dense breast tissue. (7) In the present study, 57.58 % (76/132) women underwent screening mammography and 42.42% (56/132) women underwent ultrasonography of breast.

The two strongest risk factors for breast cancer are age and family history of breast cancer.(8) In the present study, among the women who were screened, 78.03% (103/132) were premenopausal with a median age of 40 years. 36.66% (48/132) women were nulliparous.12.87% (17/132) women had history of breast cancer in first degree relative. 44.44 % patients in the malignant group were postmenopausal.

Among those screened, 0.76% (9/132) women were diagnosed with breast cancer. Benign breast disease was much more common, 15.09% (21/132).

Breast lump is the most common presenting symptom among women with breast cancer and has relatively high predictive value for malignancy. The other common presenting symptoms are breast pain and nipple abnormalities (9). In the present study, the most common presenting symptom among those diagnosed with breast cancer was breast lump, 77.78% (8/9). Among

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those diagnosed with benign breast disease, the most common presenting symptom was breast pain, 52.38% (11/21)

Fibroadenoma is the most common benign tumors (84.3%). Clinically they are painless, well circumscribed, freely mobile with a rounded, lobulated or discoid configuration. In Indian literature the reported incidence varies from 40 to 87% of breast biopsies (10). In the present study, as well fibroadenoma was the most common benign breast disease, 42.86% (9/21).

The commonest type of breast carcinoma is the invasive ductal carcinomas not otherwise specified (IDC-NOS) or of no special type (IDC-NST) (11). In the present study, among those screened and furthermore diagnosed with breast cancer, 88.89% (8/9) women had Intraductal carcinoma on histological examination. Only 1 woman had mucinous type of breast cancer.

During screening, mostly the early breast cancer is detected, thus leading to a decreased breast cancer mortality (12). In the present study, as well, most breast cancer patients were detected in the early stages, 33.33 % (3/9) and 44.45 % (4/9), in stage I and stage II respectively. Only 2 patients were detected in advanced stages of breast cancer and among them only 1 was metastatic or stage IV breast cancer.

CONCLUSION

It is possible to detect breast cancer in the early stages through breast cancer screening. But the awareness regarding regular and timely screening, is low among the general population. Hence it becomes mandatory for an obstetrician / gynecologist to understand and participate actively in breast cancer screening.

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