Retrospective analysis of Complete Pathological Response in locally advanced HER2 positive breast cancer patients treated with neoadjuvant chemotherapy associated to trastuzumab at Brazilian National Cancer Institute

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BACKGROUND

Pathological complete response (pCR) is associated with better outcomes such Disease Free Survival (DFS) and Overall Survival (OS) in high risk patients, like triple negative breast cancer and human epidermal growth factor receptor 2 (HER2) positive breast cancer. In neoadjuvant setting, randomized trials have shown that pCR would be improved with addition of trastuzumab to chemotherapy.

METHODS

We analyzed 187 patients with primary HER2 positive breast cancers given neoadjuvant chemotherapy with trastuzumab. About 161 (86,2%) were clinical stage III. They underwent neoadjuvant treatment followed by surgery between January 1, 2008, and December 31, 2013. Hormone therapy and Radiotherapy were added to adjuvant treatment when needed. Data were collected from our internal database and patients' files. The primary endpoint was pCR rate (ypT0/is, ypN0). Secondary endpoints included DFS, OS and cardiac toxicity. Tumor subtypes and chemotherapy protocol (FAC-TH or AC-TH) were registered. The safety profile was evaluated during the entire year of trastuzumab administration.

RESULTS

The pCR was seen in 50 (26,7%) patients, corroborating international data. The median time of follow up was 39,7 months (IC 95% 35,7-43,6), but not enough to determine DFS and OS. 19 (18,1%) and 27(39,7%) patients treated with FAC-TH and AC-TH, respectively, had pCR with statistic significance (p= .002). Among 112 patients with positive hormone receptor (ER and/or PR) and 75 with HER 2 enriched (ER and PR negative), 28 (25%) and 22 (29,3%) had pCR, respectively, without statistic significance (p= .512). 35 (18,7%) patients had reduction of LVEF superior to 10% and 22 (11,8%) patients needed to discontinue trastuzumab.

CONCLUSIONS

Neoadjuvant chemotherapy associated to trastuzumab improved the pCR rate even in locally advanced tumors. There was no significant difference in pCR between HR positive and negative groups. The chemotherapy protocols influenced the primary endpoint with an acceptable safety profile.

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