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Therapeutic touch for nausea in breast cancer patients receiving chemotherapy: Composing a treatment

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ABSTRACT

Background and Objective: Therapeutic touch (TT) is independent nursing intervention which is effective on nausea induced by chemotherapy but technique, steps and variables affected by this therapy are not yet well known. The aim of this study was to elicit descriptions of how TT is used with cancer patients, providing a basis for the systematic use and evaluation of TT with patients.
Materials and Method: In this research, 108 patients were examined with intentional sampling and random allocation in 3 groups (control, placebo and intervention) in 2013 (each group 36). Intervention received therapeutic touch (touching of first energy layer) and demographic form, visual analog scale (VAS) for intensity of nausea, check list for duration and times of nausea in the morning, noon, afternoon and night at acute phase were used. Data were analyzed by Kruskal Wallis, χ^2 and analysis of variance (ANOVA).
Results: Duration, frequency and intensity of nausea were significantly lower in the test group ($P < 0.001$, $P < 0.001$ and $P < 0.001$). The mean duration of intervention (whole process) was 21.38 min [SD 6.04]. In 69.4% of women there was a need for re-intervention after reassessment phase.
Conclusion: Results of this randomized control trial showed that TT is effective on duration, times and intensity of nausea; therefore, TT can be used as an alternative method for patients who are willing to use this technique.

1. Introduction

Chemotherapy is one of the oldest and most common cancer treatments [1,2]. Chemotherapy induced Nausea and vomiting is among the most severe and feared collateral effects of chemotherapy that is experienced by 70–80% of patients [2,3]. This side effect causes a significant reduction in quality of life and decline in patients' ability to perform activities of daily living; that can influence the patient's willingness to continue with and successfully complete cancer treatment. Therefore, it is essential to treat these side effects to encourage patient compliance [4].

Given the limited effectiveness and serious side effects of common antiemetic drugs; the use of complementary and alternative medicine is one of the basic and safety measures. Over the past decade, these treatments have been taken into account by patients and their families, and professionals around the world [5]. The incidence of this treatment use in adults and children with cancer is 50–84% [6,7]. Breast cancer has the highest rates of complementary and alternative medicine use among other cancers [8,9].

Therapeutic touch (TT) is a low-cost and non-invasive complementary medicine form that can be performed at any time and any place, it has no contraindications and only need a pair of hands [10–12]. It needs formal training [13] and everyone that has the ability and desire to help others (even family members of patients), can do it after training courses [14]. Unlike other haptic or touch

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based modalities such as massage therapy, TT does not require the practitioner to physically touch patient. Instead, the practitioner uses a form of focused attention and his/her hands as the center for creating balance and coordination in the field of bilateral energy of the patient and environment [15,16].

In different studies, at RCT framework, beside all limitations, TT has been shown to decrease stress and anxiety in adult patients [15]. Data has revealed that TT alleviates pain [17], controls arrhythmias and blood pressure [15], increases the hemoglobin level, improves immune system, speeds up the healing process of wounds and fractured bones and improves mobility in patients with arthritis [10,18]. The best-known outcomes of TT with cancer patients are the decrease in nausea and vomiting [13,16,19].

Yet, with increased research on the use of TT with adults and children, little work has emerged on the use of TT with nausea and vomiting; particularly in cancer patients. This may be due, in part, to the lack of descriptive investigations on the use of TT with nausea and vomiting in cancer patients. The aim of this descriptive and clinical trial study was to elicit descriptions of how TT is used with cancer patients, providing a basis for the systematic use and evaluation of TT with patients.

2. Materials & methods

2.1. Therapeutic touch

The basic assumptions of therapeutic touch are that human beings (recipients and practitioners) are complex systems of patterned energy in continual process with the energy of their environments. More specifically, a person's (and in this instance, the breast cancer patient's) energy is a vital life force that permeates the individual and interpenetrates the energy of the universe [20]. The bisymmetrical structures and energy patterns in the human body, mind, and spirit reflect a mutual balance, strength, function and direction in a healthy person. When an individual is ill, changes in his or her energy patterns are perceived as energy field imbalances that may be associated with symptoms of the illness. Based on the perceived, altered characteristics of the ill person's energy patterns and symmetry, the TT practitioner moves his or her hands and uses mental imaging to intentionally modulate the energy field to facilitate the person's endogenous capacity to heal [15,21,22]. TT has a remarkable and strong history of clinical research that prove the safety and positive impact of this intervention [10,18].

2.2. Study population

This descriptive and clinical trial study was conducted to elicit descriptions of how TT is used with breast cancer patients, providing a basis for the systematic use and evaluation of TT with patients among 108 women aged 18–65 years (36 with, 36 without TT and 36 placebo group). The sample size was determined based on Altman's nomogram. This nomogram is a method for determining the sample size for the intervention study using test power and standard deviation of the considered variable in a similar study [23] and calculating the parameter called clinical differences. The women undergoing chemotherapy for breast cancer were admitted to Seyedalshohada Hospital, Isfahan 2012–2013. The sampling technique was purposive and the samples randomly divided into three groups. The inclusion criteria were as follows: patient with or without metastases (excluding central nervous system (CNS) metastases and metastases to the gastrointestinal (GI) tract, which can cause nausea and vomiting), having the same drug regimen in all three groups (Cyclophosphamide, Epirubicin and antiemetic drugs: Dexamethasone, Plasil, Kitril and Emend), no concurrent radiotherapy and having experienced at least one course of chemotherapy and chemotherapy-induced nausea and vomiting. Exclusion criteria were not completed questionnaires within 24 h after completion of chemotherapy and patient's unwillingness to cooperate.

2.3. Data collection tools

Data were collected using a questionnaire including demographic characteristics, a 100-mm visual analog scale (VAS) [24] that patients rated their nausea severity on it and a chart to record duration and frequency of nausea at 4 times (morning, noon, evening and night) during the acute phase. Content validity was used to determine the validity of this chart.

2.4. Data collection procedures

After university internal review board approval was obtained, TT practitioner who used TT with patients began her intervention at the hospital. The researcher described the project and obtained written consent to participate in the study during the initial contact. The subjects who agreed to participate in the research were randomly divided into 3 groups (test, placebo and control). Then the participants filed out the questionnaires and VAS. The intervention for two groups (test and placebo) was carried out prior to their first chemotherapy appointment (once for about 15–20 min). The procedure is described in detail in Box 1. History of any underlying disease, especially gastrointestinal disease was considered and the time spent on those cases was much higher. In the placebo group, the repeated procedure was exactly the same as the test group (Box 1) and was performed on the same day, but the practitioner's hands-to-patient's body distance was different (more than 20 cm) and in fact there was no energy transfer. The control group received no intervention. At the end the nausea chart of acute phase (during 24 h after chemotherapy) was given to them (3 groups) (Fig. 1).

2.5. Analysis

We used descriptive statistics to describe the demographic characteristics of the sample, Kruskal–Wallis test, Chi-squared test and Analysis of variance test. Statistical analysis was performed using SPSS version 17. $P < 0.05$ was considered as statistically significant. Also, narrative inquiry was used to explore the use of TT with cancer patients and provided the themes to compose a TT process for breast cancer patients.

3. Results

The mean age in three groups was 49.7 years [standard deviation (SD) 9.2]. The maximum number of patients in three groups was belonging to the 40–49 year age category. Most subjects in these groups were married, housewife with no independent income and did not have a high school diploma. Most of them did not have a history of past gastrointestinal diseases and metastatic breast cancer (Table 1). The demographic characteristics (education level, income, occupation, marital status and age) were similar between three groups.

Analysis of variance test showed that average time of nausea differed between the groups; Tukey's test in comparing each of the two groups showed that duration of nausea in the intervention group was significantly lower than the placebo and control groups. The mean duration of nausea in the three groups are presented in [Table 2].

Also, Kruskal–Wallis test showed that frequency and intensity