



THE PIVOTAL ROLE OF THE GYNECOLOGIST IN EARLY BREAST DISEASE DETECTION AND AWARENESS: A CROSS-SECTIONAL STUDY OF 1100 WOMEN IN INDIA

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ABSTRACT

Background: In India, breast cancer presents a significant and growing health burden, characterized by late-stage diagnosis and a lower age of onset compared to Western populations. The gynecologist, as a primary point of contact for women's health, is uniquely positioned to implement early detection strategies. **Objectives:** This study aimed to assess the benefits of systematic breast evaluation by gynecologists by determining the prevalence of breast diseases, detecting benign and malignant conditions, and evaluating awareness and practices of breast self-examination [BSE]. **Materials and Methods:** A cross-sectional study was conducted from October 2022 to November 2024, enrolling 1100 women attending a gynecology outpatient department. Participants were categorized as asymptomatic [n=764] or symptomatic [n=336]. All underwent clinical breast examination [CBE], with subsequent age-appropriate imaging [ultrasonography for ≤40 years; mammography for >40 years]. Suspicious lesions [BIRADS III/IV/V] were investigated by fine-needle aspiration cytology [FNAC]. **Results:** The prevalence of breast diseases was 15.2%. Overall, 14 women [1.27%] were diagnosed with breast cancer, all in the >40 years age group. The cancer detection rate was 0.7% [5/696] in asymptomatic women over 40 and 5.5% [9/164] in symptomatic women over 40. No malignancies were detected in women aged ≤40 years. Only 10.18% of women practiced BSE regularly, with practice being significantly higher in the symptomatic group [p=0.000]. Significant risk factors associated with symptomatic presentation included nulliparity, late age at first childbirth, and absence of breastfeeding. **Conclusion:** Integrating systematic breast evaluation into routine gynecological practice is a highly effective strategy for the early detection of breast cancer and benign diseases. It serves as a crucial platform for educating women, thereby potentially reducing late-stage presentation and mortality.

Keywords: Breast Cancer, Gynecologist, Clinical Breast Examination, Screening, Breast Self-Examination, India, Prevalence, Early Detection.

INTRODUCTION

Breast cancer is the most common cancer among women worldwide, and its incidence is rising rapidly in India, where it now accounts for a substantial proportion of cancer-related morbidity and mortality [1]. A disturbing trend in the Indian context is the presentation of the disease at a younger age and at more advanced stages compared to high-income countries, leading to poorer outcomes [2, 3]. This late diagnosis is often attributed to a lack of awareness, social stigma, and the absence of organized, population-based screening programs.

In the absence of a national mammographic screening program, opportunistic screening and clinical evaluation become the cornerstone of early detection. The gynecologist, being the primary and often the only physician a woman regularly consults throughout her adult life, is in a strategic position to bridge this gap [4]. A gynecological visit presents an ideal opportunity to conduct a clinical breast examination [CBE], provide education on breast self-examination [BSE], and initiate a diagnostic workup for symptomatic women.

This study was designed to evaluate the tangible benefits of this approach. We hypothesized that a systemat-

ic, protocol-driven evaluation of breasts by gynecologists in a hospital setting would lead to the early identification of both benign and malignant breast diseases, provide critical data on local prevalence, and serve as a powerful tool for patient education.

MATERIALS AND METHODS

Study Design and Setting:

A hospital-based, cross-sectional study was conducted in the Department of Obstetrics and Gynaecology at CARE Hospitals, Hyderabad, a tertiary care center, over a 24-month period [October 2022 - November 2024].

Study Population and Sampling:

After ethical clearance and obtaining informed consent, 1100 women were enrolled using a simple random sampling technique. Women who had not achieved menarche were excluded.

Study Procedure:

- 1. History and CBE:** A detailed history, including reproductive and menstrual factors, was recorded. A standardized CBE was performed on all participants.
- 2. Group Categorization:** Women were categorized as:

Group 1 [Asymptomatic]: Women with no breast-related complaints [n=764].

Group 2 [Symptomatic]: Women presenting with breast lumps, pain, nipple discharge, or other symptoms [n=336].



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Imaging Protocol:

Women ≤ 40 years underwent breast ultrasonography.

Women >40 years underwent mammography.

4. **Pathological Confirmation:** Lesions classified as BIRADS III, IV, or V on imaging were subjected to FNAC for histopathological diagnosis.

Data Analysis: Data were analyzed using SPSS version 20. Descriptive statistics [mean, proportions] were used. The Chi-square test was applied to study associations between categorical variables, with a p-value of <0.05 considered statistically significant.

RESULTS**Demographic and Risk Factor Profile**

The mean age of participants was 48.2 ± 10.5 years. A significantly higher proportion of symptomatic women were nulliparous, had their first child after age 30, did not breastfeed, and had an early menarche [<12 years] compared to the asymptomatic group [all p-values <0.001]. [See Table 1].

Table 1: Association of Risk Factors with Symptomatic Presentation

Risk Factor	Asymptomatic [n=764]	Symptomatic [n=336]	p-value
Nulliparous/ Unmarried	12 [1.6%]	56 [16.7%]	<0.001
Age at 1st Child >30	52 [6.8%]	35 [10.4%]	<0.001
No History of Breast- feeding	49 [6.4%]	32 [9.5%]	<0.001
Menarche ≤ 11 years	164 [21.5%]	122 [36.3%]	<0.001
Practicing BSE	60 [7.9%]	52 [15.5%]	<0.001
Family His- tory of BC	3 [0.4%]	2 [0.6%]	0.621

Breast Self-Examination [BSE] Practices

Overall, only 112 women [10.18%] were aware of and practiced BSE. A significantly higher proportion of symptomatic women [15.5%] practiced BSE compared to asymptomatic women [7.9%] [$p < 0.001$].

Detection of Breast Diseases and Cancer

The overall prevalence of breast diseases was 15.2% [167/1100]. The crucial findings on cancer detection are summarized in Figure 1.

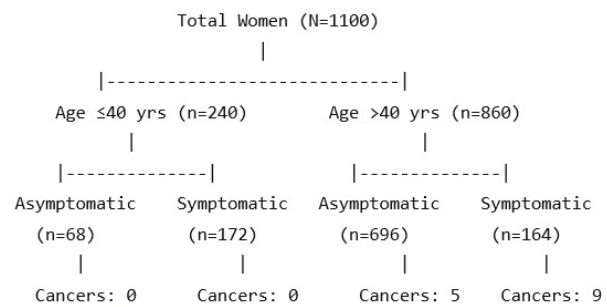


Figure 1: Breast Cancer Detection Stratified by Age and Symptom Status

Women >40 years: The cancer prevalence in this group was 1.63% [14/860]. Mammography screening of 696 asymptomatic women led to the detection of 5 cancers [detection rate: 0.7%]. Among the 164 symptomatic women, 9 cancers were diagnosed [detection rate: 5.5%].

Women ≤ 40 years: No breast cancers were detected in this younger cohort [0/240]. All suspicious lesions identified on ultrasonography [21 women] were confirmed to be benign [e.g., fibroadenomas, cysts] on FNAC.

Table 2: Diagnostic Yield of Mammography in Women >40 Years

Mam- mogra- phy [BIRAD S]	Asymp- tomatic [n=696]	FNAC Result [Benign: Malign- ant]	Sympto- matic [n=164]	FNAC Result [Benign: Malign- ant]
I / II	636 [91.4%]	-	104 [63.4%]	-
III	56 [8.0%]	55 : 1	56 [34.1%]	49 : 7
IV / V	4 [0.6%]	0 : 4	4 [2.4%]	2 : 2
Total Cancers	5		9	

DISCUSSION

This study demonstrates the profound impact a gynecologist can have on the breast health landscape in a resource-constrained setting like India. The finding that over 30% of women in a gynecology OPD presented with breast symptoms underscores a significant patient volume that actively seeks care, providing a ready platform for intervention [5].

The low prevalence of BSE practice [10.18%] and its association with the symptomatic group is a critical insight. It suggests that BSE is often initiated after a symptom is discovered, rather than as a proactive screening habit. This highlights a major gap in preventive health education, which gynecologists are ideally suited to address through consistent counseling during routine visits [6].

The core of our findings lies in the cancer detection rates. The 0.7% cancer detection rate in asymptomatic women over 40 through mammography is a powerful

argument for opportunistic screening in this age group.

These are cancers detected at a potentially earlier, more curable stage, which would have otherwise remained occult. The much higher detection rate [5.5%] in symptomatic women over 40 reinforces the critical importance of taking any breast complaint seriously and mandating a thorough investigation [7].

Conversely, the absence of malignancy in the under-40 cohort, despite a high prevalence of benign breast conditions, is a reassuring finding. It validates the use of ultrasonography as the primary imaging modality in young women, effectively evaluating symptomatic breasts without exposing them to radiation, while alleviating the significant anxiety associated with breast lumps in this age group [8].

Our data on risk factors align with global literature, confirming the protective role of multiparity and breastfeeding, and the elevated risk associated with early menarche and nulliparity in our population [9, 10]. This reinforces the value of a detailed history in risk stratification during a gynecological consultation.

CONCLUSION

The integration of systematic breast evaluation into standard gynecological practice is not merely an addition but a necessity. It is a highly effective, feasible, and low-cost strategy that yields significant benefits:

1. **Early Cancer Detection:** It facilitates the identification of impalpable cancers in asymptomatic women and ensures timely diagnosis for symptomatic women.
2. **Management of Benign Disease:** It provides diagnosis and reassurance for the vast majority of women with benign conditions.
3. **Platform for Education:** It serves as a critical touchpoint for educating women about breast awareness, BSE, and risk factors.

We strongly recommend that CBE be made a mandatory component of every gynecological examination. Gynecologists should champion age-appropriate imaging and leverage their unique patient trust to become the vanguard in India's fight against breast cancer.

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