

## SCREENING FOR BREAST CANCER- FINDING AN INDIAN SOLUTION TO AN INDIAN PROBLEM

Cancer screening refers to the use of tests to detect cancer at an early stage, before it causes symptoms and hopefully at a time when it is curable. More than 2,00,000 women in the United States are newly diagnosed with breast cancer each year and about 40,000 women die each year of breast cancer, making it *second only to lung cancer* in cancer deaths among women there. The death rate from breast cancer has declined about 20 percent over the past decade<sup>1-8</sup>. This is due, in part, to the ability of increased screening to find the disease at earlier stages when the chances of successful recovery are higher. In fact, there is more scientific evidence supporting the use of screening tests for breast cancer than for any other type of cancer. The Indian scenario is also alarming and in a study conducted by the author's group, the incidence showed a trend towards being more commonly presenting as locally advanced and with two peaks at young and old age groups respectively<sup>1-6</sup>.

There are three commonly used methods of screening for breast cancer i.e. mammography, clinical breast examination, and breast self examination. Clinical breast examination is performed by a health care provider and is typically performed at the yearly physical examination. Breast self examination is a means of detecting changes in one's own breast and is typically performed at the same time each month preferably about one week after the menstrual period ends, when the breasts are least lumpy. In postmenopausal women that are not menstruating, the same day each month is recommended. Breast self examination is not a substitute for mammography or breast examination by a health care professional but practicing breast self examination on a regular basis improves the women's ability to detect subtle changes that would otherwise not have been noticed.

The goal of any screening programme is to prevent death and not simply to detect cancers and the role of mammography for this purpose in breast cancers has been strongly debated. Although mammography does detect some cancers "early", but many of these are not potentially lethal and their detection causes needless anxiety. In the western world, breast cancer screening and mammography have almost become synonymous in the public perception, yet this should not necessarily be the case. Ideally, a screening tool for breast cancer would reduce mortality from breast cancer while having a low false alarm rate and being relatively cheap. Therefore an ideal screening test should be simple, expensive, and effective. Of the three modalities of breast cancer screening i.e. breast self examination, clinical breast examination, and mammography, breast self examination fulfils the first two criteria, but early results of two randomized trials conducted in Russia and China suggest that it would not be effective in reducing mortality from breast cancer<sup>7,8</sup>. Clinical breast examination is also relatively simple and inexpensive, but its effectiveness in reducing mortality from breast cancer has not been directly

tested in a randomized trial Mammography is complex, expensive, and only partially effective<sup>6,7</sup>. There is sufficient circumstantial evidence to suggest that clinical breast examination is as effective as mammography in reducing mortality from breast cancer<sup>6,7</sup>. The results of the NHS breast screening programme trial for women aged 50 to 64 during the first round of screening where, over a million women were screened, a little over 5000 cancers were detected<sup>6,9</sup>. Of these, 60% were invasive cancers >1 cm in size. Such cancers would be expected to be detected by clinical breast examination also. Powerful support has also emerged recently from the Japanese National Programme of clinical breast examination<sup>10</sup>. In this study they describe a comparison of breast cancer mortality in municipalities with "high coverage" of clinical breast examination with that in suitable control municipalities. The percentage change in are adjusted mortality between 1986-90 and 1991-5 was over 40% in the area where "high coverage" was adopted compared with 3% in the control areas. It must be remembered that Japanese breast lend themselves more to clinical breast examination than their European or Indian counterparts, being smaller and dome shaped rather than obese and pendulous. The author has been working on the role of dermatoglyphics (finger printing) as a modality along with clinical breast examination to find an inexpensive and non-invasive screening modality as an Indian solution to an Indian problem<sup>1</sup>. The initial results are encouraging and the study is still continuing to cover the high risk groups and is likely to emerge as probably the first such endeavor from the developing world.

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