

The Effect of Oxytocin Massage to Breastfeeding Production of Breastfeeding Mothers

Ani Triana
DIII Midwifery
STIKes Hang Tuah
Pekanbaru
Pekanbaru, Indonesia
anitriana@htp.ac.id

Yulrina Ardhiyanti
DIII Midwifery
STIKes Hang Tuah
Pekanbaru
Pekanbaru, Indonesia
rien.ardhi@gmail.com

Hetty Ismainar *Department of
IKM STIKes Hang Tuah
Pekanbaru
Pekanbaru, Indonesia
ismainarhetty@yahoo.co.id*

Hastuti Marlina *Department
of IKM STIKes Hang Tuah
Pekanbaru
Pekanbaru, Indonesia
hastutimarlina56@gmail.com*

Abstract—Oxytocin massage is a massage that aims to provide comfort to the mother so that it does not inhibit the secretion of the hormones prolactin and oxytocin in producing milk. This massage is done by massage along the spine (vertebrae) to the fifth or sixth costae bone. The purpose of this study is to find out the effect of oxytocin massage on breast milk expenditure in breastfeeding mothers. This type of research is quantitative with Quasi Experiment design. The population is all breastfeeding mothers in BPM Khairani Asnita from February to March 2016 with 17 samples of the experiment and 17 samples of the control. Bivariate data analysis uses nonparametric test, namely Wilcoxon. The results showed that milk production before and after oxytocin massage with pvalue of 0.004 meant that there was a significant influence on oxytocin massage given to breastfeeding mothers before oxytocin massage with after oxytocin massage. It is recommended to midwives to promote oxytocin massage and teach oxytocin massage to the class of pregnant women and motivate the participation of the husband to succeed in exclusive breastfeeding.

Keywords— *Oxytocin Massage, Breastfeeding Production, Breastfeeding Mothers*

I. INTRODUCTION

Women have a very important main role in building healthy families and are able to give birth to a generation of people who are healthy and have character. The Minister of Health emphasized the importance of women in providing exclusive breastfeeding, complementary food, for the optimization of their child's growth and development. Women must be healthy because they have the demand to be able to give birth to a quality generation (1). This effort must be done since adolescents so as not to be anemic, then in the first 1000 days of life which is 270 days of pregnancy and 730 days of infants from birth to age 2 years. Until now the scope of exclusive breastfeeding is still low. Data from the Ministry of Health noted that the number of early breastfeeding initiations (IMD) in Indonesia increased from 51.8 percent in 2016 to 57.8 percent in 2017. Despite the

increase, the figure is still far from the target of 90 percent (2). The low practice of exclusive breastfeeding is due to lack of maternal knowledge, socio-cultural factors, lack of information about exclusive breastfeeding and lactation counseling from health workers and the strong promotion of formula milk in modern/private health service facilities (3).

In addition, about 80% -90% of milk production (ASI) is determined by the emotional state of the mother, because this is related to the oxytocin reflex in the form of thoughts, feelings and sensations. If this increases, it can expedite ASI production (Ramadani & Hadi, 2009 (4). Therefore, there is a need to issue milk for some postpartum mothers. In the effort to remove ASI, there are 2 things that affect production and expenditure. ASI production is affected by the hormone prolactin while expenditure is influenced by the hormone oxytocin. The hormone oxytocin will exit through stimulation to the nipples through sucking the baby's mouth or through massage on the baby's spine. By doing massage on the spine, the mothers will feel calm, relaxed, increase the pain threshold and love her baby, so that the hormone oxytocin is released and breast milk comes out quickly (5).

Oxytocin massage is massage along the spine (vertebrae) to the fifth-sixth costae bone and is an effort to stimulate the hormone prolactin and oxytocin after childbirth and can provide comfort to the mother with the aim that breast milk can come out (6). Through massage or stimulation of the spine, the neurotransmitter will stimulate the medulla oblongata directly sending messages to the hypothalamus in the posterior hypofise to release oxytocin, causing the breast to pass milk. This spinal area massage will also relax tension and relieve stress, so the hormone oxytocin is released that will help release milk, aided by baby sucking on the nipples immediately after the baby is born as a normal baby (7)

In Riau Province the percentage of exclusive breastfeeding in 2012-2016 has decreased. The percentage of exclusive breastfeeding in infants 0-6

months in Riau Province in 2016 was 56.2%, lower than in 2015 (68.8%), whereas the target of exclusive breastfeeding coverage in Riau Province in 2016 was 80%. The highest coverage of exclusive breastfeeding in the regencies/cities in 2016 was Rokan Hilir Regency at 81.57%, Dumai City at 73.97%, and Siak Regency at 72.65%. On the other hand, the City of Pekanbaru is 50.67%, and this target coverage is still low (8).

Based on data obtained from the Pekanbaru City Health Office, the Sidomulyo Health Center RI is one of the Health Centers with the most visits by maternal and postpartum mothers, namely 2911 maternity and postpartum mothers and has a low coverage of exclusive breastfeeding (9). BPM Khairani Asnita is one of the most visited BPM maternity and postpartum mothers who are in the work area of the Sidomulyo Health Center RI, 60 people in the past 6 months as well as the postpartum mothers. It was found that 15 out of 20 postpartum mothers experienced lactation and breastfeeding problems. The majority of problems experienced by these mothers are the absence of breast milk on the first day until the third day post partum. As a result, newborns who are supposed to get early breastfeeding will be delayed and alternatively given formula milk so that it fails to provide exclusive breastfeeding.

II. METHODS

This type of research is a quantitative study with a Quasi Experiment design using pretest-posttest with control group to figure out the effect of oxytocin massage on milk production in breastfeeding mothers.

The study was conducted at BPM Khairani Asnita in 2016 starting in February-March 2016. The population in this study was all breastfeeding mothers at BPM Khairani Asnita from February-March 2016 with an experimental sample of 17 people and a control sample of 17 people with the inclusion criteria of having babies born with aterm and no physical defects such as cleft lip. The sampling technique uses consecutive sampling techniques, and bivariate data analysis is with the Wilcoxon test.

III. RESULTS

TABLE I. MILK PRODUCTION OF BREASTFEEDING MOTHERS BEFORE AND AFTER OXYTOCIN MASSAGE AT BPM KHAIRANI ASNITA PEKANBARU IN 2016

Before oxytocin massage	Milk Production						P value
	After oxytocin massage						
	Not increased		Increase		Total		
	F	%	F	%	F	%	
Less	4	23,5	4	23,5	8	47,1	0,046
Much	0	0	9	52,9	9	52,9	
Total	4	58,3	13	41,7	17	100	

Table 1 shows that of the 8 respondents who had less milk before oxytocin massage, then experienced increased milk after oxytocin massage by 4 respondents (50%). Furthermore, from 9 respondents

who had a lot of breast milk before doing oxytocin massage, then experienced increased milk after oxytocin massage by 9 respondents (100%). After doing statistical tests with Wilcoxon, the p-value is 0.046 ($p < 0.05$), which means that H_0 is rejected and there is a difference in milk production before and after oxytocin massage for breastfeeding mothers at BPM Khairani Asnita Pekanbaru in 2016 (Table 1).

This study is in line with Kiftia Research (10), in which the results of the research hypothesis p-value is 0.001 < 0.05 , which shows a significant difference in the average value before and after oxytocin massage therapy. It can be concluded that this oxytocin massage therapy is effective to be used in mothers with 4-10 days postpartum.

Oxytocin massage that is done will provide comfort to the mother so that it will provide comfort to the breastfed baby. Physiologically it increases the hormone oxytocin which is sent to the brain so that the hormone oxytocin is released and flows into the blood, then enters the breast, causing the muscles around the alveoli to contract and make milk flow in the milk channel. The hormone oxytocin also makes the milk channel wider, making milk flow more easily (11). Widia and Meihartati (12) explained that in addition to being influenced by the baby's suckling while breastfeeding, the baby's sucking also affects the release of the hormone oxytocin in the ductal system. When the channel is dilated or softened, oxytocin is secretly reflected by the pituitary to extract milk from the alveoli. After delivery, the effects of estrogen and progesterone suppression on the pituitary disappear, and the effect of the hypophysical hormones reappears, including prolactin. The breasts, which have been prepared during pregnancy, become affected, causing the breast glands to contain milk. ASI production will become faster and more abundant when stimulated as early as possible by breastfeeding.

The research of Kurniati, Bakara and Susanti (13) also showed that there was an influence of oxytocin massage using lavender essential oil with smooth milk production in postpartum mothers with $P < 0.05$. Massage on the spine can increase lactation in all assessed parameters. Therefore, it can be recommended for all breastfeeding mothers, especially those who have problems with IMD and breastfeeding. Importantly, this is a simple method that can be implemented (14). Therefore, the midwives need to teach oxytocin massage to mothers from the start of pregnancy through the class of pregnant women and husband's support in motivating mothers to provide exclusive breastfeeding through oxytocin massage. This is consistent with Asih's research (15) regarding the influence of oxytocin massage on milk production in BPM Lia Maria Sukarame District Bandar Lampung in 2017 because doing oxytocin massage can stimulate the hormone oxytocin which functions in the release of breast milk. In terms of employment, most respondents do not work that can allow them to carry out oxytocin massage both by the husband in the morning and evening or carried out by the family. This shows that the role of the husband greatly influences the mother's effort in providing exclusive breastfeeding.

ACKNOWLEDGMENT

The researchers would like to thank profusely the DIII Midwifery Study Program, STIKes Hang Tuah Pekanbaru, which has provided support so that researchers could complete this research. Our gratitude also goes to midwife Khairani Asnita who has been willing to give permission and respondents who are willing to take the time and help this research.

REFERENCES

- [1] Depkes, "Kemenkes: Pekerja Perempuan Harus Sehat untuk Sehatkan Keluarga," 2018 <http://www.depkes.go.id/article/view/18020700006/kemenkes-pekerja-perempuan-harus-sehat-untuk-sehatkan-keluarga.html> Diakses 22 Agustus 2019
- [2] Juniman, PT, "Angka Pemberian ASI Eksklusif di Indonesia Masih Rendah," 2018. <https://www.cnnindonesia.com/gaya-hidup/20180820165738-255-323681/angka-pemberian-asi-eksklusif-di-indonesia-masih-rendah>
- [3] Ambarwati, R., Muis, S. F., Susantini, P, "Pengaruh konseling laktasi intensif terhadap pemberian air susu ibu (ASI) eksklusif sampai 3 bulan," 2013, 2(1), 16–23.
- [4] Ramadani, M., Hadi, E. N, " Dukungan Suami dalam Pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Air Tawar Kota Padang, Sumatera Barat," 2009. 16424, 1–6.
- [5] WBW, "Early Initiation of Breastfeeding Can Save More Than One Million Babies Press Release, World Breastfeeding Week : Malaysia," 2007. <http://www.worldbreastfeedingweek.net/wbw2007/pdf/PressRelease07.pdf> Diakses 22 Agustus 2019
- [6] Widiyanti AF, Heni S, Kartika S, Rini S, "Perbedaan Antara Dilakukan Pijatan Oksitosin Dan Tidak Dilakukan Pijatan Oksitosin Terhadap Produksi Asi Pada Ibu Nifas Di Wilayah Kerja Puskesmas Ambarawa," Akbid Ngudi Waluyo Ungaran, 2014.
- [7] Perinasia, Manajemen Laktasi. Jakarta : Gramedia, 2007.
- [8] Dinkes Provinsi Riau, Profil Kesehatan Riau Tahun 2016, Riau, 2016.
- [9] Dinkes Kota Pekanbaru, Data ASI Eksklusif dan Kunjungan Ibu Bersalin dan Nifas, Pekanbaru, 2016
- [10] Kiftia, M, "Pengaruh Terapi Pijat Oksitosinterhadap Produksi ASI pada Ibu Post Partum. 3(1)", Jurnal Ilmu Keperawatan Unsyiah, 2015. <http://jurnal.unsyiah.ac.id/JIK/article/view/5128> Diakses pada tanggal 22 Agustus 2019
- [11] Isnaini N dan Diyanti R, "Hubungan Pijat Oksitosin pada Ibu Nifas terhadap Pengeluaran ASI di Wilayah Kerja Puskesmas Raja Basa Indah Bandar Lampung Tahun 2015,"Jurnal Kebidanan Malahayati. Vol 1, No 2., 2015. <http://ejournalmalahayati.ac.id/index.php/kebidanan/article/view/551/485> Diakses pada tanggal 22 Agustus 2019.
- [12] Widia L dan Meihartati T, "Oxytocin massage enhanced breast milk production in post-partum women," Majalah Obstetri & Ginekologi, Vol. 25 No. 2, 2017. <https://ejournal.unair.ac.id/MOG/article/view/7979/4717> Diakses pada tanggal 22 Agustus 2019
- [13] Kurmiati, Bakara DM dan Susanti E, "The Effect Of Oxytocin Massage Method Using Lavender Essential Oils On The Smooth Production Of Breast Milk At Mother Postpartum In Rejang Lebong Regency,"Advances in Health Sciences Research (AHSR), vol.14. 1st International Conference on Inter-Professional Health Collaboration (ICIHC 2018), 2019. <https://www.atlantis-pess.com/proceedings/icihc-18/55916774> Diakses pada tanggal 22 Agustus 2019
- [14] Patel U dan Gedam DS, "Effect of back Massage on Lactation among Postnatal Mothers,"International Journal of Medical Research and Review, Vol 1, No.01, 2013. <http://medresearch.in/index.php/IJMRR/article/view/13> Diakses pada tanggal 22 Agustus 2019
- [15] Asih Y, "Pengaruh Pijat Oksitosin terhadap Produksi ASI pada Ibu Nifas," Jurnal Ilmiah Keperawatan Sai Betik, Vol 13, No 2, 2017. <http://www.ejurnal.poltekkes-tjk.ac.id/index.php/JKEP/article/view/931/709> Diakses pada tanggal 22 Agustus 2019