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Research Article

Effect of acupressure therapy point HT 6 and LI 4 on post cesarean sectio's pain

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ABSTRACT

Background: Stimulation at acupressure point can activate three centre of body control, there are spinal cord, midbrain, and pituitary to release neurochemical such as endorphin, serotonin, and norepinephrine effect to blockage pain. Cesarean sectio's pain begins since decreasing of the effect from anesthetical medication. Acupressure therapy at point HT6 and LI4 can activate these three centre of body control. So it is possible to reduce pain sensation when stimulated both. This study was carried out to identify the effects of HT 6 and LI 4 acupressure on sectio cesarea's pain in post-partum periods.
Methods: A single blind randomized clinical trial is performed on seven eligible women who are at the beginning of post-partum periods. The participants are matched duration after sectio cesarean before 24 hours, nulliparas and multiparas. There is no additional administration of analgesics during the study period. The women receive acupressure at HT 6 and LI 4 for 20 minutes. The severity of pain is measured by using the Visual Analogue Scale for pain. Intensity of pain are measured before and immediately after the intervention. Statistical analyses are perform using SPSS 20.
Results: the rate of pain intensity's scale before and after treatment are (84,29 ± 15,65) and (64,57 ± 15,80). There are significant differences between both of groups. The pain intensity after the intervention was significantly decrease than pain intensity before ($p = 0.04$). There are significant differences between the groups in subjective pain scale before intervention and immediately after intervention. The pain intensities after the intervention are significantly decrease than pain intensities before the intervention ($p = 0.04$).
Conclusions: Acupressure at HT6 and LI4 point reduced the severity of pain at the beginning of post partum periods after cesarean sectio. These findings show that combination HT6 and LI4 acupressure are effective for reducing esarean sectio's pain. HT6 and LI4 acupressure can be an effective nursing management for women in post partum periods.

Keywords: Pain, Delivery, Abdominal surgery, Maternal, Childbirth

INTRODUCTION

The woman who has undergone cesarean section has more problems, minor or major, than a woman with vaginal delivery. Some problem are like longer duration of hospital stay, post-operative pain, delayed ambulation, increased period required to return to normal meals, breast engorgement, problems in relation to bladder and bowel, lactation failure, and less maternal newborn bonding.[1]

Pain remains a significant problem following surgical operations. Pain is the most unpleasant state at patient after CS treatment. Pain is above all an individual phenomenon. Only the person experiencing it is able to really know what that pain is like. Other people may

think that they know what the pain is like. They may have experienced pain in the same part of the body, or possibly due to a similar cause, in the past. Alternatively, they have witnessed or even provided care for a number of people and think they know what a person who is experiencing this form of pain looks like. All of these people, whether they are experienced or whether they are witnesses, are mistaken. They are making assumptions which are either weakly founded or totally unfounded. Obviously, such unfounded assumptions carry serious implications for the person actually experiencing the pain.[2] Assessing pain using visual analogue scale (VAS) in the postoperative period is essential to improve pain management.

Acupressure is a therapy that is conducted by applying physical pressure on various points on body surface by means of energy circulation and balance in cases of pain symptoms. This therapy is similar to the acupuncture and it is conducted by applying pressure on selected points of the body by fingers, hands, palms, wrists and knees in order to provide internal flow of energy. Acupressure technique is a noninvasive, safe and effective application.[3-5]

This study is important to encourage the effectiveness of pain management using acupressur technique in order to relieve pain at postoperative Cesarean Sectio's patient. Sample has taken place at Post partum room at rural hospital in Banyumas.

METHODS

This study is quasy experimental with seven women who attended post partum room after their cesarean sectio for delivering their babies.

Data have been collected were following aspects:

1. Sociodemographic data
2. Maternal characteristics
3. Indication of delivery
4. Pain scale measured with Visual Analogue Scale for pain (VASP) before and after acupressure treatment

Acupressure therapy point HT6 and LI 4 have done for 6 second and 2 second released for 5 minutes each limb until 20 minutes overall.[6] Evaluation done before and after each treatment, followed with pain measurements with VASP. The VASP consist of 10 cm horizontal scale with the descriptors 'no pain' written on the left adn 'worst possible pain" written on the right of the scale. Participants were asked to place a mark on the 10 cm line, at a point that corresponded to the level of pain intensity that they felt at time of enquiry. The distance in centimeters from the no pain (left hand) end of the VASP to the participant's mark was used as a numerical index of the severity of pain experienced. The VASP has been reported to be sensitive to pharmacologic and nonpharmacologic procedures that alter the experience of pain, and the resultant parameter value has been shown to correlate highly with the level of pain as measures with verbal and numerical rating scales.[7]

RESULTS

Maternal characteristics in Table 1 showed that most of cesarean delivery women (57.2%) are in age group of between 26-325 years. Multiparas (57.2%) are the most of maternal parital state. Middle socioeconomic group (42.8%) as well as low socioeconomic group of participants. None of participants had history of abortion and previous fetal deaths. 57.2% are in before 6 hours after CS delivery.

Table 1: Socio-demographic factors of participants.

Maternal factors	Frequencies (n)	(%)
Maternal age (years)		
< 25	2	28.6
26-35	4	57.2
>35	1	14.2
Parity		
Primipara	3	42.9
Multipara	4	57.2
Socioeconomic status		
Low	3	42.8
Middle	3	42.8
High	1	14.3
H/o Abortion		
No	7	100
Yes	0	0
H/o Fetal death in previous pregnancy		
No	7	100
Yes	0	0
Length of time after CS		
< 6 hours	4	57.1
7-12 hours	2	28.6
>12 hours	1	14.3

Table 2: Intensity of pain with Visual Analogue Scale (VAS) for Pain (1-100 mm).

Score of Pain	Frequency (n)	Percentage (%)
Before treatment		
<50	0	0
50-75	1	14.3
>75	6	85.7
After treatment		
<50	1	14.3
50-75	4	57.2
>75	2	28.6

Pain intensity outcome is tabulated in Table 2 which showed that before acupressure treatment 85.7% participants report above 75 point scale. After acupressure treatment only 28.6% participants report the similar scale.

Table 3 shows the rate of pain intensity's scale before and after treatment are (84.29 ± 15.65) and (64.57 ± 15.80). There are significant differences between both of groups. The pain intensity after the intervention was significantly decrease than pain intensity before (p = 0.04).

DISCUSSION

High-quality pain relief is important after cesarean section to promote early recovery and optimize mothers' ability to care for their newborns. Surveys have shown that parturient consider pain during and after cesarean section as their most important concern.[8] Despite advances in postoperative pain management, postoperative pain relief and satisfaction are still inadequate in some patients because of individual variability and limitation from side effects of analgesic drugs or techniques.[9]

This present study finds that acupressure is able to effectively reduce the intensity of pain at periods of post-operative cesarean section deliveries. Similarly, the results of study conducted by Kotani et al., which featured abdominal surgery patients, indicated that acupuncture could effetively alleviate patients' postoperative pain.[10]

Goddard et al. reported on 18 patients who were randomly assigned to one of two experimental groups, 10 patients receiving acupuncture and eight receiving sham acupuncture.[11] These investigators found that both acupuncture and sham acupuncture reduce the intensity of pain evoked by stimulation at masseter muscles among myofascial patients.

This study shows the effectiveness of acupressure to relieve pain. Seven respondents that given acupressure therapy demonstrated the decrease at pain scale. The decrease of pain intensity through physiologically processes during acupressure treatment. Stimulation at acupressure point activated three centre, spinal cord, midbrain, and pituitary. Neurochemical is released, such as endorphine, serotonin and norepinephrine for the use to blocked pain messages. Acupessure stimulation also could release adrenocorticotropin hormone (ACTH) from pituitary. Three mechanism to explain acupressure work to decrease pain sensation that is: Neurotransmitter theory, autonomic nervous systems and gate control theory.[12]

Table 3: Intensity of pain's rate scale before and after acupressure treatment.

Treatment	Frequency (n)	Mean±SD	Min-max	95% CI
Before treatment	7	84.29 ± 15.65	55-98	13.75-25.68
After treatment	7	64.57 ± 15.80	36-84	

Acupressure enhance post-operative physiologis inces (respiration, pulse, systolic blood pressure, and siastolic blood pressure.[6] The results of this study suggest that significant differences in the levels of postoperative anxiety and pain existed between subjects who did and did not receive acupressure, indicating that postoperative acupressure may effectively reduce postoperative anxiety and pain. Over the recent years, researchers have investigated the use of the endogenous opioid system to explain the pain-alleviating mechanism. When people are under pressure, endorphin is produced, which elicits interferential obstruction at the nerve fibers. This endorphin property provides a pain- alleviating effect. When an individual's skin is stimulated, e.g. by massage or acupressure, endorphin levels are increased, which elicit a pain-alleviating effect. The therapeutic effect on postoperative anxiety elicited by acupressure was also reported by Ip who used a descriptive cross-sectional study to investigate the conditions under which patients consult an acupuncturist.[13] From Ip's results, there was a mean effectiveness rating of 74.4%. Similarly, Chen and Huang, in their study of patients with coronary artery disease, revealed that acupuncture at Neiguan point reduces subjects' heart rates, and increased parasympathetic nerve activity.[14]

The results of our study suggest, however, a contrary result compared to Hinze trial, who assigned 48 healthy women to one of four different study groups, namely a control group, a transcutaneous electrical nerve stimulation (TENS) group, a placebo group and an acupressure group.[15] Hinze's study showed no significant difference in anxiety and pain awareness between any of the four groups. The reason for this may associate to the different medical situations for different study participants, sinceit would appear that for women undergone surgery and for those women who are still in labor, both groups of women face high levels of anxiety and pain, level that given appropriate therapeutic techniques, could effectively be reduced.

Acupressure therapy could decrease pain at 71.4% respondents. Information given to family about acupressure procedure could be accepted. 100 % family

member that accompany respondent could redemonstrated acupressure point HT 6 and LI 4 and used it when pain onset begins.

CONCLUSION

It is concluded that Acupressure at HT6 and LI4 point reduced the severity of pain at the beginning of post partum periods after sectio cesarean. These finding shows that combination HT6 and LI4 acupressure therapy was effective for reducing cesarean section's pain. Acupressure therapy at point HT6 and LI4 can be an effective nursing management for women in periods of post-operative cesarean section.

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