Surgery

KEY WORDS: Male Breast Cancer, Lobular Breast Carcinoma, Locally Advanced

INVASIVE LOBULAR CARCINOMA OF THE MALE BREAST- A CASE REPORT

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ABSTRACT

Male breast cancer comprises only 1% of all mammary cancers. Invasive ductal carcinoma is the commonest subtype in both men and women. Though lobular breast cancer is commonly seen in women, but it is extremely uncommon in men. It can be due to lack of lobular development in male breast. We report a case of 70 years old male who presented to OPD with right breast painless growth without any significant medical or family history. Fine needle aspiration revealed findings consistent with invasive carcinoma. The patient underwent modified right radical mastectomy with right axillary sampling. Histological examination showed invasive lobular carcinoma. Lobular breast cancer is difficult to explain and need further research to understand its pathogenesis and molecular profile to provide better vision for improved therapeutic management options.

INTRODUCTION

Breast cancer in men is extremely rare and accounts for < 1% of all malignant breast neoplasm cases[1,2]. Among the histological types, invasive ductal carcinoma is the most prevalent breast cancer in males, with an incidence varying from 65 to 95% followed by papillary carcinoma (5% of tumors) while lobular carcinoma represents only 1% of all the tumours[2, 3]. We herein report the case of a 70-year-old male presenting with unilateral breast mass due to an underlying invasive lobular carcinoma stage IIIB (ILC).

CASE:

A seventy years old male presented to our outpatient clinic with right painless breast mass of 6 years duration. His history showed no evidence of liver disease, no history of any chronic medication and patient also didn't take any hormonal treatment. His family history was negative for breast cancer or ovarian cancer. Examination revealed a 15 x 10 cms hard sub-areola tender mass almost occupying whole breast with irregular borders almost fixed to underlying structure (Figure 1). The growth was replacing whole of the nipple. No axillary lymph node was palpable. Contralateral left breast was apparently normal and mammography also showed no growth. Liver function tests, calcium, prostatic specific antigen, right upper quadrant ultrasound and chest x-ray were reported as normal. A fine needle aspiration revealed findings consistent with invasive carcinoma. The patient underwent modified right radical mastectomy with right axillary sampling. Histological examination of paraffin sections stained with hematoxylin and eosin revealed massive infiltration with small, relatively round tumor cells (Figure 2). Neoplastic cells displayed round-to-ovoid nuclei and a thin rim of cytoplasm with an occasional intracytoplasmic lumen. Loosely cohesive tumor cells diffusely infiltrated the mammary stroma. Fifteen axillary lymph nodes were dissected and were negative for metastasis. Immunohistochemical staining of tumor cells showed positive nuclear staining for estrogen and negative for progesterone receptors and HER-2neu receptors. Histological examination of the axillary nodes showed non specific chronic lymphadenitis. The patient's course a few months after the operation remained uneventful.

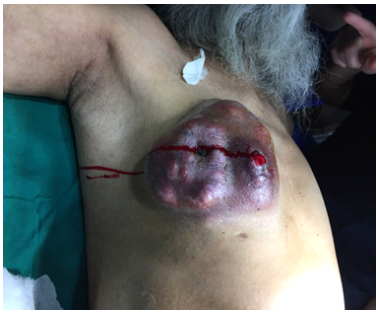

FIGURE 1: Figure showing irregular infilterating growth in right breast

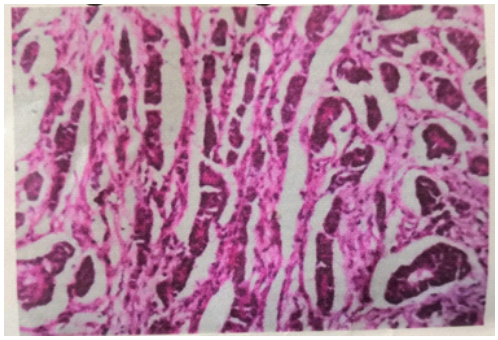

FIGURE 2: Histological section of the breast tumor showing invasive lobular carcinoma.

DISCUSSION:

About 42% of male breast cancer cases are diagnosed in stage III or IV, probably because men do not seek medical attention for breast masses as quickly as women [1]. As well the tumor is closer to the skin in males, which increases the likelihood of infiltration into the dermis. The median age of male breast cancer is in their 60s [4]. Testicular trauma, infection or maldescent results in deficiency of testosterone which may later act as possible predisposing factors [5]. Conditions that have been associated with the occurrence of breast neoplasms in men are BRCA 1&2 gene mutation, cirrhosis, obesity, radiation exposure, heavy industry toxin exposures and the use of exogenous estrogen [6-10]. Although gynecomastia has been suggested to be present in 6-38% of breast cancer cases in men [11], it was not evident in our patient. Our patient did not have a family, hormonal, or genetic history that could justify the high risk for breast cancer. Genetic diseases such as Klinefelter's syndrome and Cowden's disease have been shown to be related to breast cancer in men [1]. The risk of a contralateral breast cancer appears to be higher for men than it is for women [12]. Some studies indicate that men with breast cancer have a 30-fold increased risk of contralateral breast cancer, much greater than the two- to fourfold risk among women with breast cancer [13]. Estrogen receptors and progesterone receptors play a major role in breast cancers in men, and they are present in about 90% and 81% of breast cancers in males, respectively [3]. Furthermore, overexpression of the proto-oncogene HER-2 presents the worst prognosis for a patient [14]. Other markers that have been recently studied are p27, MIB-1 and Bcl-2 genes. Although males have considerably less mammary parenchyma than women, the investigation must be a combination of a clinical examination, mammography, cytology, and percutaneous biopsies [15, 16]. Due to the smaller size of male mammary parenchyma, the elected surgical treatment is modified radical mastectomy. Tamoxifen should still be considered as the optimal adjuvant therapy option for male patients with endocrine responsive disease

CONCLUSION:

Invasive lobular breast carcinoma in men is extremely rare with little evidence to guide clinical work-up and patient management. Despite an absence of a familial history of breast cancer, hormonal abnormalities, or a genetic disease, the male patient in the present study developed the breast cancer. The causative factors in this patient were unable to be definitively identified. The pathophysiology of breast cancer in males is not adequately understood. Further studies and research on such rare mammary malignancies in males are required to better understand the pathophysiology and epidemiology of this rare cancer which can guide clinical management for improved patient outcomes.

REFERENCES:

1. Fentiman IS, Fourquet A, Hortobagyi GN. Male breast cancer. Lancet. 2006;367:595–604. doi: 10.1016/S0140-6736(06)68226-3. [PubMed] [Cross Ref]
2. Giordano SH, Cohen DS, Buzdar AU, Perkins G, Hortobagyi GN. Breast carcinoma in men: a population-based study. Cancer. 2004;101:51–57. doi: 10.1002/cncr.20312. [PubMed] [Cross Ref]
3. Salvadori B, Saccozzi R, Manzari A, et al. Prognosis of breast cancer in males: an analysis of 170 cases. Eur J Cancer 1994;30A:930-5. [PubMed]
4. Agrawal A, Ayantunde AA, Rampaul R, Robertson JF. Male breast cancer: a review of clinical management. Breast Cancer Res Treat. 2007;103:11–21. [PubMed]
5. Thomas DB, Jimenez LM, McTiernan A, Rosenblatt K, Stalsberg H, Stemhagen A, Thompson WD, Curnen MG, Satariano W, Austin DF, et al. Breast cancer in men: risk factors with hormonal implications. Am J Epidemiol. 1992;135:734–748. [PubMed]
6. Frank TS, Deffenbaugh AM, Reid JE, Hulick M, Ward BE, Lingenfelter B, Gumpper KL, Scholl T, Tavtigian SV, Pruss DR, Critchfield GC. Clinical characteristics of individuals with germline mutations in BRCA1 and BRCA2: analysis of 10,000 individuals. J Clin Oncol. 2002;20:1480–1490. doi: 10.1200/JCO.20.6.1480. [PubMed] [Cross Ref]
7. Friedman LS, Gayther SA, Kurosaki T, Gordon D, Noble B, Casey G, Ponder BA, Anton-Culver H. Mutation analysis of BRCA1 and BRCA2 in a male breast cancer population. Am J Hum Genet. 1997;60:313–319. [PMC free article] [PubMed]
8. Haraldsson K, Loman N, Zhang QX, Johannsson O, Olsson H, Borg A. BRCA2 germline mutations are frequent in male breast cancer patients without a family history of the disease. Cancer Res. 1998;58:1367–1371. [PubMed]
9. Misra SP, Misra V, Dwivedi M. Cancer of the breast in a male cirrhotic: is there an association between the two? Am J Gastroenterol. 1996;91:380–382. [PubMed]
10. Ganly I, Taylor EW. Breast cancer in a trans-sexual man receiving hormone replacement therapy. Br J Surg. 1995;82:341. doi: 10.1002/bjs.1800820319. [PubMed] [Cross Ref]
11. Colombo-Benkmann M, Stern J, Herfarth C. On the neglected entity of unilateral gynecomastia. Ann Plast Surg. 2006;56:346. doi: 10.1097/01. sap. 0000197867. 08217.bb. [PubMed] [Cross Ref]
12. Gomez-Raposo C, Zambrana Tevar F, Sereno Moyano M, Lopez Gomez M, Casado E. Male breast cancer. Cancer Treat Rev. 2010. [PubMed]
13. Auvinen A, Curtis RE, Ron E. Risk of subsequent cancer following breast cancer in men. J Natl Cancer Inst. 2002;94:1330–1332. [PubMed]
14. Bruce DM, Heys SD, Payne S, Miller ID, Eremin O. Male breast cancer: clinicopathological features, immunocytochemical characteristics and prognosis. Eur J Surg Oncol. 1996;22:42–46. doi: 10.1016/S0748-7983(96)91418-3. [PubMed] [Cross Ref]
15. Chantra PK, So GJ, Wollman JS, Bassett LW. Mammography of the male breast. AJR Am J Roentgenol. 1995;164:853–858. [PubMed]
16. Volpe CM, Raffetto JD, Collure DW, Hoover EL, Doerr RJ. Unilateral male breast masses: cancer risk and their evaluation and management. Am Surg. 1999;65:250–253. [PubMed]