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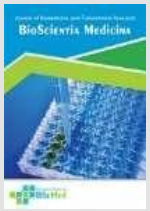

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Comparison of Breast Massage (Oxytocin Massage, Oketani Massage, and Marmet Massage) Against the Smoothness of Breast Milk from the Aspect of Baby's Sleep Frequency

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A B S T R A C T

Background: The inability to meet breast milk production can be prevented in various ways, one of which is breast massage. The breast massage technique, at a certain point, is able to remove the blockage of blood vessels and energy blockages so that it will facilitate milk production. This study aims to determine the potential of breast massage (oxytocin massage, oketani massage, and marmet massage) to smooth breast milk from the aspect of the baby's sleep frequency. **Methods:** Study design method experimental with the control group. Samples were Primiparous postpartum mothers who gave birth normally and were divided into three groups, namely oxytocin massage intervention group, marmet massage, oketani massage, and control group. Data were analyzed in univariate, bivariate, and multivariate. **Results:** Breast massage (oxytocin, marmet and oketani) in primiparous postpartum mothers was effective in increasing the frequency of baby's sleep. The frequency of the baby's sleep before Marmet massage was 3.29 hours, and after Marmet massage was 5.29 hours. In the oxytocin massage intervention group, it was known that the average sleep frequency of babies before breast massage was 2.00 hours, and after breast, massage was 3.00 hours. Furthermore, in the Oketani massage intervention group, it was found that the average frequency of the baby's sleep before breast massage was 2.00 hours, and after breast, massage was 3.00 hours. In the control group, it is known that the average sleep frequency of babies before breast massage is 0.57 hours and after breast massage is 0.71 hours. **Conclusion:** Oxytocin massage, marmet massage, and oketani massage have been shown to be effective in improving the smoothness of breast milk from the aspect of the baby's sleep frequency.

1. Introduction

Exclusive breastfeeding is breastfeeding alone without additional fluids, either formula, milk, water, orange juice, or other additional foods, before reaching the age of six months.[1] Mother's milk (ASI) is the best and most ideal food for babies because breast milk contains all the nutrients needed in the right amounts and considerations.[2] Colostrum is a thick viscous fluid with a yellowish color that comes out of the breast in the first few hours of life, which is rich in secretory immunoglobulin A (Ig A), which contains immune substances to protect babies from various infectious diseases, especially diarrhea.[3] Nationally, the coverage of exclusive breastfeeding in Indonesia is still low. Only 33.6% of babies in Indonesia are getting exclusive breastfeeding, which means that there are still 2/3 of babies in Indonesia who are not getting breast milk. In

Indonesia, the Ministry of Health of the Republic of Indonesia, through the community nutrition improvement program, has targeted the coverage of exclusive breastfeeding for 6 months at 80%. However, this figure is very difficult to achieve. Even the trend of prevalence of exclusive breastfeeding from year to year continues to decline. This is very concerning, considering that exclusive breastfeeding is very important for the growth and development of babies.

One of the causes of increased or decreased milk production is the stimulation of the breast glands, especially in the first week of lactation. Therefore, mothers are recommended to breastfeed early so that the baby's suckling immediately stimulates the anterior pituitary to produce the hormone prolactin and the posterior pituitary to produce the hormone oxytocin.[4] The inability to produce sufficient breast milk can be prevented in various ways, including teaching appropriate methods to facilitate breast milk production. Massage techniques at a certain point can remove blockages in the blood, and energy in the body will return smoothly.[5] The back is an acupressure point to facilitate the lactation process. In addition, the nerves in the breast are innervated by the dorsal or dorsal nerves that spread along the spine.

Massage is an effective supportive therapy to reduce physical discomfort and improve mood. Reducing discomfort in breastfeeding mothers will help smooth milk production. Rolling massage (back) provides a relaxing effect on the mother, which can indirectly stimulate the hormone oxytocin, which can help the smooth process of milk production. In addition, an alternative that can be done is to express or pump breast milk for 10-20 minutes until the baby can suckle. This action can help maximize prolactin receptors and minimize the side effects of delayed breastfeeding by the baby.[6] The recommended technique for expressing breast milk is to use hands and fingers because it is practical, effective, and efficient compared to using a pump. How to express breast milk using the Cloe Marmet method called the Marmet Technique, which is a combination of squeezing and massaging techniques. Expressing using hands and fingers has the advantage that the negative pressure can be adjusted. It is more practical and economical because it is enough to wash hands and fingers before expressing breast milk.[7] If this technique is carried out effectively and appropriately, there will be no problems in the production of breast milk or how to express breast milk so that the baby will continue to get breast milk and the use of formula milk in the first days of the baby's birth can be reduced.[8] Efforts to stimulate the prolactin and oscitocin hormones in the mother after giving birth, apart from expressing breast milk, can also be done by doing breast care or massage, cleaning the nipples, and often breastfeeding the baby even though the milk has not come out, early and regular breastfeeding and oxytocin massage.[7,9,10]

In a preliminary study conducted at the Langsa Kota Independent Practice Midwife, it was found that the number of postpartum mothers was 12 people, and 11 of them did not come out of breast milk on the first day. While the Langsa Lama Independent Practice Midwife obtained the number of postpartum mothers as many as 7 people, and 5 of them did not come out of breast milk on the first day. This study aims to assess the effectiveness of breast massage (oxytocin massage, oketani massage, and marmet massage) on the smooth production of breast milk from the aspect of the baby's sleep frequency.

2. Methods

The study design is experimental with a control group design. The study was conducted at PMB Langsa City, where a total of 28 research subjects participated in this study. The research subjects were grouped into four groups, namely the group that received the oxytocin massage intervention, the oketani massage intervention group, the marmet massage intervention group, and the control without intervention. The inclusion criteria in this study were postpartum mothers in the PMB working area of the Langsa City Health Center who underwent a normal delivery process, a postpartum child (live birth), was willing to participate in this study, and gave birth to a

baby with normal weight > 2500 grams - < 4000 grams. Oxytocin massage is done by massaging the back of the postpartum mother on days 1-3 on the side of the spine (vertebrae) to the shoulder blades (costal 5-6), according to the standard oxytocin massage procedure. The marmet technique is carried out on postpartum mothers on days 1-3 by a combination method, namely blushing and massaging, using the Standard Procedure of the Marmet Technique. The Oketani technique was carried out on postpartum mothers on days 1-3 using the Standard Procedure for the Oketani technique. In this study, the measurement of the frequency of a baby's sleep in hours, where the longer the baby's sleep, means that the milk produced is good enough to meet the baby's needs. This research already has ethical approval with No.2217/VII/SP/2020. Data analysis was carried out with the help of SPSS version 25 software. Univariate analysis was carried out to present the distribution of the frequency and percentage of respondent characteristics, the smoothness of breastfeeding, and changes in the baby's weight. Bivariate analysis used McNemar Test for categorical data and the Wilcoxon Signed Ranks Test for numerical data. Multivariate analysis used the Kruskal-Wallis test.

3. Results

Table 1. Average baby's sleep frequency before and after breast massage

No	Group	Before Breast Massage			After Breast Massage		
		Mean	Min.	Max.	Mean	Min.	Max.
1	Marmet massage	3.29	1	5	5.29	3	4
2	Oxytocin massage	2.00	1	3	3.00	3	3
3	Oketani massage	2.00	1	3	3.00	3	3
4	Control	0.57	0	1	0	1	0,71

Table 1 shows the smoothness of breastfeeding from the aspect of the frequency of sleep of postpartum mothers after breastfeeding between before and after breast massage in all groups. In the marmet massage intervention group, it was found that the average sleeping frequency of babies before breast massage was 3.29 hours, and after breast, massage was 5.29 hours. The results of the hypothesis test obtained a P-value of 0.039, which means that there is a significant difference in the frequency of baby's sleep in postpartum mothers between before and after Marmet massage.

Meanwhile, in the oxytocin massage intervention group, it was found that the average sleep frequency of babies before breast massage was 2.00 hours, and after breast, massage was 3.00 hours. Hypothesis test results obtained a P-value of 0.020, which means that there is a significant difference in the frequency of baby's sleep in postpartum mothers between before and after Oxytocin massage.

Furthermore, in the oketani massage intervention group, it was found that the average sleeping frequency of babies before breast massage was 2.00 hours, and after breast, massage was 3.00 hours. The results of the hypothesis test obtained a P-value of 0.020, which means that there is a significant difference in the frequency of baby's sleep in postpartum mothers between before and after the Oketani massage.

In the control group, it is known that the average sleep frequency of babies before breast massage is 0.57 hours and after breast massage is 0.71 hours. The results of hypothesis testing obtained a P-value of 0.317, which means that there is no difference in the

frequency of baby's sleep in postpartum mothers in the control group in the pre-test and post-test measurements.

4. Discussion

The results of this study are in line with those stated by Sari, Salimo, and Budihastuti (2017), which state that one of the actions that need to be taken to maximize the quality and quantity of breast milk is back massage. This back massage is useful to stimulate the release of the hormone oxytocin to be more optimal and the production of breast milk to be smooth. If the milk is smooth, the baby will feel full and can sleep well.[11] According to Takahata, et al. (2019), oxytocin massage is one solution to overcome the inability to produce breast milk. Oxytocin massage is a massage along the spine (vertebrae) to the fifth-sixth rib and is an attempt to stimulate the hormones prolactin and oxytocin after childbirth.[12] Suryani and Astuti (2013) said that oxytocin massage was able to stimulate more milk production. A lot of breast milk will provide adequate nutrition for the baby, and also the baby will feel satisfied and full after breastfeeding. Then the baby can sleep soundly for 4-5 hours, and the baby can urinate or defecate with a frequency of at least six times a day.[13] The results of this study are in accordance with those proposed by Buhari, et al. (2018), namely, Oketani massage and breast care are useful for smoothing the milk ejection reflex. It is also an effective way to increase the volume of breast milk. A lot of milk production will make the baby full and can sleep peacefully for more than 4 hours.[14] The results of this study are in line with what was stated by Rini and Nadhiroh (2015), namely marmet massage is able to stimulate more milk production. A lot of breast milk will provide adequate nutrition for the baby, and also the baby will feel satisfied and full after breastfeeding. Then the baby can sleep soundly for 2-4 hours, and the baby can urinate or defecate with a frequency of at least six times a day.[15]

The recommended milking technique is to use hands and fingers because it is practical, effective, and efficient compared to using a pump. How to express breast milk using the Cloe Marmet method called the Marmet Technique, which is a combination of squeezing and massaging techniques. Expressing using hands and fingers has the advantage that the negative pressure can be adjusted. It is more practical and economical because it is enough to wash hands and fingers before expressing breast milk.[7] If this technique is carried out effectively and appropriately, there will be no problems in the production of breast milk or how to express breast milk so that the baby will continue to get breast milk and the use of formula milk in the first days of the baby's birth can be reduced.[8] If the adequacy of breast milk is met while breastfeeding the baby, the baby can sleep soundly and soundly. The frequency of the baby's sleep can be fulfilled. The baby feels comfortable while sleeping because his stomach is full.

Suryani and Astuti (2013) said that breast massage was able to stimulate more milk production. A lot of breast milk will provide adequate nutrition for the baby, and also the baby will feel satisfied and full after breastfeeding. Then the baby can sleep soundly for 4-5 hours, and the baby can urinate or defecate with a frequency of at least six times a day. In postpartum mothers who do not receive breast massages, breast milk production is not smooth and results in the baby not feeling enough and becoming fussy. A baby is considered to be getting enough breast milk if there is a significant weight gain, the baby feels satisfied and full after feeding, then the baby can sleep soundly for 2-4 hours, and the baby can urinate or defecate with a frequency of at least six times a day. Signs of the adequacy of breast milk in babies, namely weight gain of more than 10% in the first week. The baby's weight will increase by 200-2500 grams per week. In postpartum mothers who do not receive breast massages, breast milk production is reduced and will affect the baby's weight due to insufficient intake.[15]

5. Conclusion

Breast massage (marmet, oxytocin, and oketani) in

primiparous postpartum mothers is effective in increasing the smoothness of breastfeeding from the aspect of the baby's sleep frequency.

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