

Scalp cooler efficacy to reduce anthracycline-induced alopecia and its psycho-social impact in breast cancer patients

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Abstract

Background: Hair loss is one of the most common side effects of chemotherapy that is unavoidable and emotionally distressing. So, this study was carried out to evaluate the efficacy of scalp cooling in prevention or reduction of anthracycline induced hair loss and its psychological impact in female breast cancer patients.

METHODS: The study included 120 female patients with breast cancer, treated in adjuvant setting, using anthracycline-based regimens. The patients were divided randomly into two equal groups: scalp cooling group (group I) in which patients received chemotherapy were subjected to scalp cooling and control group (group II) in which patients received chemotherapy without being offered scalp cooling. Hair loss was evaluated in all patients using WHO grading system at each cycle of chemotherapy. Quality of life was assessed using EORTC QLQ-C30 and EORTC QLQ-BR23.

Results: Eighty five percent of patients in scalp cooling group experienced grade 4 hair loss compared to 100% of patients in the control group after completing six cycles of chemotherapy. Only nine out of 60 patients (15%) in the scalp cooling group developed grade 1-2 hair loss and were considered as success. No significant relation was found between the degree of hair loss and the patient's age or the level of liver function tests. The scores of overall global health status and functional scales showed no significant difference between the two treatment groups except for scores on emotional functioning scale, body image and upset by hair loss.

Conclusion: Efficacy of scalp cooling remains doubtful. Chemotherapy-induced hair loss is stressful to the majority of patients. It affects various aspects of patient's life, especially emotional functioning and body image. More large randomized studies are needed to establish the benefit of scalp cooling and to explore other modalities for prevention of hair loss.