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# BREAST CANCER IN PAKISTAN - AWARENESS AND EARLY DETECTION

Gaba Sohail and Shams Nadeem Alam\*



Breast cancer is the leading cause of women mortality and cancer-related morbidity across the world. Pakistani women are no exception. Like carcinoma lung, it has shown an exponential rise in incidence after the Second World War. International as well as local figure indicate this disease alone to be accountable for about a third of all the cancers in females and one out of every ten new cancer cases turns out to be carcinoma breast.<sup>1-3</sup> Approximately one in every 9 Pakistani women is likely to suffer from breast cancer which is one of the highest incidence rates in Asia. Geographic incidence of the disease does vary with India, China, Japan and Philippines being the traditional low-risk countries. What is absolutely amazing is that Pakistani women show an incidence rate of 50.1/100,000 and the neighboring India with similar socio-cultural background of a young age at first child-birth and breast-feeding practices, has an incidence rate of only 19/100,000. Differences in diet or genetic factors may provide a partial explanation.

In contrast with the Western epidemiology, the disease occurs at a younger age in Pakistani females, has a larger lesion size at presentation, showing a greater frequency of metastases to the axillary nodal metastases and the predominant morphology is a higher grade of infiltrating ductal carcinoma.<sup>4</sup> Although the biological behavior of this cancer is to behave like a systemic disease, identification of the sentinel node is an important management point. This is the node where the tumor travels first. The study by Hameed, *et al.*, in the current issue of the Journal also shows sentinel lymph node identification in 80 out of 95 patients with invasive breast and even a ductal carcinoma-*in-situ*.

The prevention of this disease is difficult being attempted with risk-related surgery, chemoprevention and life style changes (greater physical activity, reduction of body weight, dietary modifications, abstinence from alcohol and reduction in dose and duration of hormone-replacement-therapy) but the target group has to be identified for its practice. There are known risk factors but these are not found in every patient with breast cancer. Although the modified Gail mathematical model (the NSABP 2 model) computes this risk for individual based on the individual's current age, age at menarche, age at first child-birth, age at menopause, number of previous breast biopsies, number of family members already diagnosed with

breast cancer, this is not a very reliable model as yet. It underestimates risk for women from the high-risk areas, overestimates for those from the low-risk areas and is not applicable on certain groups at all.

With this background, efforts must be directed towards awareness and early detection, which is the recommended key for the resource-constraint countries by the concerned WHO conference of May 2005.<sup>5</sup> It also asked these countries to come together and develop a common ground for measures to reduce breast cancer rates and practice economically-feasible and culturally-compatible diagnostic and therapeutic modalities.

Awareness among the masses remains an important issue. Like the red ribbon of AIDS, the 'pink ribbon' has become the symbol of reverence and care for the sufferers of breast cancer. The symbol is the brain-child of Evelyn H. Lauder, founder and president of the Breast Cancer Research Foundation and Alexandra Penney, invented in 1991. It helps those already diagnosed and creates awareness for screening and early detection among those who are still spared. The Pakistan Chapter is most active in Punjab while activities in other provinces have not been so pronounced as yet.

Self-examination, clinical examination and mammography remain the basis of screening and early diagnosis. This triple approach has brought about marked changes in the early detection of disease in the asymptomatic women in the UK, Sweden etc where cancer registries are now witnessing a breast cancer mass being detected at a much smaller size and, therefore, more amenable to therapy. Mammography in particular is said to be as near-example of a perfect screening test as possible with high sensitivity, specificity, negative predictive value particularly in the fatty breast, reproducibility and feasibility.

With paradigm changes in surgical management strategies from radical surgery to salvage surgery, MRI of breast is also showing promise to be a worthwhile adjuvant to mammography and sonography. It is said to have a sensitivity of 57.4% in detecting additional foci of breast cancer, which can significantly alter the surgical management.<sup>6,7</sup> Its sensitivity for invasive cancer is 93.1%.<sup>7</sup> The practice of MRM (Magnetic Resonance Mammography) in Pakistan is still in its infancy, being practiced at a few centers only. Cost, availability and radiologist's expertise remain the main limiting factors. Same remains the scenario for novel and sophisticated immunohistochemistry and chromogenic studies, which are far advanced in the West but in Pakistan, these have become available only recently and at limited places. One such technique has been elaborated upon by Pervaiz *et al.* in the current issue of JCPSP. These are not applicable for masses at present because of the cost and limited availability, yet such

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Received: December 18, 2007; accepted: December 31, 2007.

studies conducted on population may explain difference in incidence between Pakistan and the geo-cultural neighbors.

What needs to be adopted is an organized strategy directed towards the screening, early detection and salvage surgery in a disease that rarely undergoes spontaneous regression and dormant metastatic foci may awaken decades later. Pakistan completely lacks an organized approach to combat this disease at large. What is needed is greater emphasis on an organized public awareness without creating panic, teaching women to self-examine breast and report any suspicious finding to a qualified clinician, and develop multidisciplinary breast tumor boards in the tertiary health care centers for effective, comprehensive and affordable treatment.

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