

NEW TREATMENT STRATEGY IN CHEMORESISTANT LOCOREGIONALLY BREAST CANCER: C ARM CONE BEAM CT-GUIDED SELECTIVE INTRAARTERIAL CHEMOTHERAPY

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Introduction - Purpose: Locally advanced breast cancer is best managed with multimodality therapy employing systemic and locoregional therapy. A multidisciplinary approach is important for this patients. Intraarterial chemotherapy can concentrate antitumor agents more effectively than intravenous chemotherapy. Various trials show that intraarterial chemotherapy achieved high local control rates with less side effects for patients. Aim of this study was to determine the efficacy and the toxicity of C arm Cone Beam CT (CACBCT) guided selective intraarterial chemotherapy (IACT) for patients with locally advanced chemoresistant breast cancer.

Methods - Tools: Our study included 181 Locally advanced breast cancer patients who were treated with neoadjuvant chemotherapy. Neoadjuvant chemotherapy involved four cycles antracycline based chemotherapy. However if the patients didn't response the chemotherapy we performed intraarterial chemotherapy. Total 36 (19.9%) patients under went IACT. The treatment was performed using intra-arterial platin based combination chemotherapy every 21 days for 2-4 cycles by CACBCT. In all patients, via the femoral artery, CACBCT angiographies were taken and the feeding arteries of the tumors were identified. If patients had good response the treatment after first two cycles, we applied add to two cycles IACT. After IACT, patients in primary cases underwent radical mastectomy or breast conservation surgery, after radiotherapy Chemotherapy; Cisplatin 70mg/m² and Dosetaxel 70 mg/m² combination or Carboplatin 5AUC and Paclitaxel 175 mg/m² combination was administered intraarterial at day 1. This cycles repeated every 21 days. If patients had HER2 positive combined chemotherapy with trastuzumab was recommended.

Findings: The study included 181 patients who were treated neoadjuvant chemotherapy. All of patients were female. The median age of the patients was 51 years (range 27-84 years). Median follow-up time 47.8 months. Pretreatment staging of the patients; seven (38,2%) patients with BC were at stage II. Thirty-eight (21%) patient was a stage IIIA, 41 (22.7%) patients was IIIB, 31 patents was Stage IIIC. Approximately %20 of patients had triple-negative. Surgical resection was performed all of the patients. A pathological complete response was achieved in 47 (%26) patients. Median follow-up time 47.8 months. The mean disease-free survival (DFS) was 71.2 months (95% CI 68.5 to 73.8). Two years DFS rate was %85.6. IACT was performed for the patients with locally advanced chemoresistant breast cancer. The DFS of the patients were similar in two groups.

Discussion: Intraarterial chemotherapy achieved high concentrate level more effectively than intravenous chemotherapy. Many studies have shown that inraarterial chemotherapy decreased primary tumors as well as decreased systemic metastases. In this study, we showed that IACT is an effective and less toxic in chemotherapy resistant locoregionally advanced BC.

Keywords: breast cancer, intraarterial chemotherapy