Bilateral Breast Cancer- A case Report

Amrullah Abdel Moneim, MBBCh, MSc, MD[1,2]; Abdullah Alzahrani, MD, ABIM, FRCPC[1]; Ahmad Abdel Raheem, MBBCh, MSc, MD[1,2] and Hani El-Tanni, MD[1]

(1) Oncology Center, King Abdullah Medical City - Holy Capital, Saudi Arabia.
(2) Department of Medical Oncology, Faculty of Medicine, Zagazig University, Egypt.

✉ *Corresponding Author: Dr Amrullah Abdel Moneim, MBBCh, MSc, MD*
E-mail: amrallaabdelmoneem@yahoo.com

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Abstract

Introduction: Breast cancer is one of the most important heath problems in the world and affects a great number of women over the entire globe. This group of tumors rarely presents as bilateral disease and, when it does happen, normally occurs within the same biological type. We report a case of concurrent bilateral breast cancer with two different biological types, ER, PR is positive in left breast and were negative in right breast, in a 58 –year old women referred to our oncology center.

Case presentation: A 58 –year old woman referred to our oncology center in november 2012, presented with right breast mass of 7.0× 5.0 cm and left breast mass of 2×2cm. Biopsy had received invasive duct carcinoma G III with ER, PR positive and Her-2negative in left Brest, and invasive duct carcinoma G II with ER, PR negative and Her-2negative in right breast. She was submitted for neoadjuvant chemotherapy 4 cycles of AC followed by bilateral modified radical mastectomy then adjuvant 4 cycles of docetaxel followed by radiotherapy of the thoracic wall and axillary nodes. Hormonal receptors were positive in the tumor of left breast so she started letrazole.

Conclusion: The risk of development of bilateral breast cancer is about 1%each year within similar histological and biological types. In this case, the biological types are different, which is not common.

Introduction

Breast cancer is one of the most important health problems in the world. The American Cancer Society estimates that 234,580 Americans will be diagnosed with breast cancer and 40,030 will die of the disease in the United States in 2013(1). The incidence of breast cancer has increased steadily over the past few decades, but the breast cancer mortality appears to be declining, suggesting the benefit from early detection and more effective treatment(2). Women with breast neoplasia had (per year) about 0.5% risk of developing contralateral neoplasia, and in these cases, we expect tumors of the same histological type (3).

Lobular carcinoma in situ (LCIS) is both multifocal and bilateral in large percentages of cases. After an average of about 10 years, 15% of these patients had invasive carcinoma diagnosed in ipsilateral breast, and 9.3% had invasive carcinoma in contralateral breast (4). The most frequent histological type is ductal carcinoma (70%-80%), followed by lobular carcinoma (5).

Many risk factors are associated with the occurrence of breast cancer (6) .We report a case of concurrent breast cancer with the same histological type but with different biological types.

Case presentation

A 58 –year old woman, a housewife from ***El-Taif,*** noticed a mass in right breast, and in January 2013, she was sent by ***King Abdul-Aziz doctors*** to King Abdulla Medical City Oncology Center with right breast mass of 7.0× 5.0 cm in upper outer quadrant and supraareolar area, firm to hard in consistence, irregular border and thickened mobile overlying skin with freely mobile right axillary lymph node about 2×2 cm; also there was left breast mass of 2×2cm retroareolar with no palpable axillary lymph nodes. She was a postmenopausal patient with gynecological histories of 3 pregnancies; the first when she was 21 years old, and no abortion history was noted. She denied the use of an oral contraceptive pills, and she had no relevant family history.

Bilateral mammography and Ultrasound revealed» large irregular speculated ill-defined margins, heterogeneous hyper dense right breast mass approximately 5.7 × 3.6 cm approximately opposite 11 o clock with multiple highly suspicious right axillary lymph nodes were noted, the largest measures approximately 1.8× 1.3 cm with overlying skin thickness. Small (0.8 cm × 0.6cm) opacities and multiple scattered and clustered micro calcifications are noted at retroareolar area of left breast approximately opposite 6 o clock position. Right axillary lymph node enlargement was noted.

Metastatic work up was negative in form of CT chest& abdomen and bone scan.

Needle biopsy was taken and showed:

1- Right breast, invasive duct carcinoma, grade III, estrogen receptor(ER) 0%, progesterone receptor (PR) 0% with Her-2/neu negative (score 0).

2-Left breast, invasive duct carcinoma, grade II, estrogen receptor (ER) 90%, progesterone receptor (PR) 70% with Her-2/neu negative (score 1). (Figure 1a, b, c, d)

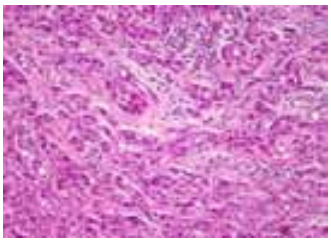

Fig 1a. IDC grade III right breast HP, core biopsy.

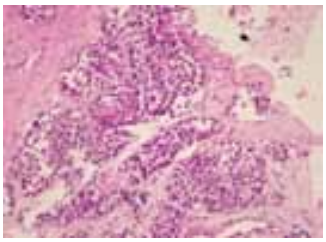

Fig 1b. IDC grade II left breast HP, core biopsy.

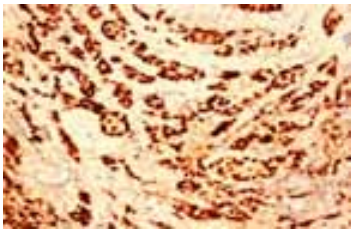

Fig 1c. PR left breast biopsy.

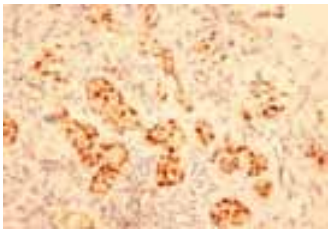

Fig 1d. ER left breast biopsy.

This patient was diagnosed as stage IIIB right breast cancer (T3N2 M0) and stage I left breast cancer (T1N0M0). She was submitted for neoadjuvant chemotherapy 4 cycles of AC (Adriamycin 60mg/m^2 & cyclophosphamide 600mg/ $^{2)}$ followed by bilateral modified radical mastectomy, with pathological surgical report showed that:

1- Right breast, invasive duct carcinoma NOS, grade III, T 5cm, DCIS present, high nuclear grade, - ve SM, LVI is present and one out of 20 lymph nodes is positive for metastasis(1/20).

Estrogen receptor(ER) 0%, progesterone receptor (PR) 0% with Her-2/neu negative (score 0); Triple negative.

2- Left breast: no residual tumor only fibrocystic changes and all lymph nodes were negative for metastasis (0/12). Estrogen receptor (ER) 90%, progesterone receptor (PR) 70% with Her-2/neu negative (score 1). (Figure2)

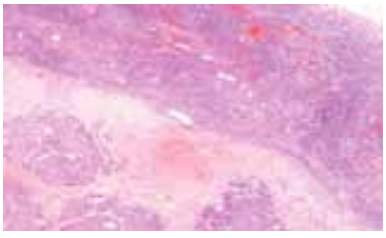

Fig 2a. Lymph node metastasis.

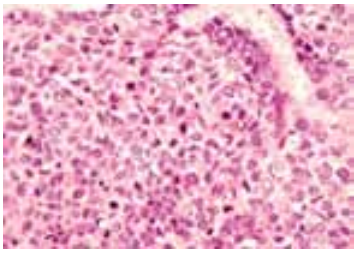

Fig 2b. ICD grade III, right mastectomy HP.

Then received adjuvant therapy in the form of 4 cycles of docetaxel (80 mg/m^2) then Radiotherapy 50 Gy (2 Gy dose daily, five weekly fractions) to thoracic wall and axillary nodes of right breast. Hormonal receptors were positive in the tumor of left breast so adjuvant hormonal therapy with letrazole 2.5mg was prescribed.

Discussion

Bilateral breast cancer is uncommon finding and is reported to account for only 2% of women with breast cancer. The risk factors associated with bilateral occurrence are: familial or hereditary breast cancer, young age at primary breast cancer diagnosis, lobular invasive carcinoma, multicentricity and radiation exposure (6, 7). Contra lateral breast cancer is either a metastatic lesion or the second primary cancer, and occurs either synchronously or metachronously. Chaudary et al. (8) categorized contra lateral breast cancer into a metastatic lesion or second primary cancer based only on pathologic criteria. Several reports showed that the prognosis in bilateral breast cancer was worse than that of unilateral breast cancer (9, 10). There have also been many debates regarding biological and therapeutic aspects of bilateral breast cancers (11, 12). Considering these points, it is important to know whether contra laterals breast cancer is a metastatic lesion or the second primary cancer.

Such type of patients is lower disease free survival and higher rates of distance metastasis are a recognized feature of bilateral breast cancer which therefore has worse overall survival compared to unilateral tumors (13).

Our patient treated in curative intent in the form of neoadjuvant chemotherapy then bilateral modified radical mastectomy followed by radiotherapy then adjuvant hormonal treatment, and need close follow up due to high incidence of recurrence.

Conclusion

In conclusion we note that in women, who present with bilateral breast cancer should be investigated for distance metastasis at presentation even in whose who are asymptomatic. Only few cases have been reported in the literature. Further study is recommended.

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