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Zoledronic Acid with Neoadjuvant Chemotherapy in Advanced Breast Cancer Prospective Study 2011-2014

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Abstract: Background: The use of Zoledronic acid (ZA) is an established place in the treatment of malignant tumors with a predilection for the skeleton of interest (in particular metastasis). Although the main target of Zoledronic acid was osteoclasts, there are preclinical data suggest that Zoledronic acid may have an antitumor effect on cells other than osteoclasts, including tumor cells. Antitumor activity, including the inhibition of tumor cell growth and the induction of apoptosis of tumor cells, inhibition of tumor cell adhesion and invasion, and anti-angiogenic effects have been demonstrated. Methods. From (2012 to 2014), 438 patients were included respondents the inclusion criteria, respectively. This is a prospective study over a 4 year period. Of all patients (N=438), 432 received neoadjuvant chemotherapy with Zoledronic acid. The primary end point was the pathologic complete response in advancer breast cancer stage. The secondary end point is to evaluate Clinical response according to RECIST criteria; estimate the bone density before and at the end of chemotherapy in women with locally advanced breast cancer, Toxicity Evaluation and Overall survival using Kaplan-Meier and log test. Result: The Objective response rate was 97% after (C4) with 3% stabilizations and 99, 3% of which 0.7% C8 after stabilization. The clinical complete response was 28% after C4 respectively, and 46.8% after C8, the pathologic complete response rate was 40.13% according to the classification Sataloff. We observed that the pathologic complete response rate was the most raised in the group including Her2 (luminal Her2 and Her2) the lowest in the triple negative group as classified by Sataloff. We found that the pCR is significantly higher in the age group (35-50 years) with 53.17%. Those who have more than 50 years in 2nd place with 27.7% and the lower in young woman 35 years pCR was 19%, not statistically significant, -The pCR was also in favor of the menopausal group in 51, 4%, and 48, 55% for non-menopausal women. The average duration of overall survival was also significantly in the subgroup (Luminal -Her2, Her2) compared with triple negative. It is 47.18 months in the luminal group vs. 38.95 in the triple negative group. -Was observed in our study a difference in quality of life between (C1) was the admission of the patient, and after (C8), we found an increase in general signs and a deterioration in the psychological state C1, in contrast to the C8 these general signs and mental status improves, up to 12, and 24 months. Conclusion The results of this study suggest that the addition of ZA to néoadjuvant CT has potential anti-cancer benefit in patients (Luminal -Her2, Her2) compared with triple negative with or without menopause status.

Keywords: HER2+, RH+, breast cancer, tyrosine kinase

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