

# Relationship of Oxytocin Massage and Breastmilk Dam in Wonosari Puskesmas District Bondowoso Indonesia

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**Abstract:** *Breastfeeding is the process of giving milk to babies or young children with breast milk from the mother's breast. The baby uses a sucking reflex to get and swallow milk. Exclusive breastfeeding only provides breast milk alone without providing food and other beverages to infants from birth to 6 months old. There are many factors that the development of exclusive breastfeeding one of them is because the milk is not fluent that can cause currents of engorgement. This research is mandatory to be seen as a massage Oxytocin against Incidence of engorgement. The sample of samples of 36 respondents who meet the inclusion criteria. The instrument of this study using SOP and Observation Sheet which then the data in the analysis using Chi Square Test, where the value of  $p < 0.05$  with Asymp sig results. 0.018, 0.03, 0.001, 0.003, 0.007  $< 0.05$  on the seventh third day indicating the effect of oxytocin massage on the incidence of engorgement. With this research is expected to oxytocin massage can be applied in the community.*

**Keywords:** Oxytocin Massage, engorgement

## 1. Introduction

Breastfeeding is the process of giving milk to babies or young children with breast milk from mother's breast. Babies use sucking reflexes to get and swallow milk. Experimental evidence concludes that breast milk is the best nutrition for infants. Experts are still debating how long the best breastfeeding period is and how far the risk of using formula (Wulanda 2011).

Breast Milk (ASI) is a fatty emulsion in protein, lactose and organic salt secreted by both mother's breast glands, as the main food for infants (Ambarwati & Wulandari 2010). According to the Ministry of Health of the Republic of Indonesia and World Health Organization (WHO) in the East Java Health Profile 2015, Exclusive breastfeeding is a 0-6 month old baby who is still breastfed only when recorded. That is, if there is a baby who is 0 months or 1 month and so on until 5 months is still given breast milk alone, then at that time he was recorded as an exclusive 0-6 months baby.

According to Ministry of Health RI 2014 based on provincial health service report in 2013 coverage of Exclusive breastfeeding in infants 0-6 months in Indonesia as much as 54%, still below the target achievement in 2013 that is 75%, in Provins East Java in 2015 is 70.8 %, still on below target. According to the Health Office of East Java (2015) in 2014 in East Java province, infants who get exclusive breastfeeding is 72.89% and in Bondowoso 66.7%, it proves that Bondowoso Regency is still below the average of exclusive breastfeeding in East Java Province.

There are many factors that affect the failure of exclusive breastfeeding one of them is because the milk is not smooth which can cause the occurrence of ASI Dam. Breast milk dams are caused by non-continuous breastfeeding, so that milk is left in the duct because it is caused by increased production of breast milk, late dosing, poor attachment, less

frequent breastfeeding, and possibly breast feeding restriction. This can occur on the third day after delivery (vivian Nanny Lia, Tri Sunarsih 2012).

Based on the results of research conducted by Rahmawati (2015) about the relationship of oxytocin massage with expenditure on postpartum mother day 1-2 in bpm hj. N balikpapan city there is difference in asi expenditure between groups of mothers who received oxytocin massage with mothers who had not massaged oxytocin. From the results of the value of or (95% ci) obtained a number of 3552 (1217-12128) which means that normal postpartum mothers who received oxytocin massage have a chance to have a smooth expenditure of 3,552 times compared to the control group of postpartum mothers.

Government efforts through the Ministry of Health provide policies on the basis of postpartum health, ie at least 4 visits during the puerperium, the first visit is 6-8 hours after delivery, the second 6 days after delivery, the third 2 weeks after delivery and the fourth is 6 weeks after delivery. (Suherni 2009)

Based on the above data, the researcher is interested to conduct a research is the relationship of oxytocin Massage to the Genesis Dam A SI On Mother Post Partum in Wonosari District Health Center of Bondowoso Regency.

The purpose of this study was to investigate relationship with Genesis Dam Oxytocin Massage On Mother Post Partum done and not done in the Territory Oxytocin Massage Health Center Wonosari regency. Specific Objectives : 1) To identify the occurrence of dams on the postpartum after doing the oxytocin massage in the working area of Wonosari - Bondowoso Community Health Center. 2) To identify the occurrence of dams on the postpartum mother who is not in the oxytocin massage in the working area of Wonosari - Bondowoso Community Health Center. 3) to analyze Oksitosin Massage to Genesis Asi Dam On

Post Partum Mother in Area Wonosari Puskesmas Bondowoso District.

## 2. Methods

The research to be conducted is an experimental research that aims to determine whether or not the effect of oxytocin massage on the occurrence of dam ation using experimental quasy research design . In this design grouping of sample members in the experimental and control groups was not done randomly or randomly (Notoatmodjo 2010) .

The population in this study is a subject that meets the criteria which have been assigned k, affordable population is the population that meet the criteria and can usually be reached by researchers from the group (Nursalam, 2009). In this study population is 40 post partum mothers in April - May 2017 in the area of Wonosari Puskesmas Bondowoso District.

The sample size used in this research is based on the solvin formula, the number of samples used based on the calculation above 36 samples, divided into 2 ie 18 samples of treatment group and 18 samples as control group. Selection of sample by using propoitive sample Namely sampling based on certain considerations such as the nature - the nature of the population or characteristics already in the know before. (Notoatmodjo 2010)

Variable in this research is independent and dependent variable. The independent variable is the postpartum mother who performed the oxytocin massage and which is not in the oxytocin massage , and the dependent variable is the incidence of the milk dam .

This research was conducted in the area of Wonosari Puskesmas Bondowoso District, the time of research conducted approximately for 1 month (30 days). Starting April 15 - May 15, 2017.

Data collection in this research is started with request permission from researcher to collect data from health center

Wonosari, then researcher approach to respondent to get statement become respondent, researcher explain the purpose and intention of research and if prospective responder willing then is asked to sign statement to be respondents. Researcher assisted by enumerator do massage of oxytocin at mother and taught to the nearest family how to do massage of oxytocin conducted for 10 days , then researcher do observation to respondent by using observation sheet and SOP then collected data processed and tabulated.

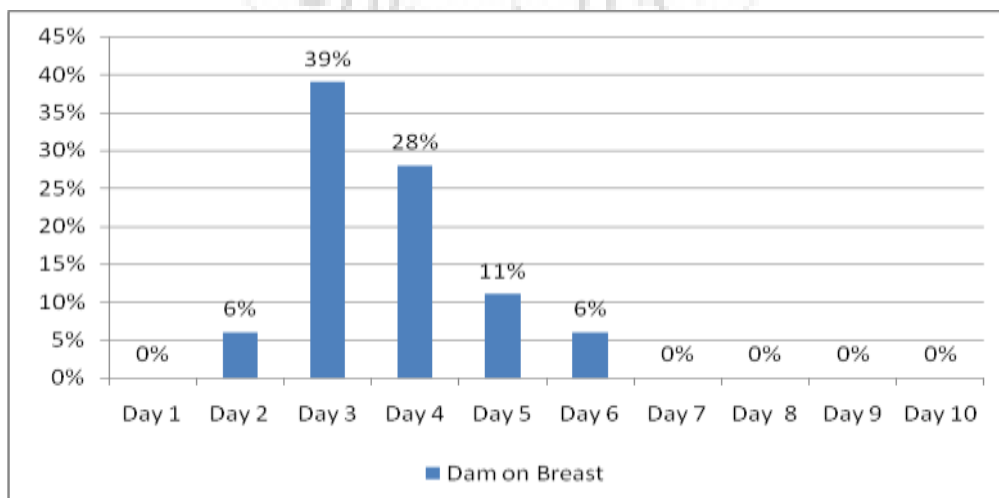
Data analysis to know the difference of ASI Dam incidence in post partum mother from each treatment group and control group using Chi Square test. in this decision-maker can be based on two things, namely comparing the value of Asymp. Sig with critical limit that is 0,05 or can by comparing between chi square count with chi square table. See the value of Asymp. Sig: 1) If the value of Asymp. Sig <0.05, then there is a significant influence . 2) If the value of Asymp. Sig > 0.05, then there is no significant influence. Comparison between the groups can describe which treatment can reduce the risk of breast milk incidence.

The results of data collection then di though to determine the difference of breast dam occurrence in post partum mother performed and not done Massage Oxytocin.

## 3. Result

This study was conducted on post partum mothers from day 1 to 10, from observation in post partum mothers for 10 days conducted by comparing control group and treatment group observed for 10 consecutive days, on April 15 2017 to 15 May 2017 in the area of Wonosari Puskesmas Bondowoso District in 2017. The number of respondents as many as 36 people who meet the inclusion and exclusion criteria. And divided into two namely 18 respondents treatment group and 18 respondents control group

### a) Identify the incidence of breast milk dam in post partum mum conducted by oxytocin massage at Wonosari Health Center Area in 2017.



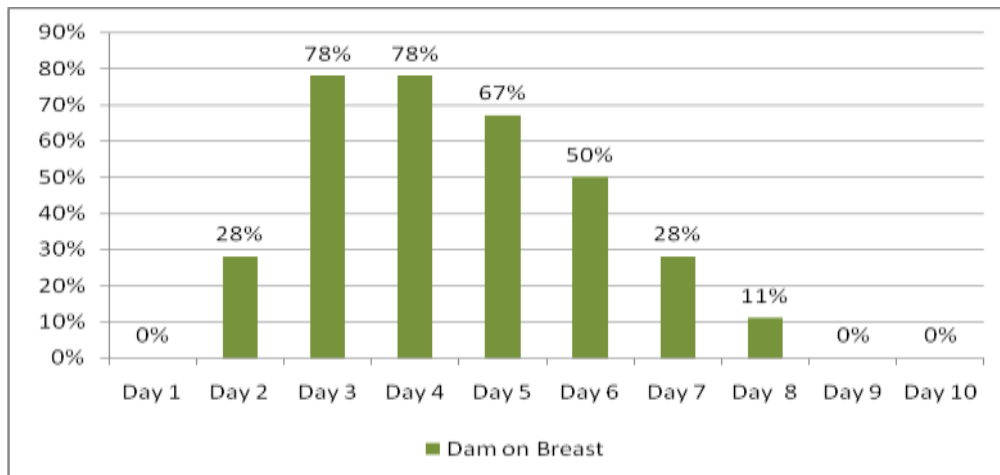
**Graph 1:** The occurrence of dams on post partum mothers is done by oxytocin massage

Source: Primary Data, 2017

The graph above explains that the incidence of breast milk dam on post partum mother conducted by oxytocin massage

started on the second day, the highest happened on the third day that is 39% and gradually decreased and disappeared on the sixth day.

b) Identify the incidence of breast milk dam in post partum mothers who did not do the oxytocin massage in the area of Wonosari Health Center in 2017.



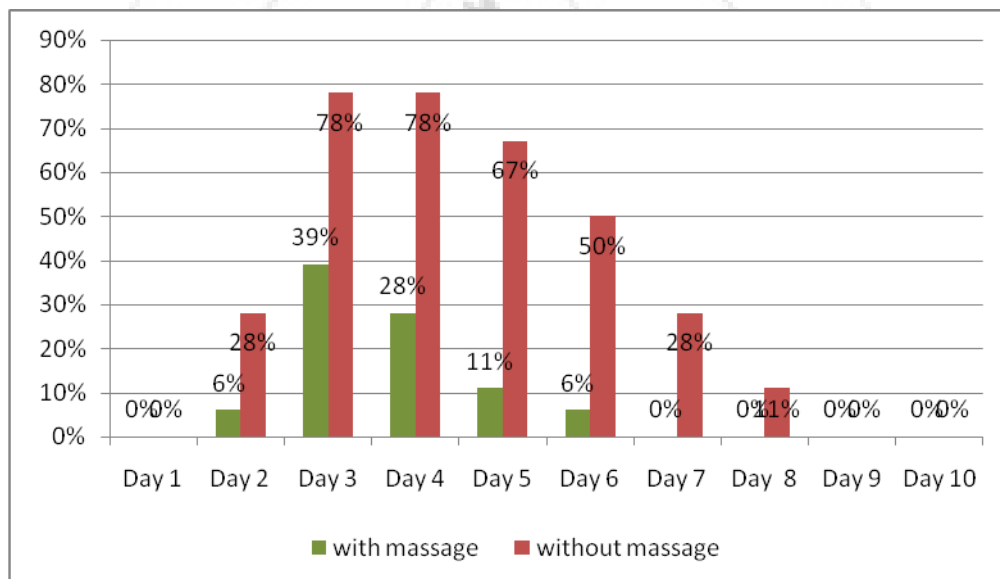
**Graph 2:** The incidence of dams on post partum mothers is not done by oxytocin massage

Source: Primary Data, 2017

The graph above explains that the incidence of breast milk dam on post partum mothers who did not do the massage of oxytocin began to occur on the second day of the highest

occurred on days three and four that is 78% gradually fell and disappeared on day nine .

c) Data analysis



**Graph 3:** Analysis of the incidence of breast milk damaged in post partum by oxytocin massage and not done on the first day until the tenth day in the area of Wonosari Public Health Center in 2017.

Source: Primary Data, 2017

The graph above consisted of 36 respondents divided into treatment group and control group, showed that the incidence of breast milk dam in post partum mother who did the massage of oxytocin began to have respondents who suffered the dam of milk on the second day most on day 3 that is 39% and gradually decreased on the fourth day and ended on the sixth day , while in the control group, the incidence of milk dam began to occur on the second day as much as 56% mostly occurred on days 3 and 4 that is 78% and gradually decreased and ended on the ninth day.

and the second day there is no influence the price of chi-square is  $0.74 > 0.05$ , then on day three to seven found influence signifikan at a price of chi square is third day  $0.03 < 0.05$ , the fourth day  $0.03 < 0.05$ , the fifth day  $0.001 < 0.05$ , the sixth day  $0.003 < 0.05$  and the seventh day  $0.007 < 0.05$  and then on the eighth day until the tenth day there is no significant influence with the chi square price of the eighth day  $0.07 > 0.05$  , the ninth and tenth day  $0.31 > 0.05$ . this proves an influential oxytocin massage from the third day to the seventh day, so  $H_0$  is rejected and  $H_a$  is received. This means that there is an effect of oxytocin massage on the incidence of breast milk dam.

After the statistical test Chi square using SPSS 16 with level signifikansi 0:05 in to the price of chi square on the first day

#### 4. Discussion

##### Identify the incidence of breast milk dam in post partum mother by oxytocin massage

The result of the research on graph 4.1 shows that from 18 respondents of post partum mothers who did the average oxytocin massage experienced a milk dam on the second day until the fourth day, on the first day there were no respondents who suffered from breast milk dam. the milk dam began to occur on the second day of the highest 6% occurred on the third day that is 39% Then on the fourth day began to decline and ended on the sixth day, on the seventh to the tenth day there are no respondents who suffered dam milk.

This is due to the oxytocin massage that has been applied to the mother during the puerperium. The oxytocin massage itself is a massage along the spine (vertebrae) and is an attempt to stimulate the hormone oxytocin after delivery (Biancuzzo, 2003; Indiyani, 2006; Yohmi & Roesli, 2009 in Mukhodim et al., 2015)

This oxytocin massage can trigger the body to produce oxytocin which is known to facilitate the release of breast milk. According Rahayu (2016) oxytocin massage is a back massage on the mother's back to increase the expenditure of the hormone oxytocin. Meanwhile, according to Sloane (2003) the hormone oxytocin can stimulate the mioepitel cells around the mammary gland alveoli that can cause the release of breastmilk from mammae glands to become smooth.

In addition Anderson PO 2002 in Wiliam 2016 also suggests the same thing that when sensory nerve stimuli occur Afferent impulse is delivered to the hypothalamus, initiating the release of oxytocin from the posterior pituitary, the hormone oxytocin will function and the alveoli cells in the breast gland can contract well. With the occurrence of contractions that ultimately can make the milk out.

This is in accordance with the theory put forward by Monika (2014) that other than member comfort in the mother, oxytocin massage can reduce breast engorgement and reduce breast milk blockage. So, by doing a massage of oxytocin in the puerperium, will be able to reduce and even prevent the incidence of breast dam. Other results also show that there is an effect of oxytocin massage on breast milk expenditure. Breastfeeding in the oxytocin massage intervention group was faster than the control group with no oxytocin massage. so it can be concluded that oxytocin massage can accelerate the expenditure of breast milk.

The oxytocin massage alone does not only have that benefit. Besides, it can reduce the incidence of breast milk dam in the postpartum because the hormone oxytocin produced, can also speed up the involution process. Besides menurut Rahayu (2016) oxytocin massage can provide comfort in the puerperium, make the mother feel relaxed, and maintain the production of oxytocin.

Of the various benefits derived from this oxytocin massage, it can be concluded that the oxytocin massage is very useful

to be done on postpartum mother. In addition, this oxytocin massage is easy and can be done at home with her husband.

##### Identify the occurrence of dam dam on mother of post partum which is not done by oxytocin massage

The results of research that has been depicted in chart 4. 2 show, from 18 respondents who do not massage the oxytocin starts to happen breastmilk dams on day two as much as 28% and a peak on the third day and the fourth day that 78% had breastfed dam. Then fade down on the fifth day until the tenth.

This is a physiological event, because during the postpartum the body will have a phase of lactogenesis II in which massive milk production can trigger the occurrence of breast milk dam. This has been suggested by Wulanda (2011) at the time of birth placenta, the body is experiencing sudden drops of the hormone progesterone, estrogen and HPL, but the prolactin hormone remains high. This can lead to a massive milk production called Lactogenesis II.

According to Perinasia (2013) Estrogen and progesterone levels will decrease during the second or third postpartum, so the influence of prolactin is more dominant and at this time began to occur ASI secretion. Massive milk production that occurs during the puerperium, can trigger a breast milk dam if breast milk is not issued regularly. According to (Wiknjastro 2002) Breastfeeding Dam may occur on 3-4 days post partum. If milk production goes smoothly, but there is no effort of breast emptying, and breast care, breast milk dam may occur. Similarly, if the baby wants to breastfeed, but the mother does not understand how to breastfeed and the correct breastfeeding position will cause a breast dam.

In addition, the milk dams occurring in the puerile mother are also influenced by several other factors as proposed by Sulasih (2015) the level of knowledge about how milk production also affects milk production, the factors that encourage and inhibit the education, occupation, age, environment and social culture. K urangnya knowledge mother in breastfeeding infants can cause the mother did not give breast milk to the baby regularly, poor feeding position so that the baby does not suckle maximum and is unable to vacate the ampulla maximum, baby suckle inadequate and milk production that exceeds the needs of infants causing buildup / static breast milk in the breast.

Breast milk in the natural puerperal mother is a physiological thing occurs during the puerperium and in accordance with existing theories. However, this will add to the discomfort of Mom to pass her childbirth. There is also a mother who stopped breastfeeding her baby because of this discomfort, so the baby is not breastfed and formula milked, so the Government program on exclusive breastfeeding can not be achieved. Therefore, to reduce and prevent the occurrence of milk dam that if left will cause further complications such as Mastitis and Breast abscess, it is necessary to do an intervention called oxytocin massage.

## Analyzing the Effect of Oxytocin Massage on the incidence of milk dams on Post Partum mothers

The results showed that there was a significant difference between the oxytocin massage and the oxytocin massage did not do this, as seen from the comparison between the respondents who did the oxytocin massage and which did not do the oxytocin massage, that is, the number of respondents who did not do massage oxytocin experienced 78% of the milk dam on the third and fourth day, as well as the ASI dam started on the second day until the eighth day with the duration of the milk dams two to five days with an average experience for 3 days while the respondents who did the massage oxytocin suffered a 39% milk dam on the third day, began to have a milk dam on the second day until the sixth day with the duration of a breast dam that is one to three days. This provides an understanding that the incidence of breast milk dam in post partum mother in Wonosari puskesmas area in 2017 can be prevented / minimized by oxytocin massage.

It is also supported by the results of statistical test data analysis chi square using SPSS 16 application with signifikansi level 0.05 in can chi square price , there influence on third to seventh day there is significant influence with chi square price ie third day 0.018 <0.05, fourth day 0.03 <0.05, fifth day 0.001 < 0.05, the sixth day 0.003 <0.05 and the seventh day 0.007 <0.05. This proves an influential oxytocin massage from the third day to the seventh day, so  $H_0$  is rejected and  $H_a$  is received. This means that there is an effect of oxytocin massage on the incidence of breast milk dam.

Oxytocin massage itself is very easy to be done by anyone, husband or family can do a massage with oxytocin in b i mbing first. The massage of oxytocin is a massage along the spine (vertebrae) to the fifth-sixth costae bone and is an attempt to stimulate the hormone prolactin and oxytocin after delivery. This massage works to increase the hormone oxytocin that can calm the mother, so the milk was out . (Biancuzzo, 2003; Indiyani, 2006; Yohmi & Roesli, 2009 in Mukhodim et al., 2015).

As the theory put forward by (Nungraheni 2017) maternal factors that are problematic in breastfeeding are breastfeeding, this issue of breastfeeding is affected by decreased stimulation of the hormone oxytocin, whereas physical and psychological changes can affect the lactation process. Therefore, in order for the lactation process to be smoothly can be intervened massage oxytocin . This is one solution to overcome the ASI Dam.

Breastfeeding dam occurs on the second or third day of massive milk production that occurs during the puerperium, this is caused by the decrease in estrogen and postpartum progesterone, so that the influence of prolactin is more dominant and at this time began to occur ASI secretion. (Perinasia , 2013) Breastfeeding occurs what happens when a lot of breastfeeding but breast milk is not released regularly, causing the milk channel to get blocked. If milk production is smooth, but there is no attempt at breast implants, and breast care, breast milk dam may occur. Similarly, if the baby wants to breastfeed, but the mother

does not understand how to breastfeed and the correct breastfeeding position will cause a breast dam.

With the oxytocin massage the production of oxytocin hormone increases so it can help the process of milk expenditure. In addition, the process of Breastfeeding Expenditure becomes more smoothly and can prevent the occurrence of blockage / dam US I so the obstacle in getting u can be solved well . Back massage is done to stimulate the oxytocin reflex to help the mother psychologically, builds mother's confidence, as an effort to reduce pain or anxiety and help the mother to get positive thoughts on her baby (Lestari A et al, 2013). Massage or stimulation of the spine, the neurotransmitter will stimulate the medulla oblongata that directly sends messages to the hypothalamus in the posterior pituitary to release oxytocin so that the breasts release milk (Wickramasinghe SC (2012) in Hadiani (2016) .According to the Ummah (2014) study in Hadiani (2016), mentions that the average normal postcasalmic mother given the oxytocin massage is quicker to remove breast milk (6.21 hours) than those without the oxytocin massage (8.93 hours).

Massage of oxytocin may also provide a sense of comfort in the mother, and a sense of calm, so that his sense of worries to be reduced and can improve the process of milk production. In accordance with the theory put forward by (Nungraheni 2017) the workings of the hormone oxytocin is influenced by psychological conditions, therefore the preparation of postpartum mothers is an important factor that can affect the success of breastfeeding, stress, excessive worry, unhappiness is instrumental in the success of breastfeeding. If the milk production process is running smoothly then the milk production will then become more fluent and the mother can continue the process of breastfeeding well so that exclusive breastfeeding program is achieved.

## 5. Conclusion

Based on the results of research and discussion about the effect of oxytocin massage on the incidence of breast milk dam on the mother of Post partum in Wonosari - Bondowoso Public Health Center can be concluded:

- 1) The incidence of breast milk dam in post partum mother in doing the massage of oxytocin happened on the third day gradually decreased on the fifth day and on the sixth day there were no respondents who suffered the milk dam.
- 2) The incidence of breast milk damages in normal post partum mothers occurs on the third and fourth days and decreases on the fifth day gradually decreases until the tenth day.
- 3) There is a significant difference between respondents in oxytocin massage and no oxytocin massage is the number of respondents not in massage more and longer to experience breast dam than do the massage of oxytocin in Postpartum mother in Wonosari - Bondowoso health center.

## 6. Suggestion

- 1) For Health Workers  
It is expected to be an effort to prevent and overcome the problem of ASI dams and to increase the achievement of government programs exclusive breastfeeding by addressing the problems that cause A failure of the former exclusive breastfeeding.
- 2) For the next researcher  
It is expected that the next researcher can develop this research with more number of respondent and frequency of oxytocin massage.
- 3) For respondents  
In expecting respondents medapat oksitosin massage conducted by the closest husband / family , and inform the public that the massage can be applied to oxytocin in post partum mother to prevent the incidence of breast dam.
- 4) For the Health Office  
Expected to be an effort to improve the achievement of the government program exclusive breastfeeding to solve the problem - the problem that caused the failure of exclusive breastfeeding especially ASI Dam .

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