Outcome of Treatment in Metastatic Breast Cancer Patients at NCI, 2 years series

Thesis submitted for partial fulfillment
of the master degree in medical oncology

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ABSTRACT

Purpose:

The aim of this study is to evaluate and analyze the data regarding the outcome of management of metastatic female breast cancer for a large cohort of patients treated in national cancer institute (NCI), Cairo University in the period 2003-2005.

Methods:

A retrospective analysis of the medical records of 1589 patients with breast carcinoma was performed. Outcome variables included response rate, progression-free survival and overall survival.

Results:

One hundred seventy of 539patients with metastatic breast carcinoma had IMBC, whereas the remaining 369 had RBC. Patients with IMBC were significantly older than patients with RBC (51years vs. 47.5years; $P < 0.001$). The proportion of postmenopausal patients was greater in the IMBC group than in the RBC group (59.4%vs. 48.5%, P=0.02). Also IMBC group had a significant higher incidence of DM (16% vs. 8.9%, p=0.02), ER positivity (75.5% vs. 56.5% ,$p<0.001$),

PR positivity (70.4%vs.53.7% ,p<0.001), advanced T stage (80.3%vs.8.9%, P= 0.001), and lower frequencies of N0 tumors (3.8%vs. 18.1%, P=0.001) respectively compared to RBC. Relapses in the brain were significantly more prevalent in ER & PR negative patients (p=0.001) as well as younger patients.

The median disease free survival in RBC patients was 21.1 months. Taxanes achieved the best response rate, while time to disease progression was significantly better with CMF regimen (p=0.005). Aromatase inhibitors achieved higher response rate than tamoxifen (28.3% Vs. 23.8%) with clinical benefits (47.9% Vs 23.8%) as well as higher time to disease progression (9.9 months Vs. 8.2 months) but this difference was not significant. Multivariate analysis showed that factors affecting overall survival were first line treatment whether chemotherapy or hormonal therapy and M stage at diagnosis. Hormonal treatment and RBC were independent prognostic factors for prolonged OS compared to chemotherapy and IMBC respectively.

Conclusion:

Patients with IMBC tended to be older, presented with advanced T & N stage, high frequency of hormone receptor positivity and higher incidence of diabetes mellitus and

Abstract

hypertension than those with RBC. Relapses in the brain were significantly more prevalent in ER & PR negative patients compared to patients with positive receptors($p=0.001$). Younger patients were much more likely to develop brain metastasis. Taxanes achieved the best response rate while CMF regimen had the prolongest time to disease progression. On the other hand, aromatase inhibitors have a higher response rate and TTP compared to tamoxifen but the difference was not significant.

Key words: Metastatic breast cancer (MBC), chemotherapy, hormonal treatment, management

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INTRODUCTION

Breast cancer is the most common cancer in women worldwide with more than one million new cases estimated to be diagnosed each year. Approximately half of the diagnosed patients will eventually develop metastatic disease.

The optimal management of breast cancer remains a significant therapeutic challenge: the selection of the most appropriate medical therapy for individual patient must currently be based on the breast cancer risk evaluation, predictive and prognostic factors, treatment toxicity, and patient preferences.

Despite all available treatment options, metastatic breast cancer (MBC)is essentially incurable and the median survival time is 12 to 24 months after documentation of metastasis **(Bergh J 2001)**. Although primary goals of treatment are prolongation of time to progression , disease free survival and overall survival , the chemotherapy is generally palliative in metastatic breast cancer. Nevertheless, the patients who achieve a complete remission after chemotherapy may remain in this state for prolonged period **(Tomiak, et al, EORTC 1996) (Rahman ZU, et al, 1999).**

Aim of the Work

The aim of this study is to evaluate and analyze the data regarding the outcome of management of metastatic female breast cancer for a large cohort of patients treated in national cancer institute (NCI), Cairo University in period 2003-2005.