

THE EFFECTIVENESS OF CUPPING MASSAGE ON UTERINE INVOLUTION

Machfudloh^{1*}, Kartika Ardiyani²

^{1,2}Bachelor of Midwifery and Midwifery Profession, Faculty of Medicine, Sultan Agung Islamic University,
Semarang, Indonesia
E-mail: machfudloh@unissula.ac.id

ABSTRACT

Physical changes occur in postpartum mothers such as changes in the uterus, lochia, vagina, and vulva. During the puerperium, the uterus will gradually recover to its pre-pregnancy state. One way to make the uterus return to good condition is to perform postpartum care, namely by cupping with the postnatal cupping massage technique. This technique is done by doing massage using cupping on the meridian point area of the abdomen and back. The purpose of this study is to determine the effectiveness of cupping massage in postpartum women on the length of the uterine involution process. This research is a quantitative research using the Quasy-experimental design using the posttest with control design to compare subjects after being given intervention. The research conducted by the researchers was to test the effectiveness of giving cupping massage to the optimization of uterine involution in Demak. Respondents in this study were 3-6 weeks postpartum mothers. The sample size in this study was 30 respondents with 15 respondents in the intervention group and 15 respondents in the control group. In the intervention group, 3-6 weeks postpartum mothers will be given cupping message according to the postpartum visit period. Meanwhile, in the control group, mothers will do postpartum care without massage cupping therapy. Post-test (after intervention) was performed by measuring TFU (weight, diameter, and palpation). Research results obtained $p=0.003$ ($p<0.005$) that means the provision of cupping massage is effective in the process of uterine involution in Demak.

Keywords: cupping massage, uterine involution, postpartum

Correspondence Author:

Machfudloh

Bachelor and Midwife Profession, Faculty of Medicine, Unissula Semarang, Indonesia machfudloh@unissula.ac.id

1. INTRODUCTION

The puerperium or postnatal period is the period from 6 to 8 weeks after delivery ¹. This process begins after the completion of labor and ends after the reproductive organs return to their pre-pregnancy or non-pregnant state as a result of psychological changes due to the labor process ². One physical change in postpartum mothers is changing in the uterus, lochia, vagina, and vulva. During the puerperium, the uterus will gradually recover to its pre-pregnancy state ³. Uterine involution is a process in which the uterus returns to its pre-pregnancy state with a weight of about 60 grams. This process begins immediately after the delivery of the placenta due to the contraction of the smooth muscles of the uterus ¹. The intensity of uterine contractions increases significantly immediately after birth, presumably in response to a very large decrease in intrauterine volume. When pregnant, the weight of the uterus itself can reach 1000 g. The size of the uterus will continue to shrink, and the weight of the uterus in the sixth week after giving birth will be only 50-100 g ³.

One way to keep the contractions good until the end of the puerperium is to take care of the puerperium, namely by doing the cupping massage technique ⁴. This cupping massage technique is a form of massage on the area that needs to be massaged, namely at the meridian points (A.M. Al-bedah et al., 2016). Cupping massage is also known as moving cupping, dynamic

cupping, and gliding cupping⁵. Various types of oil can be used such as olive oil, peppermint oil, and lavender oil⁶.

The benefit of cupping massage is to improve the reproductive system, which is to do it at the meridian point of the body, stomach, and back⁷. Besides, cupping massage can launch the blood circulation system⁷, stimulate the nerves of the brain, increase endurance, reduce stress, reduce pain, and others⁶.

Several studies on the physical changes of the puerperium (breast, uterus, lochia, and vagina) have been carried out by many researchers, such as The Factors Influence Uterine Involution (Arwiyantasari, et al 2019), The Effect of Early Mobilization on Reduction of Uterine Fundal Height in Postpartum Mothers at the Jasmine Pavilion, Jombang Hospital⁹, Height of Uteri Fundus in Post Partum Performing Postpartum Gymnastics¹⁰, and The Effectiveness of Postpartum Exercise and Oxytocin Massage on Uterus Involution¹¹. A study¹² about the effect of puerperal exercise on decreasing uterine fundal height showed that postpartum exercise affected decreasing uterine fundal height.

Researches on cupping in the health sector are¹³ on Improvement in Lactation with Traditional Chinese Medicine and Western Herbal Medicine, a Comparison of the effect of dry cupping therapy and acupressure at BL23 point on the intensity of postpartum perineal pain based on the short form of McGill pain questionnaire^{14, 15} showed that postpartum mothers who were given cupping massage (dry cupping) removed their lochia more quickly (21 days) than those who were not given cupping massage (35 days).

Based on the initial survey that the researchers conducted from October to December 2020 at the Posyandu, Kalikondang Village, Demak, 50 patients gave birth and 10 patients who were interviewed during a visit to the posyandu complained that their stomachs still felt heartburn, and they had pain. Their stomach was tense. They were afraid to do activities. They also bled. Based on these data, researchers are interested in researching the effect of cupping massage on the process of uterine involution in postpartum mothers at the Posyandu, Kalikondang Village, Demak.

2. METHOD

This research is a quantitative research using a Quasy-experimental design using the posttest with a control design in that intervention was carried out only in the intervention group and no treatment was carried out in the control group. The research was conducted at the Posyandu, Kalikondang Village, Demak in October-December 2020. The population in this study were all postpartum mothers at the Posyandu, Kalikondang Village, Demak. The sample size in this study was 15 postpartum mothers with cupping massage therapy in the intervention group and 15 postpartum mothers in the control group. The sample of this study were mothers who met the following inclusion criteria: willing to be respondents, multipara, and breastfeeding.

The data were collected using questionnaires, observation sheets, and SOP of cupping massage. In the intervention group, 3-6 weeks postpartum mothers were given cupping massage therapy 5 times according to the postpartum visit period. Meanwhile, in the control group, the mothers did postpartum care without cupping massage therapy. The questionnaire contained the patient's identity. The observations were made to monitor the process of uterine involution including measurement of High Uterine Fundus (TFU). The analysis data was conducted to determine the effectiveness of cupping massage on the process of uterine involution using the Mann-Whitney test. This research has gone through an ethical test with an

ethical clearance number No.386/XII/2020/Commission on Bioethics of Unissula Medical Faculty Semarang.

3. RESULTS

Characteristics of respondents in this study include age, education level, occupation, and type of delivery. This study consisted of 30 respondents including 15 respondents in the intervention group and 15 respondents in the control group. Characteristics of respondents can be seen in table 1 below.

Table 1 Characteristics of Respondents (n=30)

Characteristics	Group		Total	%
	Control	Intervention		
Age (years)				
< 20	0	0	0	0.0
20-35	15	15	30	100
>35	0	0	0	0.0
Education				
ELEMENTARY SCHOOL	0	0	0	0.0
JUNIOR HIGH SCHOOL	0	0	0	0.0
SENIOR HIGH SCHOOL	7	8	15	50.0
PT	8	7	15	50.0
Work				
Housewife	5	3	8	26.7
Civil Servant/Private	10	12	22	73.3
Type of Delivery				
Vaginal	8	9	17	56.7
SC	7	6	13	43.3

Table 1 showed that all 30 people (100%) respondents were aged 20-35 years. The education level of the respondents was partly higher education, namely 15 people (50.0%). Work most of the respondents were civil servants/private, namely 22 people (73.3%), and most of the respondents gave vaginal delivery, namely 17 people (56.7%).

Uterine Involution Process

Table 2 Uterine involution process (n=30)

TFU (Uterine Fundal Height)	Control Group		Intervention Group	
	N	%	N	%
Normal	10	(66.7)	13	(86.7)
Abnormal	5	(33.3)	2	(13.3)

Table 2 showed that 10 people (66.7%) in the control group and 13 people (86.7%) in the intervention group had a normal involution process category.

Bivariate analysis was conducted to analyze the effect of cupping massage therapy on the process of uterine involution in postpartum mothers using the Mann-Whitney test. It was previously tested for data normality (Shapiro Wilk) which showed that the data were not normally distributed. The results of the bivariate analysis are shown in the following table.

The Effect of Cupping Massage Therapy on the Uterine Involution Process

Table 3 The Effect of Cupping Massage Therapy on the Uterine Involution Process

Group	N	Median	Min	Max	p-value
Intervention	15	35	35	42	0.003
Control	15	42	35	49	

Table 3 showed that the mean TFU in the intervention group was 35 days. The fastest uterine involution process was 35 days and the longest was 42 days. While the mean length of the uterine involution process in the control group was 42 days. The fastest for the uterine involution process was 35 days and the longest was 49 days. The results of the Mann-Whitney test obtained a p-value = 0.003 ($p < 0.005$). There was a significant difference in the length of the uterine involution process in the group that was given cupping massage therapy with the group that was not given cupping massage therapy. So that the provision of cupping massage is effective for the process of uterine involution in postpartum mothers at the Posyandu, Kalikondang Village, Demak.

4. DISCUSSION

Characteristics of Respondents

Based on the results of the study, it was found that all respondents who were given and were not given cupping massage were aged 20-35 years. Most of the education is high school education, both for mothers who are given and not given cupping massage and the type of delivery is mostly vaginal.

According to ¹⁶, there was no relationship between maternal age and the involution of the uterus in postpartum mothers, and the independence of postpartum mothers in self-care during the early postpartum was not influenced by the level of the mother's education. The results of this statement were reinforced by research ¹⁷ which stated that education did not affect puerperal care practices. However, the mother's level of knowledge about the postpartum period affected her readiness to face the postpartum period ¹⁸. According to ¹⁹, parity affected uterine involution, and muscles that are stretched too often took a long time.

The Process of Uterine Involution in Postpartum Mothers

The results showed that respondents who did not do cupping massage had a longer uterine involution process where most of the uterus returned to normal on day 42, while the intervention group who was given cupping massage had a shorter uterine involution process on day 35. The uterus returned to its normal condition before getting pregnant.

Uterine involution is a process in which the uterus returns to its pre-pregnancy state with a weight of about 60 grams. This process begins immediately after the delivery of the placenta

due to the contraction of the smooth muscles of the uterus ¹. The intensity of uterine contractions increases significantly immediately after birth, presumably in response to a very large decrease in intrauterine volume. Postpartum hemostasis is achieved primarily by compression of the intramyometrial vessels. Hormones released by the pituitary gland strengthen and regulate uterine contractions, compress blood vessels, and aid hemostasis. When pregnant, the weight of the uterus itself can reach 1000 g. The size of the uterus will continue to shrink, and the weight of the uterus in the sixth week after delivery will be only 50-100 g (Bobak, L, J, 2012).

The results of the study indicated that there was an effect of cupping massage on the process of uterine involution in postpartum mothers in Posyandu in Kalikondang Village, Demak. Cupping massage (dry cupping) causes capillary dilatation in the cupped area so that it can elicit a relaxation response. This relaxation response occurs if cupping is done at one point. The relaxation effect obtained from the cupping process is then transmitted to the hypothalamus so that Corticotropin Releasing Factor (CRF) and other releasing factors are released ²⁰.

Cupping massage (dry cupping) is given at the point of *Al warik* (hips), *qonatul sufla* (right and left sacrum), upper back, and shoulders to increase the work of the reproductive organ system which is useful for relaxing the muscles, improving blood circulation and providing a sense of relaxation and well-being calm in the mother thereby increasing the work of the reproductive organ system ⁷.

The process of involution can occur quickly or slowly. Factors that affect uterine involution include early mobilization, nutritional status, breastfeeding, age, and parity ²¹. According to ¹⁷, several things that can affect the invol process the uterus are early mobilization, nutritional status, age, parity, and breastfeeding. Parity affects uterine involution, muscles that are stretched too often take a long time ¹⁹.

Postpartum care is very necessary in this period because the puerperium is a critical period to prevent the occurrence of a problem with the danger signs of the puerperium. This requires the participation of the community especially postpartum mothers to know about the danger signs of the postpartum period (Heni P, 2018). In addition, the participation of health workers is also needed by providing counseling during pregnancy, after delivery, and conducting home visits, namely KN.1 and KN.2 based on service standards. From these efforts, it is expected to be able to know and recognize early signs of the dangers of the puerperium ¹.

External factors that influence the process of uterine involution are age, parity, breastfeeding (in this study it has become terms or inclusion criteria), and maternal mobilization postpartum ⁹. The limitations of this study do not examine the mobilization of respondents as a confounding variable.

5. CONCLUSIONS

Postpartum mothers who were given cupping massage (dry cupping) had a faster return to normal uterine involution (the uterus returned to its pre-pregnancy state) (35 days) than those who were not given cupping massage (42 days). Giving cupping massage is effective in the process of uterine involution in postpartum mothers. Limitations in this study are the number of respondents that are only 30 and the suppressed bias factor does not cover all elements. It is hoped that further research will use more respondents and pay attention to the factors that influence uterine involution in cupping massage therapy so that it can be used as a guide for community empowerment in the wider field of health.

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