

## THE EFFECT OF EARLY BREASTFEEDING INITIATION ON DURATION OF THIRD STAGE OF DELIVERY

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### Abstract

The risk of postpartum hemorrhage will occur that could endanger the lives of mother when the contraction is not good and lengthening of the third stage of labor. Hence Early breastfeeding initiation is expected to affect the smooth muscle tissue of the uterus to contract thus speeding up the release of the placenta from the uterine wall and help reduce bleeding after delivery. This study aims to analyze the effect of early breastfeeding initiation on the duration of third stage of labor. This study is a cross-sectional comparative study. The tools used in the research is digital stopwatch, weight scales and tape meter. Observations of newborns with normal deliveries were implemented early breastfeeding initiation or not, then measuring the duration of third stage of labor and the duration of the placenta discharge in both groups. Data were analyzed using the Mann-Whitney test, and the p-value of  $<0.05$  was considered statistically significant. A total of 32 women were studied (16 in observation group, 16 in control group). The average duration of third stage of labor in early breastfeeding initiation group for  $08,15 \pm 0.3$  minutes and the average duration of third stage of labor in the non early breastfeeding initiation group for  $10.23 \pm 1.3$  minutes. The average duration of the placenta discharge at early breastfeeding initiation group for  $02.15 \pm 0.3$  minutes and in non early breastfeeding initiation group for  $02.45 \pm 1.8$  minutes. There is a significant relationship between early breastfeeding initiation on the duration of third stage of labor with p value  $0.030 (<0.05)$ . There was no significant relationship between early breastfeeding initiation with the duration of placenta discharge with p value  $> 0.05$ . From the results of this study concluded that early breastfeeding initiation affect the acceleration duration of third stage of labor. Duration of the placenta discharge was lower with the early breastfeeding group, though not statistically significant.

**Keywords:** Early Breastfeeding Initiation, Duration of third stage of labor, Duration of placenta discharge

### INTRODUCTION

The third stage of labor is the part of labor from the birth of the baby until the placenta (afterbirth) and fetal membranes are delivered, also called the placental stage.

Normally the third stage occurs during 10-15 minutes. Lengthening duration of third stage of labour because of contraction disorder and un appropriate management could rise the risk of postpartum hemorrhage and will endanger the women (Fraser, 2010).

Early initiation of breastfeeding has great benefits for the baby and the mother who just gave birth. Beat of the baby's head on the mother's chest, hands touch and licking of the baby on the mother's nipple will stimulates the hormone oxytocin, which will also affect the smooth muscle tissue of the uterus to contract thus speeding up the release of the placenta from the uterine wall and help reduce bleeding after childbirth (Moore, 2012).

Early initiation of breastfeeding (IMD) is the process of feeding the baby immediately after birth with his mother's breastmilk in the first hour of birth. Based on Riskesdas data in 2010, found the percentage of early initiation of breastfeeding for less than one hour as much as 29.3 percent (Riskesdas, 2010; WHO, 2013).

From the above data shows that the implementation of early initiation of breastfeeding is still very far from the expected target. Though the benefits of early breastfeeding initiation at one hour after birth is very much if done properly. One of which is in the acceleration speeding expulsion of the placenta. Marin in the Moore in 2012 says when skin to skin contact between the baby and the mother's abdomen happen, the knee and the baby's legs will suppress the mother's abdomen like movements to massage will stimulate uterine contractions that will lower the risk of postpartum hemorrhage and

accelerating the time of placenta delivery (Marin, 2010; Moore, 2012). Skin to skin contact has been shown to reduce the length of the third stage (Marin et al. 2010) and other authors have proposed that reducing the duration of the third stage may be the key indicator in reducing the risk of post partum haemorrhage (Magann et al. 2005).

So the aim of this study is to analyze the effects of early breastfeeding initiation on duration of the third stage of labor.

**METHODS**

**1. Statement of the problem**

To analyze the effects of early breastfeeding initiation on duration of the third stage of labor.

**2. Operational Definition**

a. Early Breastfeeding Initiation

Definition : the process of feeding the baby immediately after birth with his mother's breastmilk in the first hour of birth (Roesli, 2008).

b. Duration Of Third Stage Of Labor

Definition : duration of the end of second stage until the end of third stage of labor.

c. Duration of placenta discharge

Definition : duration of placenta and its membranes discharge from the sign of its released.

**3. Hypothesis**

- a. There is significant difference of duration of third stage of labour between observation and control group after early breastfeeding initiation.
- b. There is significant difference of duration of placenta discharge between observation and control group after early breastfeeding initiation.

**4. Research design**

A quantitative paradigm was used in the study. A cross sectional design which involves both observation and control group design, an observation group was used to study the effect of early breastfeeding initiation on duration of third stage of labor and placenta discharge and no intervention in control group.

**5. Sample**

The sample chosen for the study was women who fulfilled inclusion criteria; primiparous women with normal delivery on the third stage, and exclusion criteria; newborn with breech presentation, prolong labor, newborn with complication. Control group was women

who fulfilled inclusion and exclusion criteria but refuse to do early breastfeeding initiation.

**6. Tool used**

Digital Stopwatch was used to measure the duration of third stage of labor, Weight Scales was used to measure the newborn weight and Tape Meter was used to measure the newborn length.

**7. Procedure**

Post partum primiparous women were approached by the researcher for participation in the study through interview. The participants were enrolled for the study based on their willingness to do early breastfeeding initiation. 32 women who fulfilled inclusion and exclusion were be selected and 16 participant were assigned to observation group with early breastfeeding initiation and 16 to the control group who refuse to do early breastfeeding initiation. The researcher observed the observation group and control group and measured the duration of third stage of labor and the duration of placenta discharge. Active management was used to both group and had the same midwife.

**DATA ANALYSIS**

Mann\_Whitney-test was used to compare the observation group and control group data.

**RESULTS AND DISCUSSION**

**Results**

*Table 1 showing the results of mann\_whitney test of the effect of early breastfeeding initiation between observation group and control group on duration of third stage of labor*

Duration of Third Stage of Labor	Mean ± SD	p
Observation Group (IMD)	8.15 ± 0.3	0.001
Control Group (Non IMD)	10.23 ± 1.3	

There is a significant difference between the observation group (M=8.15 ± 0.3) and control group (M= 10.23 ± 1.3) of early breastfeeding initiation on the duration of third stage; p = 0.001.

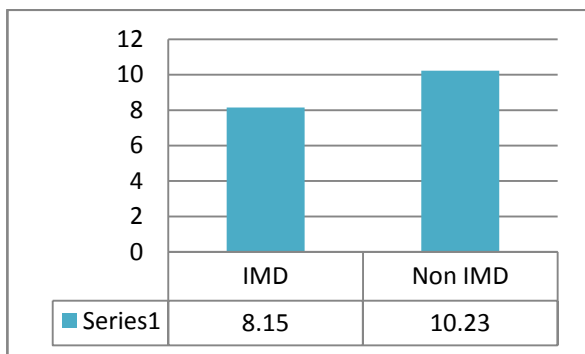


figure 1. Mean of duration of third stage of labor between observation group and control group.

Table 3 showing the results of mann\_whitney test of the effect of early breastfeeding initiation between observation group and control group on duration of placenta discharge

Duration of Placenta Discharge	Mean ± SD	Sig
Observation Group (IMD)	2.15 ± 0,3	0,2
Control Group (Non IMD)	2.45 ± 1,8	

There is no significant difference between the observation group (M=2.15 ± 0,3) and control group (M= 2.45 ± 1.8) of the early breastfeeding initiation on the duration of placenta discharge; p = 0.2.

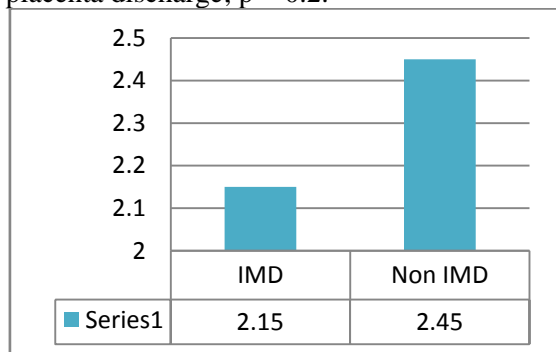


figure 2. Mean of duration of placenta discharge between observation group and control group.

**DISCUSSION**

The purpose of the present research was to study the effectiveness of early breastfeeding initiation on duration of third stage of labor and duration of placenta discharge.

The results of the study indicate that early breastfeeding initiation has had a significant effect on the observation group,

leading to a reduction on duration of third stage of labor.

Lower reduction of duration of placenta discharge compare to control group, however there is no significant difference between the two grup.

Table 1 and 2 shows that early breastfeeding initiation on the observation group on duration of third stage of labor is higher than control group, indicating a reduction in the duration of third stage of labor with early breastfeeding initiation. The duration of third stage of labor between the observation group is lower compare to the control group and with the Mann\_Whitney test, statistically significant. Based on this, the hypothesis which states that there is significant difference in the duration of third stage of labour in the observation group compare to control group is accepted.

Hence, based on these results, a conclusion can be drawn that early breastfeeding initiation has a significant effect on the reduction of duration of third stage of labor.

Previous studies showed that early breastfeeding initiation speeding the duration of third stage of labor. The duration depend on the contraction. The contraction will press blood vessel and will stop bleed throug arteriola in placenta insertion. With the speeding of third stage of labor duration can reduce the potential of post partum haemorrhage. Third stage of labor occur because of uterine contraction which stimulated by oxytocine hormone. The baby will crawl on mothers chest and breast and will massage the uterine, babies touch on mother’s nipple and breast will stimulated production of oxytocine hormone which stimulated uterine contraction and speeding duration of third stage of labor (Roesli, 2008; Purwarini, 2011).

Kolifah in her studies showed early breastfeeding initiation has significant effect in speeding of the placenta discharge (81.8% participants). However, there was no significant effect statistically by Mann-Whitney techniques with p value> 0.05, the average time discharge of the placenta was lower in the early breastfeeding initiation group compare to non early breastfeeding initiation group.

The sign of placenta discharge are starting from signs such as changes in the

shape and height of the fundus after the baby is born, the umbilical cord is seen poking out through the vulva, their sudden bursts of blood accompanied by the release of all parts of the placenta and membranes (Kolifah, 2012).

Early breastfeeding initiation will stimulate oxytocin hormone which will stimulate the endometrial cells of the uterus, causing contractions and reflex flow is called the let down reflex oxytocin which will cause the uterus to contract, helping the release of the placenta more quickly and reduce the risk of bleeding (Roesli 2008; Zuhro, 2015).

The same result was showed in Sari 2012, that the risk of post partum haemorrhage is lower with early breastfeeding initiation (Sari, 2012).

If the uterus does not contract immediately after delivery of the placenta, the mother can bleed around 350-500 ml / minute. Uterine contractions will press uterine blood vessels of the myometrium and stop the blood flowing through the arteriola of placental implantation (Purwarini, 2011).

Marin in the Moore in 2012 says the time of skin to skin contact between the baby and the mother's abdomen, the knee and the baby's legs will suppress the mother's abdomen like movements to massage will stimulate uterine contractions that will lower the risk of postpartum hemorrhage and accelerating the delivery of the placenta (Marin, 2010; Moore, 2012).

The previous studies by Sari (2013) showed that 53.8% of respondents with early initiation of breastfeeding experience the acceleration process of the third stage compared with respondents who did not do early initiation of breastfeeding. Acceleration of the third stage of labor is influenced by several factors including injection oxytocin hormone immediately, controlling traction on the umbilical cord, uterine massage immediately after delivery of the placenta (Sari, 2013).

## CONCLUSION

Thus the hypotheses which stated that there is significant difference between the observation group and the control group on duration of third stage of labor were accepted. However, the hypotheses which stated that there is significant difference between the observation group and control group on placenta discharge were rejected. Thus, it can be concluded from

the results of the present study that early breastfeeding initiation has a significant effect in reducing the duration of third stage of labor and an optional choice to reduce the duration of placenta discharge.

## REFERENCES

- American Academy of Pediatrics. Breastfeeding and the use of human milk. *Pediatrics*. 2012; 129:e827.
- American Academy of Pediatrics, Committee on fetus and newborn. Hospital stay for healthy term newborns. *Pediatrics*. 2010; 125-145.
- Bergman N. Restoring the original paradigm for infant care and breastfeeding. Kangaroo mother care. Niels and Jill Bergman Production. 2005
- Bergstrom A, Okong P, Arvdson RAB. Immediate maternal thermal respons to skin to skin care of newborn. *Acta paediatr*. 2007; 96(5):655-8. <http://onlinelibrary.wiley.com/doi/10.1111/j.16512227.2007.00280.x/abstract;jsessionid=>
- Fraser DM, Cooper MA. Buku ajar bidan myles. Ed 14. Jakarta: EGC; 2009. Hal. 690-693.
- Heinig MJ. Host defense benefit of breastfeeding for the infant, effect of breastfeeding duration and exclusivity. *Pediatr clin North am*. 2001; 48:105-123.
- JNPK-KR. Paket pelatihan pelayanan obstetri neonatal emergensi dasar (PONED). Jakarta; 2008. Hal. 8.7-8.8.
- JNPK-KR/POGI. Asuhan persalinan normal & Inisiasi menyusui dini: Buku Acuan dan panduan. Ed 3. Jakarta: Jaringan Nasional Pelatihan Klinik; 2012.
- Johnson R, Taylor W. Buku ajar praktik kebidanan. Editor bahasa Indonesia: Kurnianingsih S, Ester M. Jakarta; EGC; 2005. Hal.29-45.
- Karlsson H. Skin to skin care: heat balance. Sweden: Archives if disease in childhood. 1996; 75:F130-F132.
- Kliegman RM. Janin dan bayi neonatus. Dalam: Ilmu kesehatan anak nelson. Edisi ke-15, vol.1. Editor edisi bahasa Indonesia: Wahab AS. Jakarta: EGC; 2012. Hal. 535-541.
- Kolifah, Ainun N, Heri Wibowo. Hubungan Inisiasi Menyusui Dini Terhadap Kelancaran Proses Pengeluaran

- Plasenta Di Vk Ponek Rsud Jombang. 2012.
- McHugh MK. Transisi fisiologis ke kehidupan ektrauteri. Dalam: Varney H, Kriebs JM, Gegor CL, editor. Buku ajar asuhan kebidanan. Ed 4. Jakarta: EGC; 2008.
- Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants (Review). The Cochrane Library 2012. Issue 5. Diunduh dari: <http://www.thecochranelibrary.com>.
- PP RI No.33. Pemberian ASI Eksklusif. Jakarta. 2012.
- Purwarini J, Rustina Y, Nasution Y. Pengaruh Inisiasi Menyusu Dini Terhadap Lamanya Persalinan Kala III dan Proses Involusi Uteri Pada Ibu Post Partum Di RSUD Kota Jakarta dan RSUD Kota Bekasi. J. Keperawatan dan Kebidanan (JIKK), Vol I, No.5 Desember 2011. 251-258
- Riskesdas. Riset Kesehatan Dasar. Jakarta: Badan Penelitian Dan Pengembangan Kesehatan Kementerian Kesehatan RI. 2010.
- Roesli U. Inisiasi menyusui dini plus ASI eksklusif. Jakarta: Pustaka Bunda; 2008.
- Sari NMM, Handayani S. Pengaruh Inisiasi Menyusui Dini Terhadap Jumlah Perdarahan Kala IV Persalinan Di Klinik BPS Ny.Endang Purwati-Megangsang-Yogyakarta. Jurnal Kesehatan Samodra Ilm, Vol 03, No 02, Juli 2012.
- Sastroasmoro S. Dasar-dasar Metodologi penelitian klinis. Jakarta: CV.Sagung seto; 2011.
- Sherwood L. Fisiologi manusia. Ed 6. Jakarta: EGC; 2012.
- Sugiyono. Metode penelitian kuantitatif, kualitatif dan R & D. Bandung: Alfabeta; 2008.
- Survei demografi dan kesehatan Indonesia (SDKI). Laporan pendahuluan. Jakarta: 2012.
- Thilo EH, Rosenberg AA. The newborn infant. In: Hay WW, Levin JM, Sondheimer JM, Deterding RR, editors. CURRENT Diagnosis & Treatment: Pediatrics. 21th ed. USA: Lange; 2011.
- WHO. Thermal Protection of The Newborn: Practical Guide. 1997.
- WHO. Breastfeeding-early initiation. Diunduh dari [http://www.who.int/elena/titles/early\\_breastfeeding/en/eLENA](http://www.who.int/elena/titles/early_breastfeeding/en/eLENA).
- WHO. Infant And Young Child Feeding. Diunduh dari: <http://www.who.int/>.
- WHO. The World Health Statistics 2011. Diunduh dari: <http://www.who.int>.
- Zuhro SF. Hubungan Pelaksanaan Inisiasi Menyusui Dini (IMD) Dengan Retensio Plasenta Di Ruang Ponek RSUD Jombang. 2015.