



Bilateral Synchronous Breast Cancer in Elderly Male

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Received: 13 June 2019 / Accepted: 12 November 2019
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Introduction

The incidence of male breast cancer is very rare and reported around 1.2–2% of all cancers in males and less than 1% of all breast cancers in both sexes [1]. Bilateral synchronous breast cancer in males is an extremely uncommon entity and accounts for just 1% of male breast cancers [2]. The presentation of male breast cancer is similar as with female breast cancer. There is a scarcity of literature regarding treatment of male breast cancer [3]. So hereby we are presenting this case of synchronous male breast cancer with no risk factors Figs. 1, 2 and 3.

Case Report

A 60-year-old male with no comorbidity presented to the clinic with a history of lumps in both breasts for the last 6 months. He noticed both lumps at the same time and received local treatment with antibiotics and anti-inflammatory agents by the local physician. The lumps were painful before 6 months. After extracting detailed medical history, there was no history of hormonal therapy, testicular disease, and occupational exposure to radiation in his lifetime. He was a non-smoker and nonalcoholic. There was no personal and family history of breast cancer. On examination, the right breast had a 2 ×

2 cm lump just below the nipple areola complex with no palpable axillary lymph nodes. The left breast had 3 × 2 cm retroareolar lump with no palpable axillary nodes. Nipples were retracted bilaterally. A bilateral trucut biopsy revealed infiltrating ductal carcinoma on both sides. Systemic examination and external genital examination was normal. A metastatic workup was done. The chest X-ray, ultrasound of the abdomen with pelvis, and a bone scan was done. All were reported normal with no evidence of metastatic disease. The patient was taken up for surgery. A bilateral modified radical mastectomy was done. The final histopathology reports revealed bilateral infiltrating ductal carcinoma, and on the right side it was T2 NO tumor, and on the left side it was T3 NO tumor. Both tumors were ER PR positive, and both were HER2 negative.

A chemotherapy port was inserted at the time of the surgery. The patient had received 4 cycles of doxorubicin (60 mg / m² IV) and cyclophosphamide (600 mg / m² IV) three weekly, and 12 cycles of weekly paclitaxel (175 mg / m² IV) followed by radiation therapy. Patients had received daily fractions of 2 Gy, and target volume was supraclavicular (at 3 cm depth) and tangential chest fields with a total dose of 50 Gy with 6 MV photon using Linac. The supraclavicular region extended from the level of cricothyroid groove to sternal angle. The superior border of the chest wall and breast matched with the lower border of the supraclavicular field. The lower field border was at 1 cm below the mammary fold. The medial border was set at midline, with no specific attempt to cover the internal mammary lymph nodes, while the lateral border was set at mid-axillary line. Hormonal therapy was administered with tamoxifen 20 mg once a day for 5 years.

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Discussion

The mean age of presentation of male breast cancer is 67 years (60–70 years). In the case of female breast cancer, the age of presentation is in earlier age as compared with male breast cancer [4]. Because of diagnosis in older age with more advanced stage,



Fig. 1 Bilateral breast cancer in a 60-year-old male patient



Fig. 3 Right breast cancer with nipple retraction in the same male patient

presentation of male breast cancer accounts for lower survival rate as compared with female breast cancer [5]. The most common histological type is invasive (infiltrating) ductal carcinoma with an incidence of 85–90% [6].

It has been observed that the more advanced the age of the patient at diagnosis, the more likely that there will be lymph node involvement making it more advanced stage [7].

Male breast cancer most commonly presents with painless lump, bloody nipple discharge with or without nipple retraction, and on examination there will be a palpable firm, non-tender mass with retroareolar region as the most common location [8].

The known risk factors for male breast cancer are radiation exposure, Klinefelter's syndrome (47, XXY), familial and genetic factors, hormonal imbalance, obesity, and testicular diseases [8]. Still data are unclear regarding association of BRCA 1 mutation with male breast cancer, but cases have been reported showing association of BRCA 2 mutation with male breast cancer [5].

Obesity is considered as one of the risk factor for both male and female breast cancer. There is a conversion of testosterone to estradiol and androstenedione to estrone in peripheral adipose tissue. Some studies have mentioned the association of higher mean estradiol level in male breast cancer [9].

Increase incidence of male breast cancer has been found in various testicular diseases. Undescended testis is the most common testicular disorder which has shown association with

male breast cancer. It may result in testicular dysfunction resulting in hormonal imbalance leading to the development of male breast cancer [10, 11]. Other testicular disorders include mump orchitis, orchiectomy, and testicular injury. These have also been mentioned as risk factors for male breast cancer. Still, the literature is lacking in showing the significance of accessory breasts or polymastia in male breast cancer [12].

It has been found that hormonal receptors are positive in male breast cancer and they do not show overexpression of HER 2 receptor. It is more prone to test positive for hormonal receptors, but less likely to show c-erbB-2 overexpression. Hormonal receptor status shows similar expression in unilateral and bilateral male breast cancer [13].

As such male breast cancers are very rare, one should always examine the contralateral breast to rule out synchronous male breast cancer. A thorough physical examination is recommended in such cases to rule out testicular diseases. As such, there are no prospective studies available which supports the management of male breast cancer; the management strategies are the result of retrospective studies of case series.

Conclusion

Genetic factors and hormonal abnormalities are the risk factors for male breast cancer. In our case, there is no positive family history or risk factors, so hormonal abnormalities may be the reason for the development of cancer, the possibility that the breast cancer developed due to the effect of slight elevation of estrogen over a long period of time, but the actual causative factors in this patient were not identified. In the near future, we may be able to elucidate the causes of male breast cancer.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict interests.



Fig. 2 Left breast cancer with nipple retraction in the same male patient

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