The Effectiveness of Oxytoxin Massage Towards Increasing Breast Milk Production in Aek Haruaya Village, Portibi District

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1. INTRODUCTION

Mother's milk is the best food for babies because it is a perfect natural food, easily digested by babies and contains nutrients that are in accordance with the baby's needs for growth, immunity and preventing various diseases as well as for baby's intelligence, safe and guaranteed cleanliness because it is directly given to babies to avoid digestive disorders such as diarrhea, vomiting and so on [2].

Another benefit that is no less important than exclusive breastfeeding as mentioned above is because breast milk is highly nutritious, affordable and can protect babies from sudden infant death syndrome or SIDS (Sudden Infant Death Syndrome). However, creating breastfeeding from day one is not always easy as many mothers face problems in doing so. An event that often occurs on the first day of breastfeeding is the difficulty of milk coming out. This makes mothers think that their babies will not get enough milk so mothers often take steps to stop breastfeeding and replace them with formula milk. In addition, there are also mothers who are afraid and avoid breastfeeding, as a result, there will be damming and stasis of breast milk because it will reduce the baby's sucking at the breast, so the amount of milk released is small. While in developing countries, many mothers feel anxious and use a schedule in breastfeeding, so that the quantity of breast milk produced is not sufficient for the baby's needs [8].

The coverage of exclusive breastfeeding nationally in Indonesia has fluctuated over the last 3 years, the coverage of exclusive breastfeeding for infants 0-5 months decreased from 62.2% in 2007 to 56.2% in 2008, but...
increased again in 2009 to 61.3%. Meanwhile, the coverage of exclusive breastfeeding for infants up to 6 months decreased from 28.6% in 2007 to 24.3% in 2008 and rose again to 34.4% in 2009 [7].

Expenditure of breast milk can be influenced by two factors, namely production and expenditure. Breast milk production is influenced by the hormone prolactin while expenditure is influenced by the hormone oxytocin. The oxytocin hormone will come out through stimulation to the nipples through the baby's mouth sucking or through massage on the baby's mother's spine, by massaging the mother's spine, she will feel calm, relaxed, increase the pain threshold and love her baby, so that the oxytocin hormone comes out and Breast milk also comes out quickly [22]. Massage or stimulation of the spine, neurotransmitters will stimulate the medulla oblongata directly send messages to the hypothalamus in the posterior pituitary to release oxytocin, causing the breasts to release milk. Massage in this spinal area will also relax tension and relieve stress and thus the oxytocin hormone will come out and will help release breast milk, assisted by baby sucking on the nipples immediately after the baby is born with a normal baby condition [1].

Indonesia, with its biodiversity, has enormous potential to provide natural medicines, given the large number of medicinal plants that grow well. Since the first, the Indonesian people have known medicinal plants and use them to maintain health and treat disease. The use of medicinal plants is obtained based on empirical experience handed down from our ancestors. Treatment with ingredients of plant origin is called phytotherapy which in its application at this time is known in the form of herbal medicine and phytopharma (Santoso U, 2009 in Murtiana, 2011).

The results of [6] which states that oxytocin massage has a great influence on increasing breast milk production. The increase in breast milk production is influenced by the presence of polyphenols and steroids that affect the prolactin reflex to stimulate the alveoli which work actively in the formation of breast milk. The results of this study also stated that the increase in breast milk production was also stimulated by the hormone oxytocin.

Based on a preliminary survey in Aek Haruaya Village on breastfeeding mothers, it is known that some postpartum mothers and their families consider that to give breast milk their breasts must be waited until they are full or hard, so that the discharge is thick and plentiful, so that many postpartum mothers experience swelling of the breasts or mastitis due to late give breast milk. This is due to the ignorance of the postpartum mother or her family about how to express breast milk and the absence of health workers who provide assistance to the mother when she needs it or because the health services and facilities she receives from health workers do not support the breastfeeding process. Regarding the benefits of oxytocin massage on increasing exclusive breastfeeding, it was found that from 10 mothers to 7 mothers did not know oxytocin massage as an increase in milk production.

2. METHOD

Design study this is quasi experiment with One Group pre . design and post test design , namely the observation is done before and after being given treatment respondents. Research was conducted in Aek Haruaya Village, Portibi District, North Padang Lawas Regency in April – June 2022. Population in study this is mother who have babies 0-2 months. The treatment given was oxytocin massage. While the control population in the study this is all mothers who don't given treatment massage oxytocin.

Sampling was carried out by method Non Probability Sampling-Purposive. Sampling Type with 10 respondent group treatment and 10 respondent group control . Next researcher To do massage oxytocin on respondent which given treatment once a week later conducted massage for 20 minutes using baby oil on neck and shoulders to relax the body then proceed from the back waist walk through bone behind until with scapula shape letter "V", then The volume of breast milk production was measured with a measuring bottle. Next conducted observation and measurement on second group which given treatment and not given treatment. Breast milk production volumed in sheet observation. Analysis data with univariate and bivariate for see effectiveness connection between independent variables (massage oxytocin) with variable bound Expenditure breast milk), test statistic using t-test dependent with significant level 0.05 [4].

3. RESULTS AND DISCUSSION

Based on the results of research conducted from April to June 2022 in the village of Aek Haruaya regarding the Effectiveness of Oxytocin Massage to Increase Breast Milk Production, the following results were obtained:

Table1. Distribution Characteristics Average Breast Milk Production Volume On Mother.

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Mean (Volume)</th>
<th>variance</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massage done</td>
<td>&gt;40 ml</td>
<td>0.256</td>
<td>10</td>
</tr>
<tr>
<td>No Massage</td>
<td>&lt;20 ml</td>
<td>7.285</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 1. show average production volume breast milk on mother which conducted massage oxytocin that is as much as > 40 ml. While the average volume of breast milk production on mother which no conducted massage oxytocin that is as much as <20 ml.

Expenditure breast milk could accelerated with action non pharmacology that is through massage or stimulation on bone behind. neurotransmitter will stimulate medulla oblongata instantly sent a message to the hypothalamus in the posterior pituitary to Secrete oxytocin which cause breast secrete milk. With massage in area bone behind this also will relax tension and remove stressed, with so hormone oxytocin go out and will help express breast milk, assisted with puff baby on nipple milk moment as soon as the baby is born, the dripping milk or go out is a sign active reflex oxytocin [12].

Naziroh’s research (2017) on the effect of oxytocin massage on the smoothness of breast milk (ASI) in mothers having significant results, namely there is an effect of oxytocin massage on the smoothness of mother’s milk.

Wrong one theory labor is decreased levels of the hormones estrogen and progesterone by drastic so that replaced by hormone prolactin and hormone oxytocin. Hormone prolactin and oxytocin play role in process lactation so that milk production will be smooth. breast milk that is not come out not because of inadequate milk production sufficient, but milk production is sufficient however the output hampered consequence obstacle secretion oxytocin [11].

Thing this show suitability with theory, that massage oxytocin which conducted in along bone behind (vertebrae) until bone costa fifth- sixth will stimulate hormone prolactin which produced by pituitary anterior and oxytocin which produced by pituitary posterior so that Automatic breast milk can be more fluent. Besides expedite breast milk, massage oxytocin give convenience mother, reduce swollen (engorgement), reduce blockage breast milk, stimulate release hormone oxytocin, maintain milk production when the mother and baby sick. Existence flavor comfortable which feel mother during massage is condition success massage oxytocin [6].

Table 2. Distribution Normality Group Treatment And Group Control

<table>
<thead>
<tr>
<th>Test of Normality</th>
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<tbody>
<tr>
<td>Treatment Group</td>
</tr>
<tr>
<td>Statistics</td>
</tr>
<tr>
<td>Treatment</td>
</tr>
<tr>
<td>Control</td>
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Based on the results of the normality test of variance using the Shapiro Wilk test, the value of significant for group treatment 0.475 and group control 0.188. Because score significant second group more from 0.05 so could said that group control and treatment groups were distributed normal.

Bivariate analysis was carried out by test Independent T-Test to compare two group mean of two different samples. The principle want to knowing is there is difference effectiveness mean among two sample, with level trust 95% or level significant value =0.05, if the p value <0.05 means there is influence which significant among variable independent and variable dependent.

Table 3. Difference Average Volume Expenditure breast milk On Group Treatment and Control

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (Volume)</th>
<th>P-Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>&gt;40 ml</td>
<td>0.003</td>
<td>10</td>
</tr>
<tr>
<td>Control</td>
<td>&lt;20ml</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

Based on table 3, is known that on group treatment average volume expenditure breast milk >40 ml, whereas on control group <20 ml. Statistical test results obtained p-value = 0.003 (p<0.05) means there is influence effectiveness massage oxytocin to average expenditure breast milk.

Results calculation with analysis Independent T-Test statistics on 10 respondents group treatment and 10 respondent group control obtained score p=0.003 (<0.05) which could concluded that there is influence average volume expenditure Breastfeeding between the group treatment and the control. The results show that there are the difference in the length of time to express breast milk between mother who received oxytocin massage (treatment) with the mother that is not done oxytocin massage (control). Oxytocin massage is something method for help speed up expenditure breast milk with method give stimulation massage on second side bone behind, start from neck to direction bone shoulder blade next to bone costa mother postpartum [3].

Through stimulation or massage on bone behind, neurotransmitter will stimulate medulla oblongata direct send.
messages to the hypothalamus in the pituitary posterior to secrete oxytocin cause breast Secrete breast milk. With a massage in this spinal area will also give a sense of relaxation, eliminate stress and with so hormone oxytocin out and will help express breast milk. breast milk which dripping or go out is sign active reflex oxytocin [3].

Stimulation oxytocin make cells myoepithelium around the alveoli in the glands breast contracted. Contraction cells causes milk to come out through the ducts and into the lactiferous sinuses. Reflex let-down could feel as sensation tingling or could also mother no feel sensation whatever. Signs otherlet-down is a drop of milk from the mother's breast and milk drips from the other breast that is not currently sucked by baby [24].

In study this group treatment mean volume of milk expulsion >40 ml more many from average group control <20 ml. Thing the show suitability with theory, with To do massage on along bone behind (vertebrae) until bone costa fifth- sixth will stimulate hormone prolactin which issued by pituitary anterior and hormone oxytocin which issued by posterior pituitary, so that milk comes out occurs because the smooth muscle cells around the gland breast shrivel up. Reason muscles that frown is hormone oxytocin [18].

Besides expedite breast milk, massage oxytocin give comfort on mother breath, reduce swallowing (engorgement), reduce blockage breast milk, stimulate release of the hormone oxytocin, maintain production breast milk when mother and baby sick. There is a sense of comfort felt by the mother During process massage is condition success massage oxytocin [13].

Factors which increase letdown reflex is: see baby, listen voice baby, kiss baby, thinking for breast-feed baby, massage bone behind (massage oxytocin). Whereas factors which hinder let down reflex is stress such as: confused state or thought chaotic, afraid, and worried.

When there is stress from a breastfeeding mother then there will be a blockade from let down reflexes, this caused by because existence release from adrenaline epinephrine which cause vasoconstriction from vessels blood alveoli, so that oxytocin a little hope to be able to reach the target organmyoepithelium. The result of imperfecton let down reflex then there will be accumulation breast milk in alveoli which by clinical look breast grow up.

Breast which grow up will cause abscess, fail for breast-feed and flavor sick. Flavor sick this will is stress again for a mother so that stress Will increase. Because the let down reflex doesn't perfect so baby which thirsty so no satisfied. Dissatisfaction this will cause additional stress for the mother. Thirsty baby and no satisfied this will attempted for get enough milk add strong suck it so that noseldom could cause injuries on nipples, these wounds will be painful by her mother which also will add the stress. Thus it will be formed one again circle Devil which closed (circularvitus) with consequence failure in breast-feed.

4. CONCLUSION

Based on results analysis and discussion could concluded that:

1. The average volume of breast milk production in massage treatment group mother oxytocin is >60 ml.
2. The average time to express breast milk in group mother control <20 ml.
3. Oxytocin massage affects the average expenditure colostrum on mother post partum (p-value =0.00 3).

Suggestion from results study this that is every officer health specifically midwife which found incident that breast milk is not go out so should midwife give action to client for conducted massage oxytocin besides that power health also could give education health to mother and family for permanent give breast milk on baby in beginning his life.

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REFERENCES


Tampubolon, Christina & Margono, Margono & Retaningsih, Yuliantisari. (2021). Breast Massage Using Lavender Oil To Increase Breast Milk Production Of Breastfeeding Mothers. Interest : Jurnal Ilmu Kesehatan. 85-92. 10.37341/interest.v0i0.332.


