Case Reports

Advanced Breast Cancer: Response and Responsibility

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Abstract

Breast cancer is the most common cancer among women worldwide and only surpassed by lung cancer in the developed countries as a leading cause of death. In Jordan, breast cancer heads the list of all cancer types affecting women (33.9%). [1] In the developing countries, between 40-60% have advanced disease at presentation. [3- 5] In this report, we review the case of a 48- year old woman who presented to Jordan University Hospital with a huge fungating ulcerating malignant mass in the right breast area associated with distant metastasis. This case sheds light on two important points, namely, the delay in presentation of breast cancer's patients in the developing countries and the value of applying modern management concepts to improve outcomes in carefully selected patients. A delay in presentation of patients with breast cancer is a real obstacle facing curative management in the developing countries and sincere efforts are required to overcome this problem. Breast cancer should be treated by breast experts in specialized centers.

Keywords: Breast cancer; Advanced; Response to chemotherapy; Delay of Presentation

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Introduction

Breast cancer is the most common cancer among women world wide and only surpassed by lung cancer in the developed countries as a leading cause of death. In Jordan, breast cancer leads the list of all cancers affecting women (33.9%). [1] A tremendous effort has been exerted to reduce the mortality and morbidity rates of this frightening disease in many countries including launching campaigns for early detection; and hence, increasing the chance of cure and reducing the suffering from both the disease and its treatment. Despite these efforts, a significant number of women present with advanced-stage disease.

In contrast to the United States, where only about 20% of patients initially present with advanced breast cancer, [2] in the developing countries the picture is more gloomy, with 40%-60% of patients in an advanced stage at presentation. [3- 5] This case report highlights the causes of delay in presentation in Jordanian women and the results of modern treatment options when individually applied to such unfortunate victims.

Case Report

A 48-year old single woman presented to Jordan University Hospital on May 13, 2001 with a huge

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fungating ulcerating mass in the right breast (Fig.1). Her history dated back two years prior, when she noticed a painless mass in her right breast. She did not seek any medical advice until the mass became painful, smelly, ulcerated and bleeding, and was associated with shortness of breath. She had no family history of breast cancer and did not smoke or drink. A general clinical examination revealed no significant abnormality, other than the fact that the right breast was totally replaced by a large fleshy and oozy mass. The left breast and axilla were normal. The skin and the areola-nipple complex had totally disappeared; the right axilla contained hard fixed lymph nodes. An incisional biopsy showed a grade II/III infiltrating ductal carcinoma that was estrogen- and progesterone receptor positive. Assessment of HER2 status was not done. A metastatic workup revealed multiple bilateral lung metastases, which were confirmed by a Computed Tomography (CT) scan that revealed both breast areas as well (Fig. 2). Blood tests showed a high CA 15.3 level (139 units/ml; normal upper limit 28 units/ml), but a normal left breast mammogram, liver function tests, and hematological function. Disease was staged as T4cN2M1 (pulm). Her body surface area was 1.6 m^2.

Since the patient had a relatively good performance status (0-1) she was started on chemotherapy. We initially used a three-weekly regimen of Intravenous (IV) doxorubicin 50 mg/m^2 plus docetaxcel 75 mg/m^2 IV, with granulocyte colony stimulating factor support (300 mcg injected subcutaneously) started 24 hours after docetaxel and continued for 5 days. [9] She was re-evaluated after the fourth course of chemotherapy by the same tests conducted at baseline and showed a demonstrable response. The tumor was markedly reduced in size with little ooze, no smell, and no pain (Fig. 3). The CA 15.3 level was reduced to 47 units/ml and a follow- up chest CT scan showed a complete radiological response (Fig. 4). Chemotherapy was well tolerated despite slight fluid retention in hands and feet associated with nails hyperpigmentation.

A further 4 courses of the same regimen were associated with further significant loco regional response (Fig. 5). Axillary lymph nodes were no longer palpable. The patient received a radical dose of radiotherapy (50 Gray), for both breast and axilla, which consolidated the loco regional response (Fig. 6). The patient was then maintained on oral capecitabine 1250 mg/m^2 given every two weeks followed by a one-week rest, for 12 months followed by daily 20 mg tamoxifen for one year, which was then replaced by letrozole 2.5 mg. daily. The patient is undergoing strict follow up every two months (Fig7). There is no clinical, chemical, or radiological evidence of local recurrence or systemic progression after five years of follow up. On 15th of June 2006 she was found to have multiple liver metastases by ultrasound and abdominal CT scan and endobronchial metastasis as proved by chest CT and endobronchial metastasis. The patient didn't agree on undergoing any further chemotherapy options. She was provided a palliative treatment until her death on the 16th of December 2006.

Figure (1): Huge fungating ulcerating mass in right breast area.

Figure (2): Multiple bilateral lung metastasis (small arrows), the right breast totally replaced by tumor which invaded the underlying muscle (big arrow).

Figure (3): The tumor clinically was markedly reduced in size, little ooze, no smell and no pain.

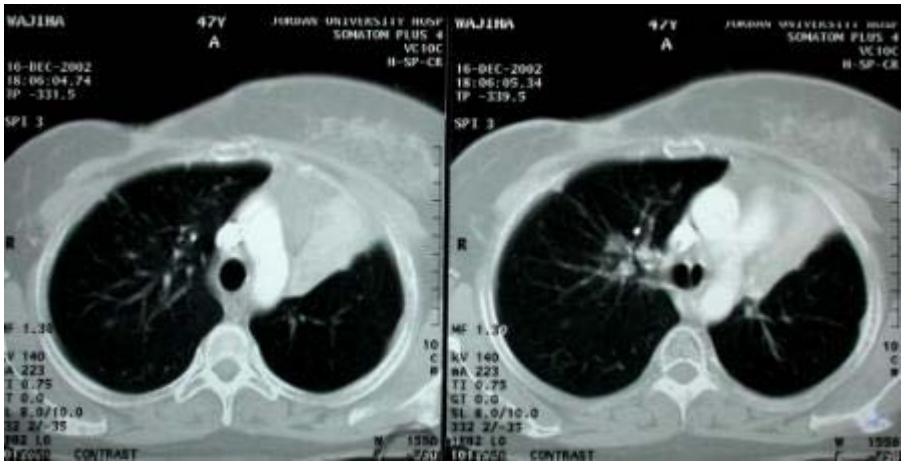

Figure (4): Follow-up chest CT scan had shown complete radiological response after 8 courses of chemotherapy.

Figure (5): Further significant loco-regional response after another 4 courses of chemotherapy.

Figure (6): The patient received radical dose of radiotherapy (sixty Grey), for both breast and axilla which consolidated the loco regional response.

Figure (7): No evidence of local recurrence 4 years after treatment.

Discussion

The case presented in this article, highlights two important points, namely, the delay in presentation of breast cancer's patients in the developing countries and the value of applying modern management concepts to improve outcomes and quality of life in carefully selected patients. Several factors were mentioned as causes for delay in presentation. The common belief among community members that a diagnosis of cancer will have several negative social impacts on the patient and her family, including: fear of being less attractive as wives and fear of isolation if the family falsely believes that cancer is a contagious disease. An affected mother or older sister may hide the disease fearing that negative attitudes against younger female family members will ultimately prevent future marriage. Other factors include lack of awareness about the seriousness of the problem, [6] difficult access to proper medical care, and poverty. The fear of extensive surgery [7] and, the bad reputation of chemotherapy and radiotherapy prompt many patients to search for and try alternative treatments, which are usually not effective [8] causing a significant delay in seeking medical care.

The late presentation has deleterious effects on outcomes because management is usually expensive and is associated with significant morbidity, and the disease is rarely curable. It is the public's responsibility, including government and private organizations, to work sincerely to overcome this problem in the short term, launching carefully planned educational campaigns against the social misconceptions about breast cancer, stressing the value of screening and early detection, and highlighting modern developments in breast cancer management, such as breast-conserving, axillary management approaches, and breast reconstruction, and the management of toxicity during chemotherapy. In the long term, fighting poverty, illiteracy and the development of comprehensive, well-equipped, professionally-run, easily-accessed, and women-friendly breast centers will definitely change women's attitudes and improve outcomes.

Regarding treatment of the patient described in this report, we elected to start taxane- based neoadjuvant chemotherapy. [9, 10] The patient responded surprisingly well, demonstrating a significant partial response and acceptable tolerability to the initial four courses (Fig. 4), which encouraged us to administer an additional four courses followed by radiation to the breast area and axilla. Surgery was not offered because we believed that the surgery would be extensive and yield little additional benefit.

The response of this patient to a taxane-based regimen supports the recent literature on the efficacy of taxanes in locally-advanced and metastatic disease, especially in chemo-naive patients. [11] The issue of maintenance chemotherapy in advanced breast cancer is debatable, because although it increased disease-free survival, it did not improve over all survival. [12] We elected to use capecitabine because of its efficacy in breast cancer, its easy oral use, and its tolerable side-effect profile. [13,14] The concomitant use of hormonal therapy and chemotherapy was found to be beneficial in some studies [15, 16] and the patient was shifted to letrozole after encouraging it by recently published data in comparison to tamoxifen. [17] In conclusion, a delay in the presentation of patients with breast cancer is a real obstacle facing curative management in the developing countries and sincere efforts are required to overcome this problem. Breast cancer management has continuously improved and changed due to technical advancements in diagnosis and treatment. Breast cancer should be treated by breast experts in specialized breast centers.

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سرطان الثدي المتقدم: الاستجابة والمسؤولية

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الملخص

يعد سرطان الثدي الأكثر شيوعا عند السيدات في العالم ويأتي تاليا بعد سرطان الرئة كمسبب للوفاة. يحتل سرطان الثدي في الأردن المرتبة الأولى بين كل أنواع السرطانات التي تصيب الأردنيات (33.9%)(مرجع رقم 1). في الدول النامية 40%-60% من كل حالات السرطان تشخص في حالات متأخرة(مرجع رقم 3,4,5). في هذا التقرير نقدم حالة سيدة عمرها 48 عاماً أدخلت الى مستشفى الجامعة الأردنية بسبب وجود كتلة كبيرة، متقرحة، وذات معالم سرطانية في منطقة الثدي الأيمن حيث اختفت معالم الثدي التشريحية وكانت تلك هي المرة الأولى التي تعلن فيها المريضة عن حالتها وتبين أن تلك الكتلة متزامنة لنقائل ثانوية في الرئتين.

الهدف: هدفنا من هذا التقرير تسليط الضوء على نقطتين: أولاهما المسؤولية عن أسباب التباطؤ والتأخر بالإفصاح عن المرض من قبل السيدات في الدول النامية، والثانية الاستجابة للمعالجة الحديثة لتلك الحالات المتأخرة التي يأبى الكثير من الأطباء معالجتها.

النتائج: التقرير يؤكد أن الأسباب العديدة التي تحرم المريضة من العلاج المبكر هي من أهم العراقيل للمداخلات العلاجية التي تضمن الشفاء، ويجب أن نبذل جهوداً مخلصة حتى نتغلب على تلك المعضلة. كما أن سرطان الثدي يجب أن يعالج من قبل خبراء في ذلك المجال ضمن مراكز متخصصة.

الكلمات الدالة: سرطان الثدي المتقدم، الاستجابة للعلاج الكيميائي، التباطؤ بالإفصاح عن المرض.