

The Efficacy of Court - Type Thai Massage (CTTM) in Healing Pressure Ulcer

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ABSTRACT

Background: Pressure ulcer (PC) is one of the major health problems in the hospital. Patients with impaired mobility are potentially at risk of developing a pressure ulcer. PC represents a major burden of sickness for families, hospitals and countries as it requires high treatment cost. This study aimed to explore the court-type Thai massage (CTTM) procedure that could promote the healing of PC. According to Thai Traditional medicine theory, there are signal points that the massage will deliver blood and nerve supply to the tissue seal organs, resulted in the wound healing process benefit. This study applied this theory to provide treatment to patients with PC.

Objective: To investigate the effectiveness of court-type Thai massage (CTTM) on the promotion of PC healing.

Study design: The randomized cross-over controlled trail was performed in 20 patients with stage 2-3 PC in elderly care centers in Bangkok and Nonthaburi. The patients were divided into 2 groups. The first group received CTTM six times, three times a week for 14 days and the no treatment period was 28 days after the first phase. The second group stated with 21 days of no treatment period and followed by CTTM for 21 days as first group. Then received CTTM six times, three times a week for 14 days after no treatment period. The healing effect was measured by Bates Jensen Wound Assessment treatment (BWAT) at day 0, 7, 14, 21, 28, 35 and 42. T-test was employed to compare healing effect between two groups whereas paired t-test was done to measure before-after effects in healing.

Study result: The first group had the higher healing scores significantly ($p=0.000$) in the first period which had treatment but it was not different during day 7-14 and 14-42 ($p= 0.187, 0.654$ respectively). In the second group, the healing was higher

significantly during day 21-28 and 28-35 ($p= 0.012, 0.028$ respectively) which had treatment period. Like the first group, the healing was not significant in day 0-21 ($p= 0.069$). The result showed that CTTM help to speed up the healing of PC.

Conclusion: CTTM help promoting healing of PC regardless of time proving CTTM because the stimulation of major signal points would reduce muscle stretch and improve blood circulation.

Key words: Court-Type Thai Massage, Pressure Ulcer, BWAT

Source and Significance of The Problem

Pressure sore or Pressure ulcer is an injury to the skin and the subcutaneous skin caused by pressure on the bone button. This is a major problem, which is found in hospitals and is often found in patients who are restricted in activities and movements. The main goal of wound care is to promoting the healing process of wound. The researcher are looking for other alternative medical treatments to apply in the health care of patients together. In this research, the Thai traditional medicine, which was used was court-type Thai massage based on the principles of Thai traditional medicine that could help stimulate blood circulation and lymphatic system in order to improve the blood supply to the organs and the tissues so that they can get enough nutrients. Massage can help stimulate the release of Endorphine and Enkephalin , which also reduce the pain.

Purpose of The Study

To study the effectiveness of court-type traditional Thai massage in the relief of pressure ulcer or pressure sore.

Expected Benefits

Receive the guidelines for the health care of patients with pressure sores using the court-type Thai traditional massage method in order to help with the healing process of pressure ulcers, reduce pain, reduce the chance of infection if the wound heals faster, and reduce the costs of patients' health care.

Scope of The Study

This research is an experimental research with a randomized cross-over controlled trial, which was conducted in 20 volunteers with 2nd-3rd levels of pressure ulcers in the elderly care centres in Bangkok and Nonthaburi by using the Bates-Jensen Wound Assessment Tool (BWAT) to collect data.

Experimental Procedures

- 1) The researcher had sought out to obtain a research ethics certificate.
- 2) The researcher had recruited 20 volunteers with 2nd-3rd levels of pressure ulcers in the elderly care centres in Bangkok and Nonthaburi provinces. The samples were purposive sampling and were divided into two groups. Volunteers signed their consents to participate in this research project.
- 3) The 1st group of volunteers was given a massage during the week at Day 7 and 14 and the 2nd group received 6 sessions of massage during Day 28 and 35 (3 times a week). Both groups would be examined on the progress of wound healing once a week in Day 0, 7, 14, 21, 28, 35, and 42 with the same examination for the observation of wound healing progress by using the Bates-Jensen Wound Assessment Tool -BWAT and the comparisons of BWAT was employed to compare the results between two groups of volunteers through statistical t-test and the statistical pair t-test was employed to compare the results within a group of volunteers.
- 4) Volunteers from both groups would receive one hour of court-type Thai massage for their entire bodies along
- 5) The researcher recorded the photos each week, assessing the wound healing progress.

Conclusion of General Information

Most of the samples were females, which was at 70% of all volunteers and the rest; 30% were males. Most of the volunteers were in the age range between 81-90 years old which was equal to 45% and the age range between 91-100 years was the least percentage which was at 5%; who appeared to be 93 years old. The average score of the pressure level before the start of the experiment was at the 2nd level, which was at 80% and the 3rd level which accounted for 20%.

Summary of Wound Healing Progress and Outcome Discussions

1. To conclude the experiment, the hypothesis were tested by using the pair t-test for comparisons in the week of massage in the two groups of 6 times; the massage was done three times a week for one hour each time. It was found that between day 0 and 7 when the experiments were imposed on the 1st group, there was statistical significance found at 0.05 level, which had the p-value equal to 0.000. It showed no differences and on day 7 and 14 (p-value = 0.187). During day 14-28 when volunteers didn't received any massage session, it was found that the would healing progress showed no difference of the statistical significance at 0.05 level (p-value =0.654).

In the 2nd group between day 21 and 28 and day 28 and 35 were found to improve wound healing and showed some differences, which the statistical significance at 0.05 level (p-value =0.012, 0.028, respectively). In the period from 0-21, it was found that the wound healing was not significantly better at 0.05 level (p-value = 0.069). This showed that in the week that patients getting a court-typed massage did help with the pressure ulcer symptoms of patients as a court-typed massage was done by using the thumbs pressing down on various parts of the body to help the muscle relax and help the blood to flow better through the blood vessels in the temporary areas that received the pressure. When lifting the hands up, the blood would flow through those certain areas that were pressed. This helped enhance the blood circulation and helped repair wounded areas. Pressing and squeezing stimulated the muscles, relieved tension, and increased blood flow to the tissues, resulting in better healing of the wound compared to the untreated weeks.

2. The conclusion of the hypothesis was done as the hypothesis were tested using a pair-t-test to compare weeks without massage. In the 1st group, between 14 and 21, 21, 28, 28, 35 and day 35 and 42 showed no difference in wound healing which had the statistical significance level at 0.05 (p-value = 0.530, 0.070, 0.853, and 0.425, respectively). In the 2nd group, between day 0 and 7, day 7 and 14, and day 14 and 21 showed no difference in wound healing which had the statistical significance level at 0.05 (p-value = 0.770, 0.217, 0.121, respectively). This implied that in the weeks that patients did not receive a massage. The wound healing was not improved and the results were not statistically significant.

3. The conclusions of the hypothesis, which was tested using a pair-t-test to compare the weeks without long-term massage when the absence of stimulation by massage

showed that in the 1st group in day 42; patients in both group didn't receive a massage. The results in both group showed no statistically significant difference at level 0.05 (p-value = 0.682). This indicated that a court-typed Thai massage could improve the wound healing progress and no matter when the massage starts, the healing progress will be better in the week that patients receive a massage.

5. Summary of the results of the 1st group and the 2nd group:

Group 1: The wound healing improved in the first week that patients received a massage and the wound healing progress was likely to continue to improve compared to before the trial (Day 0) with each week. The lesions were significantly different at 0.05.

Group 2: The wound healing improved in the week of massage and likely to be better due to the statistical significance in wound healing was significantly different at 0.05 on day 42 after receiving the massage.

Suggestions

1. Due to the literature review, it was found that the effectiveness of a court-typed Thai massage helps cure of pressure ulcers; this has not been studied seriously before. The researcher was interested in Thai traditional medicine and found that a massage can help in stimulating blood circulation. Therefore, the interest in studying about a court-typed massage on patients had occurred and had been studied to compare the effectiveness of a court-typed Thai massage on wound healing and to improve the effectiveness of patients' health care. The researcher's opinions towards this research are as follows:

1) The effectiveness of massage is related to the number of times a week of massage, such as how many times patients should be massaged in a week or within months so that the healing progress of wound will change significantly better and will be the most beneficial so that the plan of health care for patients with pressure ulcers can be done more effectively.

2) The effectiveness of the massage is related to the duration of the massage per session, such as how long patients should be massaged for during the duration of the massage. In this study, acupuncture was used as the basis for determining the duration of treatment for a court-typed Thai massage, which could be further develop to more

appropriate form for the most benefits in planning the health care for patients with pressure ulcers with a court-typed Thai massage treatment.

2. The researcher can provide the basic information for setting up guidelines for the health care of patients with pressure ulcers to increase the choices of patients in hospitals or at homes as appropriate.

References

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