Neoadjuvant Platinum Containing Regimen for Locally Advanced Triple Negative Breast Cancer

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Abstract

Background: Primary systemic chemotherapy is a standard approach to treating women with locally advanced breast cancers, with higher survival rates reported among patients who attain a pathological complete response. Triple negative breast cancer is a special biological entity that remains major challenge to oncologist. Around 12%-20% of breast cancers are triple negative. The current single arm phase II trial was conducted to evaluate the pathological complete response (pCR), efficacy and safety of anthracycline-taxane-cisplatinum containing regimen as neoadjuvant chemotherapy in locally advanced triple negative breast cancer.

Methods: This study is a single arm phase II trial was conducted on eighteen women with stage III triple negative breast cancer who were recruited between July 2007 and February 2010 at King Fahad Specialist Hospital-Dammam, Saudi Arabia. Neoadjuvant chemotherapy consisting of 4 cycles of AC or FEC 100, followed by 4 cycles consisted of docetaxel-cisplatin (75mg/m2 each) every 3 weeks. Primary end point was pathological complete response.

Results: This is a preliminary report on the first eighteen patients included. Median age: 49 y (24-70); premenopausal: 16 ; 25% were below 35 years of age; Median tumor size : 9 cm (3.5-19); Grade III: 15 ; Stage IIIA: 3, IIIB:14, IIIC:1; all but 2 had positive nodes at diagnosis (89%) . All patients completed the anthracycline part with 2 episodes of febrile neutropenia (F.N). Only 10 patients completed all 4 cycles of the second sequence with Docetaxel-Cisplatin; 4 completed 3 cycles. Toxicity related to Docetaxel - Cisplatin: febrile neutropenia: 4; renal impairment: 2; Hypersensitivity reaction: 1. No grade 5 toxicity. Clinical evaluation of response by RECIST criteria pre surgery: Overall response: 16/18 (88.9%), Complete response: 9 (50%); Partial response: 7 (38.9%).The second sequence with Docetaxel-Cisplatin doubled the rate of clinical CR obtained with AC /FEC. Two patients were not operated due to disease progression. Pathological assessment, revealed that 8 (47%) patients had no residual invasive carcinoma in the breast; 3 (18%) had residual occasional scattered tumor cells less than 5 mm (pT1a); 10 (59 %) had negative nodes; 8 achieved CpR and 2 nCpR. Baseline Ki 67 levels for patients with residual invasive component are under evaluation.

Conclusion: This anthracycline-taxane-cisplatin based neoadjuvant chemotherapy regimen was well tolerated and achieved a high rate of pCR/npCR.