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Delayed Progress in Detection and Treatment of Male Breast Cancer

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Abstract

Cancer generally starts when cells begin to grow out of control in any organ in human body. The review in brief describes about breast cancer especially in men. Breast cancer occurs almost entirely in women, but men can get breast cancer too, where the cells usually form a tumor and can be identified over an X-ray or can also be felt as a lump at the breast region [1]. Of course, it is very little known about population–level patterns of incidence but is being prevalent and growing malignant diseases among men across the globe in past three decades. Like many other rare "orphan" diseases, male breast cancer is understudied. However, Male Breast Cancer (MBC) accounts for ~1% of breast cancer cases identified every year [2-5].

Keywords: Male Breast Cancer (MBC); Cancer; BRCA2 mutations; AR gene mutations; CYP17 polymorphism

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Introduction

The major reason in delayed diagnosis might be due to small amount of breast tissue in men and is harder to feel or making it more difficult to catch these cancers early. This also means tumors can spread more quickly to surrounding tissues. A man's chance of getting breast cancer goes up with age and most breast cancers happen to men in the later ages of 60 or 70 [6].

There were several studies on male breast cancer. Papers published from 1942 to 2000 on breast cancer in men were identified by using Cancer Lit, MEDLINE, and other study bibliographies. Out of which K S Heller study in 1978 and Nicole C. F. Hodgso in 2000 makes some significant contributions in this study area. According to Nicole C. F. Hodgso on the data obtained from Florida Cancer Data System (2000) Infiltrating ductal was the most common subtype (92%); fewer common subtypes included mucinous (2%) and papillary (2%). Localized disease accounted for 45% of all cases, with regional disease in 33%, distant metastases in 7%, and upstaged in 15% [2,7,8].

The epidemiology of MBC has similarities with the epidemiology of female breast cancer. Genetic factors associated with an increased risk of breast cancer for men include BRCA2 mutations, which are believed to account for most of the inherited breast cancer in men. Suspected genetic factors include AR gene mutations, CYP17 polymorphism, Cowden syndrome, and CHEK2 [9].

Epidemiologic risk factors for Male Breast Cancer include some disorders relating to hormonal imbalances, obesity, testicular disorders and other sources as radiation exposure. Suspected epidemiologic risk factors include prostate cancer, prostate cancer treatment, gynecomastia, occupational exposures like electromagnetic fields, polycyclic aromatic hydrocarbons and high temperatures, dietary factors as meat intake and fruit and vegetable consumption especially alcohol intake [10,11].

According to Korde LA, et al. (2010) this large-scale population-based comparison between male and female breast cancers provided intriguing etiologic and prognostic clues [12]. First, similarity of both the age-standardized and age-specific incidence rate trends over time raises the possibility that there may be breast cancer risk factors that are common to both men and women. Second, the descriptive patterns show that the biology of male breast cancer resembles the late-onset and ER–positive type of female breast cancer. Finally, mortality and survival rates for male and female breast cancers improved substantially over time, but progress in men lagged progress in women [5,13-15].

Conclusion

There is a need of additional translational studies for a better extrapolate the successful adjuvant treatments for female breast cancer to male breast cancer, especially hormonal treatments for hormone receptor–positive disease. Tamoxifen is likely effective in treating male breast cancer. Finally, a more comprehensive understanding of the secular as well as age-related relationships between male and female breast cancers will inform both the prevention and treatment of breast cancer overall.

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