

Effectiveness of Dry Cupping Therapy Combined with Breast and Oxytocin Massage on Early Lactation: A Case Report

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Abstract

Background: Insufficient breastfeeding is a common problem that affects the baby's well-being.

Aim: This study was conducted to examine the effects of two techniques, dry CT and breast/oxytocin massage in improving lactation in early postpartum period.

Method: A case study was performed in 2016 at a Postpartum Clinic of University Hospital, Turkey, Ankara. Dry CT and breast/oxytocin massage was applied two times for 10 minutes on the selected areas and effectiveness of these interventions was evaluated five times by using LATCH scale.

Results: Findings showed a statistical significant increase of LATCH scale scores from 4.1 ± 1.7 to 9.2 ± 0.1 after interventions ($p < 0.001$).

Conclusion: Our findings provided evidence supporting that dry CT combined with breast/oxytocin massage may be used an effective therapy in improving of early lactation.

Keywords: *Cupping Therapy; Breast Massage; Oxytocin Massage and Lactation*

Introduction

Lactation is the process of milk production with the help of maternal hormones, while breastfeeding is the process of the newborn obtaining milk from the breast by suckling, which is the most suitable, natural and unique nutrition method as the gold standard for the maintaining of lactation and conferring benefits to both the mother and her baby [1,2]. However, breastfeeding can bring complex task and critical challenges due to stagnation or blockage energy such as mastitis, engorgement, nipple pain, infection, attachment and emotional problems, especially for new mothers, which may prevent the mother's body from producing milk [3]. The WHO and the UNICEF indicated that the rate of early lactation was 42% in the world, which is still far below expectation and they have made general recommendations to pay attention to enhancing effective interventions on exclusive breastfeeding for the first of life six months such as providing skilled professionals and intuitional facilities [4]. The purpose of starting breastfeeding in the early period is not to feed the baby, but to ensure that breast milk comes. The most important reason why mothers cannot continue breastfeeding is insufficient milk secretion. Reports on negative aspects associated with insufficient milk secretion have demonstrated that this situation can increase infant morbidity and mortality rates, and reduce maternal self-confidence as well as cause the economic loss it brings to the family and the country [5].

In fact, even if milk production continues with prolactin production, milk cannot be expelled without oxytocin. Emotions such as anxiety, stress, pain, and doubt suppress oxytocin release. Oxytocin positively can be released by using with breast and oxytocin massage.

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Thus, these massages also can reduce mothers' levels of the stress hormone cortisol and increase levels of serotonin. In this point, the importance of this intervention increases as it causes an increase in oxytocin and prolactin levels [6,7]. Cupping Therapy (CT) is also said to come with multifunctional benefits for resolving blood stasis, preventing accumulation of milk, promoting micro-circular perfusion, facilitating the flow of milk, sedating nervous system, and stimulating release of the maternal hormone oxytocin [8]. Despite many studies performed to explore effectiveness of complementary and alternative medicine (CAM) methods on treating breastfeeding difficulties and increasing prolactin secretions, the effectiveness of the dry CT has yet to be sufficiently clarified. In this study, we aimed to examine the effects of two techniques, dry CT and breast/oxytocin massage on sufficient breastfeeding [9-28].

Method

This case study was conducted in 2016 to investigate efficacy of CT with breast massage at a Postpartum Clinic of University Hospital - mother and baby friendly, Ankara, Turkey. Inclusion and exclusion criteria; had a vaginal delivery and healthy birth who rooming in with their mothers (mother and her baby without complications); being primiparous mother at the first day of postpartum (only breastfeeding without any additional supplements) with full-term singleton newborn; age 18 to 35; not having a breast problem or baby related congenital problems that can interfere with breastfeeding; being mobilized, and having the bladder emptied; not having any chronic disease and psychological illness, women who accept to participate in research; open to communication and cooperation, ability to read, write and speak in Turkish; volunteering patient was included in the study; patient without an auditory or mental disability, and not receiving any regimen such as pumping, massage for breastfeeding.

Patient Information data obtain from patient file. Also, a scale called LATCH was used to explore the effectiveness of interventions on early breastfeeding. A numerical score of 0, 1, or 2 is assigned to the five letters of the acronym (Latch-on, Audible swallowing, Type of nipple, Comfort breast/nipple, and Help/hold baby to breast), which is 10 points in total with the higher the score representing successful breastfeeding [29]. Mean and standard deviation were used to analyze the effectiveness of dry CT with breast massage on milk secretion before and after intervention. Rules specified in the Helsinki Declaration were observed in the data collection phase. The study protocol was approved by the Ethics Committee of university hospital. Patient voluntarily provided written informed consent before study.

Case and interventions

The case had graduated from high school. She was married, housewife, and medium socioeconomic level, primiparous and gave normal vaginal delivery. She had born a female newborn. Her newborn were within normal weight (3400 gr) and were normal Apgar score (≥ 7). Within the first thirty minutes after birth, breastfeeding and skin contact of the baby with the mother was provided. She had no chronic diseases and she had breastfeeding exclusively. Case' medical history form was completed from patient chart including information on their age, general health properties.

The procedures were performed in the patient room by the researcher who trained in CT with breast massage as follows; firstly, the LATCH scale was used before intervention. The patient was placed sitting position on the bed. Application areas were cleaned with anti-septic solutions and gentle breast massage was applied for each breast with the fingertips in a circular motion around the whole breast and compressed on breast, areola as well as the nipple, while oxytocin massage was performed from the neck, scapula, until the spine (C5 - C6) for 10 minutes. Then after re-cleaned the selected area dry CT was administered; disposable plastic cups (5 cm) were placed at the selected four points of between the spine and the shoulder in order to remove blockages and regulate blood flow, and stimulate "let-down" reflex. Then negative pressure was applied using a manual pump, gently sliding cups around the whole points rhythmically for a massage-like effect, the cups were left on the each point for about 15 minutes and then the cups were gently removed. After this application area were cleaned again. The LATCH scale was administered to compare effectiveness of intervention. The patient was satisfied with the CT and no adverse reaction was encountered.

Results

The mean of LATCH scale was 7.3 ± 2.1 ; before intervention in the 4th hours was 4.1 ± 1.7 , and in the 4hr was 6.1 ± 1.6 after intervention, in the 10hr was 7.5 ± 1.7 , in the 16hr was 8.3 ± 1.1 , and in the 24hr was 9.2 ± 0.1 after intervention, respectively (Table 1).

LATCH score	Test*
Time 1 (4hr) before intervention	4.1 ± 1.7
Time 2 (4hr) immediate after intervention	6.1 ± 1.6
Time 3 (10hr) follow-up	7.5 ± 1.7
Time 5 (16hr) follow-up	8.3 ± 1.1
Time 4 (24hr) immediate after intervention	9.2 ± 0.1
Total mean of LATCH scale	$7.3 \pm 2.1, p < 0.001$

Table 1: Distribution of LATCH scale scores according to different times
*Repeated measure ANOVA.

Statistically significant differences were seen in LATCH score baseline, 4th, 10th, 16th, and 24th hours after interventions. According to pre and posttest analysis, the case on dry CT with breast and oxytocin message showed better results terms of early lactation effectively ($p < 0.001$), (Table 1).

Discussion

Failure in lactation has multidimensional factors. One of the most important reasons why mothers have ineffective breastfeeding is lack of milk production. Unfortunately, 60% of mothers were unable to breastfeeding regularly. Breastfeeding provide the potential to save newborn for a lifetime by protecting from various health risks [1,2]. Therefore, breastfeeding is the most efficient health intervention. The use of complementary and alternative medicine (CAM) such as progressive muscle relaxation, aromatherapy, meditation yoga and music, therapeutic contact, Kangaroo care, hand expression, pumping, hypnosis, mindfulness, cold or warmth compression, herbal, reflexology, acupressure, acupuncture, oxytocin breast massage, including CT to ensure effective breastfeeding has increased significantly in recent years [10-28].

Increasingly, CT is a simple, non-pharmacological therapy and one of the most frequently preferred CAM practices. CT is widely used a natural healing technique with a long history, which is done by creating local suction inside the cup to produce its therapeutic outcomes for various diseases. A study showed that, CT might impact lactation or increase milk supply. However, the benefits of these solutions are controversial and it is still necessary to understand the effectiveness of CT on early lactation [5-9]. Oxytocin massage or breast massage are also provide another positive effect on breast milk secretion [7,15]. In this case study showed that there was a significant increase of LATCH scores after given dry CT with combination of breast/oxytocin massage. It showed that the combination of these interventions contributed trigger of milk secretion regularly ($p < 0.01$) (Table 1), which may stimulate the releasing of oxytocin hormone causing a contraction of myophitel cells. This is also consistent with previous studies showed that most of postpartum mother have a great improvements for milk production after given breast massage [15,17,19]. Another trial revealed that the oxytocin massage for two different times could increase breast milk production when the compared to control group [21]. A different study has performed on the relationship between Gua-Sha and breast engorgement. It was found that the amount of colostrum released by postpartum women after given this intervention, there was greater improvements in terms of eliminating breast tenderness and relieving breast pain [11].

In a different study performed by Wildan., *et al.* (2015) examining the effect of yoga on breast milk, the amount of breast milk of the mothers participating in the study (n = 30) before practicing yoga was measured and found to be 82.4 ml. After 6 days of yoga exercises,

breast milk was measured again and the amount was found to be 195.17 ml. It has been reported that yoga increases breast milk production [30]. In a four-group experimental study conducted in Indonesia, the first group (n = 13) was treated with a combination of hypnotizable and oxytocin massage, the second group (n = 13) was treated with hypnotherapy, the third group (n = 13) was treated with oxytocin massage, and the fourth group was included in the study as a control. It was determined that the amount of breast milk increased significantly in the group with a combination of hypnotism and oxytocin massage compared to the other groups [15].

Conclusion

Consequently, all these results and our findings supported that there was a significant relationship between effective lactation in early postpartum period and dry CT with combined breast/oxytocin massage. Therefore, these interventions can be used to remove negative factors that disrupt breastfeeding and to initiate early lactation, hence improve the well-being of both mothers and infants.

Limitation

This study is limited by its sample size; results of the case study cannot be generalized. Despite the positive findings, the study did not present randomized controlled trial data on initiating of early lactation.

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Conflict of Interest

The authors report that there is no conflict of interest regarding the publication.

Authors' Contributions

HE and GP participated in the design of this clinical trial. They drafted this manuscript; the primary researcher conducted the intervention. Both of authors participated the statistical analyses, read and approved the final manuscript.

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