

The Effectiveness of Warm-Water Footbath on Fatigue in Cancer Patient Undergoing Chemotherapy

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Abstract : Introduction: Fatigue is the most common symptoms experienced by cancer patients undergoing chemotherapy. Patients receiving anticancer therapies develop a higher proportion of fatigue compared with patients who do not receive anticancer therapies. Fatigue has significant impacts on quality of life, daily activities, mood status, and social behaviors. A warm-water footbath (WWF) at 41°C promotes circulation and removes metabolites resulting in improving sleep and relieving fatigue. The aim of this study is to determine the effectiveness of WWF for relieving fatigue with cancer patients undergoing chemotherapy. Materials and Methods: This is a single-center, prospective, quasi-experimental design study in the oncology ward in Taiwan. Participants in this study were assigned to WWF group as experimental group and standard care group as a control group by purposive sampling. In the WWF group, the participants were asked to soak their feet in 42-43°C water 15 minutes for consecutive 6 days at one day before chemotherapy. Each participant was evaluated for fatigue level by the Taiwanese version of the Brief Fatigue Inventory (BFI-T). BFI-T was completed for consecutive 8 days of the study. The primary outcome was compared the BFI-T score of WWF group to the standard care group. Results: There were 60 participants enrolled in this study. Thirty participants were assigned to WWF group and 30 participants were assigned to standard care group. Both groups have comparable characteristic. The BFI-T scores of both groups were increased associated with the days of chemotherapy. The highest BFI-T scores of both groups were on the day 4 of chemotherapy. The BFI-T scores of both groups were decreased since day 5 and significantly decreased in WWF group on day 5 compared to standard care group (4.17 vs. 5.7, $P < .05$). At the end of the study the fatigue at its worse were significantly decreased in WWF group (2.33 vs. 4.37, $P < .001$). There was no adverse event reported in this study. Conclusion: WWF is an easy, safe, non-invasive, and relatively inexpensive nursing intervention for improving fatigue of cancer patients undergoing chemotherapy. In summary, this study shows the WWF is a simple complementary care method, and it is effective for improving and relieving fatigue in a short time. Through improving fatigue is a way to enhance the quality of life which is important for cancer patients undergoing chemotherapy. Larger prospective randomized controlled trial and long-term effectiveness and outcomes of WWF should be performed to confirm this study.

Keywords : chemotherapy, warm-water footbath, fatigue, Taiwanese version of the brief fatigue inventory

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