Breast Cancer- Awareness and Early Detection

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Breast cancer (BC) is a heterogeneous group of neoplasms originated via epithelial cells, which line the milk ducts. Breast tumor heterogeneity is matter of discussion and research in histology and clinical outcomes for a long span of time, and these differences pave the paths to disease classification. Out of the few tumor types which successfully use the molecular classification for the design of individualized therapies, BC is one of them. These types of tumors lead to significant improvements in disease-specific survival. The classification based on comprehensive gene expression profiling, divides the breast tumors into at least three broad subtypes: luminal, human epidermal growth factor receptor 2+, and basal like. In both developed and under development countries, BC is the most common type of cancer in females. To be precise, one out of ten cancers identified each year in female is BC. Moreover, it's a worldwide major cause of deaths occurring among women due to cancer. According to the WHO's 2008 GLOBOCAN, BC is the most frequent cancer in women, affecting an estimated 1.38 million people [1]. Among the Asian population, Pakistan reports the highest incidence of BC i.e., 19.33% [2]. The established risk factors of BC are linked to oestrogens. Risks are increased by several factors including early menarche, late menopause, and obesity in postmenopausal women. Increasing concentrations of endogenous oestradiol also increased risk of BC. Childbearing somehow reduces risk, with a greater protection for early first birth and a larger number of births; illustrated as breastfeeding probably has a protective effect. Moreover, the oral contraceptives and hormonal therapy for menopause both tend to cause a little increase in breast-cancer risk, which appears to diminish once use stops. Alcohol also increases risk, whereas physical activity probably declines. Mutations in certain genes like BRCA1 and BRCA2 also massively enhance the risk to BC, but these certainly account for a minority of cases. Of all the key challenges that occur during BC research, mapping of pathways that give rise to metastasis is one of them. Recent studies have done analysis of gene expression profiles to identify markers which correlate with metastasis. Clinical and pathological risk factors, such as patient age, tumor size, and steroid receptor status, are commonly used to assess the likelihood of metastasis development. In Pakistan socioeconomic factors are to blame for the poor health of women especially in rural communities. One in nine Pakistani women have had BC at some point in their lives. There are no screening facilities for the diagnosis of different types of cancer, and a lot of women lose their lives to BC each year. Most Pakistani women are impoverished and unable to pay for costly screening exams. Talking about BC is considered a taboo and women don't talk about it due to shyness. Campaigns on awareness of BC are needed country wide specially targeting rural areas. Women who are above 40 should be suggested to get mammogram time to time. Women should be advised to do Breast self-examination (BSE) once a month for detection of cancer at an early stage.

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