Male Breast Cancer

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Case Study

S.U., a 71-year-old man who lives alone, presented to the emergency department complaining of chest pain. He received a complete cardiac workup, and his chest pain was attributed to heartburn and indigestion. When the nurse practitioner examined him, she discovered a large ulcerated left breast mass (see Figure 1) with no palpable axillary lymphadenopathy. S.U. admitted that he’d known about the mass for a few years and that it had ulcerated a few months ago. He did not tell anyone about it because he was embarrassed to be “growing” a breast.

A core biopsy of the breast mass revealed that the patient had infiltrating ductal carcinoma. He underwent a sentinel lymph node biopsy, which showed two positive sentinel lymph nodes. He subsequently underwent a modified radical mastectomy, and the tumor was found to be estrogen-receptor (ER) and progesterone-receptor (PR) positive.

Incidence and Risk Factors

Jemal et al. (2004) estimated that 217,440 new cases of breast cancer will be diagnosed in 2004. About 1,450 of these new cases are expected to be diagnosed in men. Male breast cancer (MBC) comprises less than 1% of all breast cancers and less than 1% of all cancer deaths in males, but its incidence and mortality are rising (Levi, Lucchini, & LaVecchia, 2002).

MBC is extremely rare, and literature about this topic is scarce. Lay people often are surprised to learn that men are at risk for developing breast cancer and that men actually have breast tissue. Furthermore, they typically are unaware that many of the risk factors for MBC are similar to risk factors for women.

Risk factors for MBC include advancing age, benign breast disease (i.e., nipple discharge, breast cysts, and breast trauma), testicular disease, radiation exposure, estrogen exposure, and diseases associated with hyperestrogenism, such as cirrhosis or Klinefelter’s syndrome (i.e., XXY chromosomal abnormality) (Giordano, Buzdar, & Hortobagyi, 2002; National Cancer Institute, 2003). Johnson, Pan, and Mao (2002) also noted that increased weight and high body mass index may increase the risk of MBC. Family history of breast cancer in first-degree relatives and males with female and male relatives who have BRCA2 mutations carry an increased risk (Bernard-Gallon et al., 2003). Men with a personal history of prostate cancer are at increased risk for developing a second primary breast tumor (Thellenberg, Malmer, Tavelin, & Gronberg, 2003), and men diagnosed with breast cancer are at high risk of contralateral breast cancer, especially if their initial breast cancer was diagnosed before they were 50 years of age (Auvinen, Curtis, & Ron, 2002). Gynecomastia is not considered a risk factor for MBC (Olsson, Bladstrom, & Alm, 2002).

Prognosis

MBC tends to be diagnosed at a later stage than breast cancer in females, largely because of the public’s lack of awareness about the disease in men (El Omari-Alaoui et al., 2002; Giordano et al., 2002). Similar to female breast cancer, the most important prognostic indicators for MBC are tumor size, axillary node status, ER and PR status, and histologic grade (El Omari-Alaoui et al.; Giordano et al.). O’Malley, Prehn, Shema, and Glaser (2002) compared MBC survival rates for different ethnic and racial groups and found the following five-year breast cancer survival rates: 83% for whites, 72% for blacks, and 89% for men of other racial or ethnic backgrounds. The researchers also discovered significant differences in survival based on race alone even when prognostic indicators were similar.

Clinical Presentation and Diagnosis

The public is generally unaware of MBC. When men discover a breast lump, they often do not have it evaluated. Thus, the diagnosis of MBC typically is delayed (El Omari-Alaoui et al., 2002; Giordano et al., 2002). Approximately 85% of men with breast cancer present with a subareolar mass. Other presenting signs and symptoms include nipple retraction, discharge, or bleeding. Patients also may present with nipple or breast ulceration. Mammography usually is performed to distinguish between gynecomastia and possible carcinoma. However, because MBC is so rare, routine screening mammograms are not recommended for men.

A biopsy of the suspicious lesions is performed for pathologic examination. ER and PR status and HER2-neu tests also are completed to adequately stage the patient and determine the best treatment plan. In addition, p53 and p53i (Ki67) may be analyzed in the tumor. The researchers also discovered significant differences in survival based on race alone even when prognostic indicators were similar.
Infiltrating ductal carcinoma is the most common pathology in MBC. Other pathologic diagnoses include ductal carcinoma in situ, inflammatory breast cancer, and Paget’s disease of the nipple (Giordano et al., 2002; Muir, Kanthan, & Kanthan, 2003; National Cancer Institute, 2003). The incidence of lobular carcinoma is very rare because the male breast consists mostly of ductal tissue (Giordano et al.).

**Male and Female Breast Cancer**

A recent Canadian study compared immunohistochemical components of male and female breast cancer (Muir et al., 2003). The researchers found that MBC more often presented with grade 3 (85%) lesions compared to breast cancer in women (50%). Males with high-grade lesions more frequently had ER-positive tumors compared to females (81% versus 69%). Men were less likely to overexpress p53 and HER2-neu compared to women. No significant difference was observed in PR or BCL-2 overexpression. However, in stage II matched comparisons, men were more likely to overexpress ER, PR, and BCL-2 positivity. P53 and ERBB2 still had lower expression. MBC also shows different immunophenotypic characteristics compared to female breast cancer, and the researchers asserted that differences may occur in the development and progression of this disease between men and women and that these differences may influence therapeutic management (Muir et al.).

**Treatment**

Treatment of MBC is similar to treatment of the disease in women. Mastectomy and either sentinel lymph node biopsy or axillary dissection are standard treatment (Atalay, Kanlioz, & Altinok, 2003). Considerations for adjuvant therapy are based on the same criteria as female breast cancer, taking into account axillary node status, tumor size, hormone receptor status, and the patient’s general health (Volm, 2003). Radiation therapy may be used if the risk for local recurrence is high (Chakravarthy & Kim, 2002). Hormonal treatment, such as tamoxifen, also is considered in MBC based on ER status. The side effects associated with treatment (e.g., surgery, adjuvant therapy, radiation therapy, hormonal therapy) are similar to those experienced by women. Men who receive treatment with tamoxifen are also at risk of developing hot flashes and impotence (National Cancer Institute, 2003).

**Implications for Practice**

MBC is a rare disease, but it does occur. Therefore, public education to increase awareness of MBC is essential. Nurses should include information about MBC at health fairs and breast cancer information sessions and urge men to seek evaluation if they discover a breast mass. Nurses also should be knowledgeable about MBC incidence, risk factors, signs and symptoms, and treatment to dispel public misconceptions and appropriately answer questions that inevitably arise when MBC is mentioned.

Because men with prostate cancer are at increased risk for developing MBC, nurses should consider including this information in discharge teaching. Nurses also can present the topic of MBC in support groups for men with prostate cancer to increase awareness and promote early diagnosis and treatment.

In the clinical setting, the nursing management of MBC is very similar to the management of female breast cancer. However, with respect to psychosocial support, gender differences must be considered. For example, men with breast cancer may be reluctant to attend breast cancer support groups because they may be embarrassed about having a traditionally "woman’s disease." Additionally, many breast cancer support groups are designed for women; therefore, men may feel out of place. General cancer support groups may or may not be a suitable option for men with breast cancer.

Men with breast cancer may be hesitant to discuss their diagnosis with their friends, which may lead to feelings of isolation. Furthermore, they may be hesitant to discuss side effects such as hot flashes and sexual dysfunction with their oncology team. Understandably, these are sensitive issues that should be discussed openly.

**Case Study Conclusion**

S.U. completed adjuvant treatment and is recovering well. He has not had any further incidents of chest pain. S.U. currently is taking tamoxifen and has been experiencing mild hot flashes and some fluid retention. His experiences have helped several of his friends and relatives realize the importance of early detection of breast cancer and that both men and women can be at risk for developing this disease.

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**References**


