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Symposium

Effects of Cryotherapy on Chemotherapy-Induced Peripheral Neuropathy: Self-Controlled Clinical Trial

Akiko Hanai¹

¹*National Cancer Center*

Chemotherapy-induced peripheral neuropathy (CIPN) is a frequent and disabling side effect of cancer treatment. We evaluated the preventive effects of cryotherapy in a self-controlled trial.

Forty breast cancer patients who were planned to undergo weekly paclitaxel treatments (80 mg/m² for 1 hour) with a cumulative dose of at least 960 mg/m² were enrolled. Each patient wore frozen gloves and socks on the dominant hand and foot, and the non-dominant side acted as the untreated control. CIPN symptoms were assessed by tactile sensitivity, thermal sensitivity, performance speed, and Patient Neuropathy Questionnaire. We defined tactile sensitivity, patients-blinded test, as the primary outcome. We concluded that cryotherapy is useful for preventing both the objective and subjective symptoms of CIPN and resultant dysfunction.

There were other reports about cold intolerance or frostbites due to cryotherapy. In our trial, nonwoven fabric covers were applied to alleviate the discomfort if the patients complained of cold pain. The subgroup analysis indicated that this intervention did not interfere with the effects of the cryotherapy. Further discussion to establish standard cryotherapy with safe and adaptable settings is needed.