Breast Cancer in Kerala: Addressing the Concerns and Improving Outcomes

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ABSTRACT

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Breast cancer is on the rise among women in Kerala, with a significant number of cases being diagnosed at a younger age compared to Western populations. This article discusses the challenges faced in early detection and management of breast cancer in Kerala, the limitations of relying on mammography for screening in younger women with dense breast tissue, and the potential benefits of clinical breast examinations as a cost-effective alternative. It also highlights the importance of proper management practices and the adoption of more intensive early detection methods to improve patient outcomes, reduce mortality, and enhance the quality of life for breast cancer patients.

Keywords: Breast Cancer, Kerala, Early Detection, Clinical Breast Examination, Breast Conservation, Sentinel Lymph Node Biopsy, Snehita Risk Calculator, Risk Stratification

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INTRODUCTION

Breast cancer is becoming an increasing concern in Kerala, with a significant number of patients being diagnosed at a younger age. Data from the Regional Cancer Centre (RCC) in Thiruvananthapuram indicates that around 50% of breast cancer patients in Kerala are under 50 years old, and 20% are diagnosed before the age of 40. This is in contrast to high-income countries, where the majority of breast cancer cases are found in women over 60 years old. This younger age profile of breast cancer patients in Kerala presents unique challenges in both the detection and management of the disease, highlighting the need for a tailored approach to breast cancer care in the region.[1-3]

Early Detection: Challenges and Strategies

The cure rate for breast cancer when detected early exceeds 90%, with outcomes in Kerala comparable to or even better than those in high-income countries. However, the majority of women in Kerala present with advanced-stage disease, leading to a high mortality rate, with nearly 50% of patients succumbing to the disease. This tragic situation often results in the loss of young mothers in the prime of their lives, leaving behind orphaned children. The absence of an effective system for early detection and management is a key contributor to this unfortunate scenario.[4,5]

In Western countries, screening mammograms are an integral part of early detection strategies. However, the effectiveness of mammography in younger women, particularly those with dense breast tissue, is limited. In Kerala, where a significant proportion of breast cancer patients are younger, mammograms are likely to miss early lesions, making them a less reliable screening tool.

A more appropriate approach to early detection in Kerala would be the implementation of routine clinical breast examinations (CBE) by trained healthcare providers. A simple, cost-effective method, CBE can detect breast lumps at an early stage, significantly improving the chances of cure. An expert clinician can detect lumps as small as 1 cm, with a cure rate exceeding 90%. Regular CBE for all women over 30 years of age, every 6 to 12 months, by trained volunteers could detect lesions below 2 cm, potentially

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saving up to 80% of patients and dramatically reducing the current mortality rate.[6]

Moreover, it is crucial to ensure that at least female general practitioners and gynecologists are trained in performing proper CBE. These healthcare providers should consider opportunistic CBE for all women 30 years and above, and particularly for high-risk women starting at 25 years of age. This proactive approach can significantly enhance early detection efforts, especially in a population where the risk of breast cancer manifests at a younger age.[7,8]

In addition to CBE, more intensive early detection methods should be adopted, particularly for high-risk groups. This includes beginning CBE at an earlier age and increasing the frequency of examinations. For those with a family history of breast, ovarian, pancreatic, or prostate cancer, appropriate imaging methods such as MRI breast may be utilized. The Snehita risk calculator (available at snehita.in) can also be employed to identify individuals who may require more intensive early detection strategies, ensuring that those at high risk receive the attention they need.[9,10]

Proper Management: Key to Improved Outcomes

Early detection alone is insufficient to improve breast cancer outcomes. Patients must also receive appropriate and effective management to ensure the best possible outcomes. Several practices in the management of breast cancer can be optimized to avoid unnecessary procedures and ensure that patients receive the most effective treatment:

- **Avoidance of Unnecessary Investigations:** Unnecessary investigations, such as PET, should be avoided in early-stage cases, and MRI shouldn't be used except for specific indications. Patients often spend significant amounts on these investigations, leaving insufficient funds for essential treatments like surgery.

- **Core Biopsy Over Excision Biopsy:** Breast cancer should be diagnosed using a core biopsy prior to surgery, which is feasible in over 95% of cases. This approach avoids unnecessary excision biopsies and ensures accurate diagnosis before surgical intervention.

- **Sentinel Lymph Node Biopsy (SLNB):** SLNB should be preferred over complete axillary clearance in appropriate cases. This practice reduces the risk of lymphedema and improves the patient's quality of life.

- **Breast Conservation Surgery:** Total mastectomy should be avoided in cases where breast conservation surgery would suffice. Breast conservation, when combined with margin-negative surgery and oncoplasty, offers equivalent oncological outcomes with better cosmetic results.[11]

- **Judicious Use of Adjuvant Therapy:** Adjuvant therapies should be used judiciously. The decision to use such therapies should be based on individual patient factors and the biology of the disease.

Additionally, surgery remains the cornerstone of breast cancer treatment and is the primary determinant of cure. Ensuring that surgeons are trained in performing margin-free excision of breast lumps with minimal margins, sentinel lymph node biopsy, and breast oncoplasty is imperative. These skills are critical for achieving oncologically safe surgeries while also optimizing cosmetic outcomes, thereby significantly enhancing the patient's quality of life.[12]

To assist in clinical decision-making and to educate patients about their treatment options, tools like Predict UK (accessible at predict.nhs.uk) can be invaluable. Predict UK is a prognostic model that helps clinicians and patients understand the likely benefits of different treatment options based on individual patient characteristics and tumour biology, allowing for more informed and personalized treatment decisions.[13]

CONCLUSION

The public needs to be better informed about the importance of early detection and proper management of breast cancer. This can only be achieved if general practitioners and non-oncology specialists are aware about the benefits of clinical breast examinations for early detection and the principles of proper initial surgery. Moreover, the adoption of more intensive early detection methods, such as CBE at an earlier age and more frequent intervals, along with appropriate imaging for high-risk individuals, can further reduce mortality rates. The Snehita risk calculator (https://snehita.in/risk) offers a valuable tool to identify those who may require these intensified strategies, while Predict UK (predict.nhs.uk) serves as an important resource for both clinicians and patients in making informed treatment decisions. The three major factors determining the cure in early breast cancer are early detection, the biology of the disease, and the quality of the initial curative surgery. Proper adjuvant therapy and appropriate follow-up are also crucial in ensuring

long-term survival and quality of life for breast cancer patients in Kerala. By addressing these concerns, we can significantly reduce breast cancer mortality and improve the lives of women in Kerala.

END NOTE

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