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Invasive ductal carcinoma of male breast in a relatively young patient

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Abstract
Breast cancer in men is uncommon. It accounts less than 1% of all types of cancer in male. The survival rates of breast cancer are similar in men and women. Men tend to be diagnosed at an older age than women (mean age is about 67 years). Most patients present late for several reasons, including the absence of early signs and symptoms. We report a case of invasive ductal carcinoma in a 36 year old man who was treated with modified radical mastectomy.

Keywords: male breast cancer, invasive ductal carcinoma, clinical presentation

1. Introduction
Breast cancer in men is rare. It accounts less than 1% of all types of cancer in male. More than 50% men with breast carcinoma are diagnosed with stage III or greater of disease. This is probably because men do not seek medical attention for breast masses as quickly as women. The risk factors for breast cancer in men and women are similar. The etiology of male breast cancer is unclear, but hormonal levels may play a role in the development. Risk of breast cancer in men is also related to hormonal changes, including estrogen changes. Male breast cancer is associated with diseases or body conditions that increase estrogen exposure or that have effects similar to increased estrogen exposure. Body conditions that decrease levels of the male reproductive hormones have also been associated. Such risk factors include: obesity, benign breast disease in men, diseases of the testes and liver and a disease called Kleinfelter's syndrome.

Case Report
A 36 year old male presented with right breast swelling for 6 months duration with no nipple discharge and skin changes. Clinically there was a discrete large mass at junction of upper inner quadrant close to nipple 3x3 cm in size with slightly retracted nipple towards the mass. The mass was mobile with no skin changes. No axillary lymph nodes could be palpated. Mammogram done showed well defined lobulated density with speculated margin, seen in right breast periareolar region close to nipple. Sonography done showed hypoechoic ill-defined irregular shaped soft tissue mass seen at 3 O`clock 1 cm from nipple measuring 2.2x1.1 cm in its widest dimensions. Enlarged right axillary lymph node measuring 8x4 mm. Core needle biopsy was taken and histopathology was invasive ductal carcinoma. CT scan chest and abdomen done which was normal, except two small nodules in upper lobe of right lung associated with scarring and faint calcification likely granulomas. Right side modified radical mastectomy with axillary lymph node dissection done and histopathology was invasive ductal carcinoma, grade 11 with neural invasion. Tumor size was 2.5x2.2 cm. All margins were free. 17 lymph nodes were dissected and 7 were positive for metastases. Estrogen-receptor (ER), Progesterone Receptor (PR) strong positive and HER2 negative. He is planned for adjuvant chemotherapy followed by radiation therapy and adjuvant hormonal therapy.

Discussion
Breast cancer is a very uncommon disease in men. In whole male population, it accounts less than 1% of all types of cancer in male [1]. It tends to affect older age group than females, peaks at age 59 years [2]. In the men with a familial history of breast cancer, the incidence of male breast cancer is increased and seems to be more in the carriers of BRCA2 mutation compared to the carriers of BRCA1[3, 4].The risk factors for breast cancer in men and women are similar. The etiology of male breast cancer is unclear, but hormonal levels may play a role in the development of this disease. Testicular abnormalities such as undescended testes, orchiectomy, orchitis and infertility have been consistently associated with elevations in breast cancer risk [5, 6]. Klinefelter's syndrome, in which patients carry XXY chromosomes, may be present in 3%–7% of men with breast cancer; giving males with Klinefelter's syndrome a 50-fold greater risk over the general male population [7-9]. Male breast cancers have high rates of hormone-receptor expression. Approximately 90% of male breast cancers express the estrogen receptor, and 81% express the progesterone receptor [10]. More than 50% men with breast carcinoma are diagnosed with stage III or greater of disease [11]. This is probably because men do not seek medical attention for breast masses as quickly as women. In male breast cancers, important prognostic factors include tumor diameter and lymph node involvement. Death rate is greater by 40% in the patients with a tumor diameter of 2-5 cm compared to those with a tumor diameter of <2 cm. Similarly, death rate is greater by 50% in the men with lymph node involvement compared to those without lymph node involvement [12].
The pathology is similar to that of female breast cancer, and infiltrating ductal cancer is the most common tumor type [13]. Male breast cancers are predominantly of ductal origin due to the lack of terminal lobules within the male breast. As a result, lobular carcinoma in situ (LCIS) and infiltrating lobular carcinoma are extremely unusual in male patients.
Local therapies administered for the treatment of early stage male breast cancer are similar to those administered in women. Most commonly used surgical method is modified radical

mastectomy. Similar to female breast cancers, adjuvant radiotherapy is recommended for the patients with a high risk for relapse (4 or more axillary lymph node involvements, T3, T4). Adjuvant chemotherapy is recommended if the tumor diameter is >1 cm and if there is axillary lymph node involvement (regardless of the tumor size).

Conclusion

Male breast cancer remains a rare disease. Men tend to be diagnosed at an older age than women and with stage 111/1V breast cancers. Most of the histological subtypes that are seen in women are also present in men, except that lobular histology is much rarer. Risk factors include many conditions that could affect hormonal levels, Klinefelter's syndrome, a prior history of radiation exposure and a family history of breast cancer. *BRCA1* mutations are associated with some cases. Lymph node involvement plays a crucial role in poor prognosis in as it does in women. So adjuvant chemotherapy and radiation therapy would be beneficial in male breast cancer as in female, especially for the cases of axillary lymph node involvement. It is important to recognize male breast carcinoma in its earlier stages and start prompt treatment.

References

1. National Cancer Institute. Surveillance Epidemiology and End Results (SEER): Cancer Statistics. Bethesda (MD): National Cancer Institute, 2011.
2. Giordano SH, Cohen DS, Buzdar AU, Perkins G, Hortobagyi GN. Breast carcinoma in men: a population-based study. Cancer. 2004; 101:51-57.
3. Onami S, Ozaki M, Mortimer EJ, Kumar S. Male breast cancer: An update in diagnosis, treatment and molecular profiling. Maturitas. 2010; 65:308-314.
4. Weiss RJ, Moysich BK, Swede H. Epidemiology of male breast cancer. Cancer Epidemiology, Biomarkers & Prevention. 2005; 14:20-26.
5. Sasco AJ, Lowenfels AB, Pasker-de Jong P. Review article: epidemiology of male breast cancer. A meta-analysis of published case-control studies discussion of selected aetiological factors. Int J Cancer. 1993; 53:538-549.
6. Thomas DB, Jimenez LM, Mc Tiernan A, *et al*. Breast cancer in men: risk factors with hormonal implications. Am J Epidemiol. 1992; 135:734-748.
7. Casagrande JT, Hanisch R, Pike MC, *et al*. A case-control study of male breast cancer. Cancer Res. 1988; 48:1326-1330.
8. Hultborn R, Hanson C, Kopf I, *et al*. Prevalence of Klinefelter's syndrome in male breast cancer patients. Anticancer Res. 1997; 17:4293-4297.
9. Harnden DG, Maclean N, Langlands AO. Carcinoma of the breast and Klinefelter's syndrome. J Med Genet. 1971; 8:460-461.
10. Giordano SH, Cohen DS, Buzdar AU, *et al*. Breast carcinoma in men: a population-based study. Cancer. 2004; 101:51-57.
11. Ottini L, Palli D, Rizzo S, *et al*. Male breast cancer. Crit Rev Oncol Hematol. 2010; 73(2):141-155.
12. Giordano SH, Cohen DS, Buzdar AU. Breast carcinoma in men: a Population-based study. Cancer. 2004; 101:51-57. (PMID: 15221988).
13. Giordano SH. A review of the diagnosis and management of male breast cancer. Oncologist. 2005; 10(7):471-9.