
Effectiveness of Oxytocin Massage Combination Jamu Bejja on Breast Milk Production and Uterine Involution

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ABSTRACT

Introduction: A breastfeeding mother has many nutritional needs in every food she consumes by paying attention to the needs needed by her body. Breast milk is a liquid to meet the nutritional needs of babies and protect from disease. Breast milk is given to babies because it can prevent infectious and non-communicable diseases, as well as increase IQ, EQ, and strengthen the affectionate relationship between mother and child. The World Health Organization (WHO) recommends that every newborn should be exclusively breastfed for six months. However, exclusive breastfeeding is a program that is quite difficult to develop. The cause of the low level of exclusive breastfeeding stems from the delay in breastfeeding which resulted in a decrease in breast milk production. This study aimed to determine the effectiveness of the Combination of Jamu Bejja and Oxytocin Massage on Breast Production and Uterine Involution. **Methods:** The design used a quasi-experiment. The population was postpartum mothers in Bangkalan Regency. The sample consisted of 30 in treatment groups 1, 30 in treatment group 2 and 30 in control groups. The variables were oxytocin massage, jamu bejja, milk production and uterine involution. Data collection used observation sheets (quasi-experimental). Data analysis used man whitney and kruskal wall tests. **Results:** there were differences in the effect of the combination of oxytocin massage and jamu bejja Madura on milk production and uterine involution with $\alpha < 0,01$. The average value in the oxytocin combination group of herbal jamu Bejja Madura and massage was higher than the average value in the oxytocin massage group and the control group. **Conclusion:** The combination of oxytocin massage and herbal jamu Bejja Madura was more effective than the massage and control groups.

Keywords: oxytocin massage; jamu bejja; milk production; uterine involution

INTRODUCTION

Breast milk is a liquid to meet the nutritional needs of babies and protect from disease. In addition, several studies in Jakarta showed that mothers provide prelactal food (formula milk and honey) on the first or second day before breastfeeding, while 62.6% avoid giving colostrum. ⁽¹⁾The Ministry of Health has set a target for exclusive breastfeeding coverage in 2014 at 80 percent. In fact, only 27.5 percent of mothers in Indonesia are able to provide exclusive breastfeeding. There are several factors that influence mothers in breastfeeding their babies. Behavior of breastfeeding mothers is influenced by the mother's education, parity status and the closeness of the mother's relationship with her baby. ⁽²⁾Based on a preliminary study conducted by research on July 1, 2019 at BPS Desa Rtn Mlajah, Bangkalan District, Bangkalan Regency, there were 20 breastfeeding mothers who did not breastfeed on the first, second and third days. And also the results of preliminary studies through interviews conducted with midwife M stated that they had never done oxytocin massage, and were lazy to drink jamu ASI (jamu bejja).

Many factors influence breast milk production and milk production, including no IMD (Early Initiation of Breastfeeding), incorrect breastfeeding techniques, not breastfeeding on demand, and complementary feeding (complementary feeding). ⁽³⁾Psychological factors such as stress, lack of confidence, anxiety, and sadness ⁽⁴⁾, Several other factors that can affect the production and smoothness of breast milk are food intake, contraception and the influence of drugs such as herbal medicine (bejja). For Madurese people who like to drink herbal medicine, especially for mothers who have just given birth, consuming herbal maternity (jamu bejja) specifically for new mothers can make breastfeeding easier. This expression shows that in Madura there are traditional medicines such as jamu which are believed to be effective for the quality of breast milk. Therefore, it is necessary to give a back massage combined with the consumption of supplements by drinking the herb bejja madura, with the hope of increasing milk production and uterine involution

METHODS

The research design was a quasi-experiment. The population was postpartum mothers in Arosbaya , Klampis, and Blega. The samples consisted of 30 in treatment groups 1 (oxytocin Massage), 30 in treatment group 2) combination of Jamu Bejja and oxytocin massage, and 30 in control groups respectively. Sample selection used simple random sampling. Group 1 was given an oxytocin massage intervention from the first day of the postpartum period until the 7th day of postpartum period with a minimum giving time of 15 minutes as much as 2 times a day, and carried out by the family (husband) who had been trained, as well as health workers. Group 2 was given the same treatment as group 1 with additional combinations of giving jamu bejja from the first day of postpartum period with a dose of 2 times per day each 5 grains. The control group was only given standard care during the post partum period.

The variables were oxytocin massage, jamu bejja, milk production and uterine involution. Data collection used observation (quasi-experimental). Data analysis used the man whitney and kruskal wall tests. This research has obtained Ethical Exemption from the Commission for ethics health Politechnic of Surabaya with the number EA/0354/KEPK-Poltekkes_sby/V/2020.

RESULTS

Effect of Oxytocin Massage on Milk Production and Uterine Involution

Effect of oxytocin massage on milk production and uterine involution showed in table 1.

Table 1. Effect of oxytocin massage on milk production and uterine involution

Variable		Mean	p
Milk Production	Oxcitosin massage	36.70	0.004
	Control	24.30	
Uterine Involution	Oxcitosin massage	35.50	0.013
	Control	25.50	

Oxytocin massage was an action to apply pressure to the back area in addition to the spine in a circular motion to stimulate the production of the hormone oxytocin. This action was done in the first 7 days of the puerperium which is done 2 times a day with a long massage of 15 minutes. Mother was in a sitting position with breasts hanging. This oxytocin massage module was prepared based on the results of the first phase of research where mothers who are immediately given oxytocin massage after giving birth, were given a frequency of 2 times a day for 15 minutes and can be done by husbands, families and health workers.

The Effect of Oxytocin Massage Combination of the 'Bejja' Herb Madura on Milk Production and Uterine Involution

The effect of oxytocin massage combination of the 'bejja' herb Madura on milk production and uterine involution showed at table 2.

Table 2. The effect of oxytocin massage combination of the 'Bejja' herb Madura on milk production and uterine involution

Variable		Mean	p
Milk production	Combination of the 'bejja' herb Madura and Massage	42.30	0.000
	control	18.70	
Uterine involution	Combination of the 'bejja' herb Madura and Massage	38.70	0.000
	control	22.70	

The results showed that the oxytocin massage combined with the Madura jamu bejja had an effect on milk production ($\alpha < 0.01$) and uterine involution ($\alpha < 0.01$) both compared to the oxytocin massage group and the control group.

This showed that the oxytocin massage intervention combined with the Madura herbal remedies was more effective in increasing breast milk production and uterine involution.

The Difference in the Effect of Oxytocin Massage and the Madura Herb “Bejja” on Milk Production and Uterine Involution

The difference in the effect of oxytocin massage and the Madura herb “bejja” on milk production and uterine involution showed at table 3.

Table 3 The difference in the effect of oxytocin massage and the Madura herb “bejja” on milk production and uterine involution

Variable		Mean	p
Milk production	Oxcitocin massage	42.67	0.000
	Combination of the 'bejja' herb Madura and massage	66.33	
	Control	27.50	
Uterine involution	Oxcitocin Massage	46.50	0.000
	Combination of the 'bejja' herb Madura and massage	57.70	
	Control	32.30	

The results showed that there was a difference in the effect of the oxytocin massage combination of the Madura herb jamu bejja on milk production and uterine involution with $\alpha < 0.01$. The mean value in the combination group of oxytocin massage combination of jamu and jamu Madura herbs was higher than the mean value in the oxytocin massage group and the control group.

DISCUSSION

Effect of Oxytocin Massage on Milk Production and Uterine Involution

Oxytocin massage provides a relaxing effect on the mother so that it can stimulate the release of the hormone oxytocin, oxytocin massage will stimulate the release of the hormone oxytocin which will trigger the myoepithelial cells that surround the ducts and alveoli of the breast to contract resulting in the release of breast milk. ⁽⁵⁾ Empty breasts will stimulate the brain to release the hormone prolactin, which functions to produce breast milk, the more breastmilk is released, the more production of breast milk will be. This is in accordance with the theory of supply and demand in breast milk production, where the low emptying of ASI is at decreased milk production. ⁽⁶⁾

Uterine involution is a process of returning the uterus to its pre-pregnancy size, which is supported by uterine contractions. Oxytocin is a hormone produced by the hypothalamus and released by the pituitary gland, which functions to stimulate muscle contractility including the uterine muscles Massaging the back next to the spine (Oxytocin Massage) will stimulate the release of the hormone oxytocin, which causes uterine contractions to get better (harder). In accordance with the research results of Lun (2002) that repeated massage can increase the production of the hormone oxytocin. The better the uterine contractions, the faster the uterus returns to its pre-pregnancy size. ⁽⁷⁾

The Effect of Oxytocin Massage Combination of the 'Bejja' Herb Madura on Milk Production and Uterine Involution

Until now, there has been no research that combines oxytocin massage with Madurese herbs bejja. However, there have been several studies related to the effect of several herbs on breast milk production. Widowati, Iin and Januriwasti, Dian Eka (2018) stated that mothers who consumed jamu bejah showed an increase in breast milk production. ⁽⁸⁾ The content of herbal bejah is similar to the content found in breast milk. For instance, the content of the Madura herb jamu bejja, namely kencur (*Kaemferia galangal L.*) contains starch, minerals, and essential oils, turmeric (*Curcuma domestica*) contains tumerone, curcumin, hars fat and vitamin c, keys (*Kaempferia rotunda L.*) contain essential oils, cineol and soparin curcuma (*Curcuma xanthorriza*) contain cricum, glucosides and essential oils, betel (*Piper Batle*) contains carotene, vitamin C and amino acids, katu (*Sauropus androgynus*) contains protein, fat, potassium, vitamin K, Pro vitamin A, vitamins B, vitamin C, phosphorus and magnesium, tamarind (*Tamarindus indica*) contains vitamin A, sugars, pectin, beluntas, (*Plucea indica*) contains alkaloids and essential oils. Prastiwi research results, Ratih Sakti (2018) states that consumption of herbal medicine in the form of temugiring and kencur can improve the health of postpartum mothers and milk production. ⁽⁹⁾ Wulandari's research (2020) states that consumption of turmeric and kates leaves can increase milk production. ⁽¹⁰⁾ The results of Roichana's (2017) study state that mothers who carry out the postpartum tradition, one of which is drinking herbal concoctions, experience good uterine involution. ⁽¹¹⁾

The Difference in the Effect of Oxytocin Massage and the Madura Herb "Bejja" on Milk Production and Uterine Involution

This suggests that the oxytocin massage intervention combined with the Madura herbal remedy is more effective in increasing breast milk production and uterine involution. Oxytocin massage exerts a relaxing effect on the sympathetic nervous system there by decreasing the production of adrenaline and increasing the production of the hormone endorphine. This increase in endorphine increases maternal comfort, thereby stimulating let down reflexes by releasing oxytocin. Empty breasts due to breastfeeding will lead to more prolactin production and more milk production. Furthermore, the consumption of Madura herb herbal medicine which contains nutrients that can increase breast milk production. Asih's research, Yusari (2017) states that oxytocin massage affects breast milk production ⁽¹²⁾. Likewise, research conducted by Fefitn (2019) states that oxytocin massage increases breast milk production. ⁽¹³⁾ The process of releasing breastmilk and the uterine involution released by the same hormone, namely oxytocin, is released by hypophysis. Oxytocin will stimulate smooth muscle

CONCLUSION

Oxytocin massage combined with with Jamu bejja Madura herb is more effective for increasing milk production and uterine involution compared to only oxytocin massage contraction which causes breast contractions to release milk and contractions in the uterus to accelerate the process of uterine involution

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