JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Breast Cancer and Breast Self-Examination: A Review

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Abstract

Breast cancer remains one of the most common malignancies affecting women globally, with a particularly high burden in developing nations like India. Early detection through screening methods such as breast self-examination (BSE) plays a vital role in reducing morbidity and mortality. This review article highlights the epidemiology, risk factors, clinical manifestations, diagnostic evaluation, prevention strategies, and the significance of BSE in early detection. It emphasizes the importance of awareness among women and the role of nurses in promoting health education. The article also reviews existing evidence supporting BSE as a cost-effective and feasible screening method, particularly in resource-limited settings.

Keywords: Breast cancer, Breast self-examination, Early detection, Nursing education, Prevention

Introduction

Breast cancer is the leading cause of cancer-related deaths among women worldwide, accounting for significant morbidity and mortality. According to GLOBOCAN 2020, approximately 2.3 million new cases of breast cancer were diagnosed globally, with nearly 685,000 deaths reported. In India, breast cancer has overtaken cervical cancer as the most common cancer among women, with urban populations at higher risk. The growing incidence is attributed to lifestyle changes, genetic predisposition, and lack of awareness about early detection strategies.

Methodology

This review article was prepared using a structured approach to identify and synthesize relevant literature on breast cancer and breast self-examination (BSE).

Electronic databases including PubMed, Google Scholar, ScienceDirect, and WHO/Globocan repositories were searched for articles published between 2010 and 2024.

The search was performed using keywords such as “breast cancer,” “breast self-examination,” “early detection,” “risk factors,” and “prevention.”

Inclusion criteria comprised peer-reviewed journal articles, reports from recognized organizations (WHO, IARC, Indian Council of Medical Research),

and review papers in English that addressed epidemiology, risk factors, prevention, and BSE practices. Exclusion criteria included conference abstracts,

non-English papers, and studies lacking full-text access.

A total of 85 articles were screened, of which 46 met the inclusion criteria and were included in this review.

Data from these sources were carefully extracted, analyzed, and synthesized under thematic headings such as epidemiology, risk factors, prevention, and BSE methodology.

The final content was arranged systematically to provide clarity, coherence, and relevance to nursing and medical practice.

Epidemiology

Globally, breast cancer represents about 11.7% of all cancer cases, making it the most commonly diagnosed cancer. In India, estimates suggest that one in 22 women is likely to develop breast cancer during her lifetime. The incidence is higher in metropolitan cities, where lifestyle and reproductive factors contribute to rising numbers. Delayed presentation is common due to stigma, ignorance, and limited access to healthcare facilities, resulting in poor survival outcomes.

Risk Factors

The risk factors for breast cancer can be categorized into modifiable and non-modifiable factors. Non-modifiable factors include age, family history, genetic mutations (BRCA1 and BRCA2), early menarche, and late menopause. Modifiable risk factors involve lifestyle behaviors such as obesity, alcohol consumption, smoking, sedentary lifestyle, and delayed childbearing. Awareness about these risk factors is crucial for prevention and early intervention.

Clinical Manifestations

Breast cancer presents with varied clinical features, ranging from painless lumps to more advanced symptoms such as nipple discharge, skin dimpling, retraction of the nipple, ulceration, and enlarged axillary lymph nodes. Some women may remain asymptomatic in the early stages, highlighting the importance of regular self-examination and screening.

Diagnostic Evaluation

Diagnosis of breast cancer involves a combination of clinical examination, imaging, and histopathological confirmation. Screening modalities include mammography, ultrasound, and MRI. Fine needle aspiration cytology (FNAC) and core needle biopsy are standard diagnostic tools. Mammography remains the gold standard for early detection, but in low-resource settings, BSE serves as an accessible and cost-effective method for raising awareness and prompting medical consultation.

Prevention Strategies

Preventive strategies focus on health promotion, lifestyle modification, chemoprevention, and prophylactic surgeries for high-risk groups. Regular physical activity, a healthy diet, and avoiding alcohol and smoking contribute significantly to risk reduction. Nurses play a vital role in counseling women about screening practices and encouraging early medical consultation.

Breast Self-Examination (BSE)

BSE is a simple, non-invasive, and cost-free method that empowers women to detect changes in their breasts at an early stage. It is recommended that women perform BSE monthly, ideally a few days after menstruation. The technique involves both visual inspection and palpation in standing and lying positions. While BSE is not a substitute for clinical breast examination or mammography, it increases awareness and improves health-seeking behavior.

Nursing Implications

Nurses are at the forefront of health education and play a critical role in breast cancer prevention and early detection. They are responsible for educating women on how to perform BSE correctly, dispelling myths, and reducing stigma. By integrating breast health awareness into community health programs, nurses can significantly contribute to reducing the burden of breast cancer.

Conclusion

Breast cancer continues to be a major public health concern worldwide. Early detection remains the cornerstone of reducing mortality. Breast self-examination, though not a diagnostic tool, plays an essential role in awareness and timely medical consultation. Strengthening health education, especially in resource-limited settings, can save lives by promoting early detection and treatment.

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