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The psychosocial and sexual effects of a feminised condition within a masculine body: a review article of male breast cancer

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ABSTRACT

Male breast cancer (MBC) is a rare condition whose incidence is on the rise. To date there are limited support services available to men with breast cancer and no Australian studies looking at the social determinants of MBC and its impact on the prognosis of this disease. Lack of MBC awareness and specific information continues to be an issue for the men.
A literature search was undertaken using PubMed to identify articles published on the topic of MBC. Breast cancer is not a gender exclusive disorder and the current lack of open discussion and research into the MBC and its psychosexual consequence has shown to be associated with harmful effects on mental and sexual health of men. More research is necessary to study its biological nature as well as its association with psychosocial and sexual effects.

Introduction
Male breast cancer (MBC) is a rare (1 in 100) and unique condition unlike any other due to psychosocial health factors contributing to morbidity and mortality. It is also a potentially fatal condition whose incidence is on the rise in the recent years particularly among the male population (1). This article aims to evaluate the key aspects of MBC and provide a review of the literature to identify the currently available treatment, management and support options.

Genetic causes
Genetic causes contribute significantly to MBC with up to 7.5% of men with breast cancer havinga chromosomal abnormality, Kleinfelter syndrome being the most common genetic risk factor (2). Men with BRCA-1 and BRCA-2 gene mutation have a 6% risk of developing breast cancer (3).

Hormonal causes
Attributable causes of hormonal imbalance between oestrogen and testosterone such as testicular maldescent and injury, mumps orchitis, prostate cancer, and increased peripheral aromatisation of andorogens may have a positive link to the development of male breast cancer (4, 5).

Environmental causes
Environmental and lifestyle factors such as exposure to radiation and high temperatures, obesity, diabetes, hypertension, hyperlipidaemia, alcohol consumption and liver disease have been hypothesised to reduce testicular function leading to hormonal imbalance which may be implicated in MBC (6).

Epidemiology of presenting symptoms
The symptoms and signs of male breast cancer is similar to those of women, although these become evident on average ten years later than that of women's breast cancer symptoms (7). The duration prior to diagnosis depends on geographical locations and can range anywhere from one to eight months, longer than the female breast cancer population (8).

Clinical findings
Examination findings include the presence of painless, hard lump with skin tethering and/or discharge which is suspicious for a malignant formation. Up to 50% of patients with diagnosed male breast cancer have spread to axillary lymph nodes at the time of diagnosis (9). The most appropriate means of detection of breast cancer is in the form of clinical examination and it is the key to survival as male breast cancer screening is currently not feasible given the low incidence rate. Perhaps it is for this reason that men are twice as likely to have spread to the axilla and 10% more likely to have tumours greater than 1 cm at diagnosis which has a great impact on prognosis and survival compared to women (10). Of particular note is Paget's disease which can mimic the signs of breast cancer while pigmented lesions can mimic melanoma (11).

Investigations
Mammography, ultrasound, Magnetic Resonance Imaging (MRI) and aspiration cytology have been successfully used-women with breast cancer and these modalities have also had success with the diagnosis of male breast cancer. False positive are observed in gynaecomastia, fat necrosis and inflammatory breast disease and the results need to be reported with care. Other modalities such as galactograms and MRIs have not been studied to the extent to be able to draw on a conclusion.

Treatment options
Treatment options include surveillance, surgery with or without reconstruction and adjuvant therapy. Surveillance may be indicated in men in the high risk category such as chromosomal abnormalities or significant environmental exposure such as radiation. The current surgical guidelines state that simple mastectomy along with either sentinel node biopsy or axillary clearance depending on the lymph node fine needle aspiration (FNA) results is sufficient (12). Post-operative breast reconstruction can be considered to fill the chest wall defects.

Non-surgical management options
The non-surgical options include hormonal therapy, radiotherapy and chemotherapy. Hormone therapy improves the 5-year survival rates more so if node positive and if combined with radiation therapy and chemotherapy may further prolong the life expectancy rate (13). The majority of male breast cancer are estrogen receptor positive and endocrine therapy should be considered as studies have shown that agents such as Tamoxifen increase the life expectancy rates (14). Chemotherapy is indicated for patients with hormone-negative cancer and/or cancer which are aggressive in nature (15).

Pathology
The histopathology of the MBC is similar to that of women, however 90% of cases have an invasive component while the remaining 10% are non-invasive carcinoma in situ of ductal origin (16).

Psychological distress
The emotional and psychological impact of breast cancer in females is well known and awareness campaigns are well established for support and education. The psychological and sexual problems arising from diagnosis of breast cancer in men leading to removal or disfigurement of the breast has also been shown to result in body image issues in men.

However, given the fact that the breast is viewed as a figure of femininity and sexuality, men may suffer in silence from self-perception and sexual identity issues and most of the time do not seek medical or psychological assistance, with up to a quarter of men suffering from breast cancer specific psychological distress (17). Most often it is not the diagnosis of the condition itself but rather the perceived isolation and neglect from their partners and others.

Sexual distress

Sexual health, being an important contribution to overall health, is an important area of study in this group of patients to ensure a holistic approach of care is delivered. Depending on the personality of the man, the breast may be a symbol of sexuality, which when removed, has just as great of an impact on health as it has been reported for women. Furthermore, studies have found that this diagnosis can greatly damage the concept of masculinity and negatively impact on activities of daily living (18). The mastectomy scar, in particular, has implication to the way the men interact with their surroundings. One study revealed that men were reluctant to remove their shirts in public out of fears of judgement (19). A lack of gender specific information further impacts on their self-esteem and confidence.

Masculinity and stigma attached to male breast cancer

In addition to the diagnosis of a feminised cancer, studies revealed the high rate of men who were also likely to suffer from emotional distress(20, 21). Medications such as Tamoxifen had significant side effects including erectile dysfunction and loss of libido which further impacted on their sexual and emotional life, many experiencing humility and despair (22). Some men resorted to the 'silent treatment' and concealed their diagnosis altogether. This silent suffering is contributing to the morbidity of this disease and awareness campaigns that target the emotional wellbeing are needed to bring understanding and acceptance of the disease.

Emotional implications

The diagnosis of breast cancer may lead to emotional as well as social difficulties particularly in men who display a 'provider mentality' as the diagnosis of a feminised illness may imply loss of masculinity. The necessary time off work, unable to financially provide for their families, a feeling of shame and a de-masculinised image in the presence of their partner or spouse has the potential to lead to serious psychosexual harm. Studies suggest that men are not adequately educated in regards to the cause of the condition, many believing that their bodies are in excess of estrogen, concluding that their bodies are somewhat feminised(23, 24).

Interacting with Healthcare providers

Studies have found that patients did not believe that healthcare providers were aware of the psychosexual aspects of the diagnosis, particularly the hormonal based side effects of Tamoxifen such as erectile dysfunction (25). This differs greatly to the support provided to women diagnosed with breast cancer leaving men to feel marginalised which further impacted on their psychological health. Men reported feeling frustrated about the limited knowledge and investigations offered to them on initial presentation. It is vital for the psychosocial wellbeing of the men for clinicians to be vigilant in their diagnosis and not to dismiss clinical findings due to the rarity of the disease.

Social support

There are fewer avenues for support for men with breast CANCER when compared to women. Currently most of the support comes from their spouse or partner, with some men stating that their male colleagues and friends had difficulties accepting the diagnosis. This led to many men hiding their diagnosis and living in shame and fear of being de-masculinised. Studies showed that given these reasons men are less likely to participate in support groups aimed at developing strong social bonds (26). Men who do attend are more likely to attend for information rather than emotional support (27).

Conclusion

Breast cancer is not a gender exclusive disorder and the current lack of open discussion and research into the male breast cancer and its psychosexual consequence has shown to be associated with harmful effects on mental and sexual health of men.

Recommendation

Greater public health awareness is necessary to address the gender issues and reduce the stigma attached to the disease. Support groups should be established for the men who have difficulties coping with the aspects of diminished masculinity and more education is necessary for prevention and early detection of male breast cancer. Psychosocial and behavioural treatment should be offered to men who have difficulties coping with the implication the disease has on their masculinity. A supports network for males with breast cancer should be developed and gender-neutral information provided.

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