RELATIONSHIP OF BREASTFEEDING FREQUENCY RELATIONSHIP WITH IKTERUS INCIDENCE AMONG NEWLY BORN BABIES IN AURA SYIFA HOSPITAL KEDIRI REGENCY INDONESIA

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Abstract- Breastfeeding as often as possible during the first day of life, can release meconium in infants. Meconium have a bilirubin, when it discharges, it can increases reabsorption of bilirubin and cause jaundice in infants. On demand breastfeeding with frequencies between 8-12 times / day, is very important for infants to prevent jaundice in infants. The purpose of this research was to know the correlation between breastmilk frequency with jaundice in newborn baby. The research design used analytic survey by approach of cohort. The number of population were 30 respondents, taken by using accidental sampling with the number of samples were 28 respondents, which was suitable with inclusion criteria. The instrument used observation sheet of breast feeding and the incidence of jaundice. Analyzed by Fisher Exact test with ρ value is 0.33 and the error degree is 0.05 (α = 0.05). The result obtained ρ value is 0.33> α = 0.05 indicate s that there is no correlation of breastmilk frequency with jaundice in newborn baby. Based on the result , shape of nipp le an d breastfeeding technique are very influence toward release of breastmilk. The maturity of liver's function determines the jaundice in newborn baby or not.

Index Terms- Newborn baby , Breastmilk frequency, incidence, jaundice

I. INTRODUCTION

As soon as the baby is born, early contact between mother and baby is an effective early attempt to allow breastfeeding (Deslidel, 2011). Breast milk is naturally easy to digest by newborns, as it is the only food that fits the digestive tract of newborns. Breast milk also contains antibodies that can protect babies from disease during the first 6 months of life (Maryunani, 2010).

Breastfeeding as soon as the baby is born, which is done for 30 minutes - 1 hour, is the first step performed between mother and baby, to train the baby's reflex to look for the nipple (*rooting reflect*) so that the process of suckling can happen soon. Riskesdas's results show the IMD process has increased from 293% in 2010 to 345% in 2013. This indicates that Indonesia is quite successful in implementing IMD (Pusdatin, 2013).

In Indonesia, the incidence of jaundice that occurs in some education hospital such as in Cipto Mangun Kusumo, 58% occur in neonates at term and 29.3% occurred in preterm neonates. At the dr. Sardjito Hospital reported as many as 85% neonates sufficient months and 23.8% premature neonates experienced jaundice early in life, and at the Hospital of dr. Kariadi Semarang, jaundice incidence of 12.0% occurred in the Neonatal and 22.8% in preterm neonates. Hyperbilirubinemia-related mortality rate was 13.1% (Ningsih, 2013).

Based on a preliminary study conducted at Aura Syifa Hospital Kediri District, the incidence of jaundice in 2014 occurs in 5 infants and in 2016, 11 babies experience jaundice early in life. This suggests that the incidence of jaundice in newborns is still common.

One effort to prevent jaundice in newborns that can be done is to breastfeed as soon as possible in infants to reduce enterohepatic circulation work , maintain normal bacteria flora stability, and stimulate small intestine activity (IDAI, 2008). breastfeeding as early as possible and as often as possible will increase intestinal motility and also causes the introduction of bacteria into the intestine. Bacteria can convert the direct bilirubin into non-reabsorbed urobilin. Thus, serum bilirubin levels will fall (Maria, 2013).

Based on the results of research Khairunnisak (2013) about "The Relationship of Breastfeeding with Genesis Ikterus in New Baby Born 0-7 Days in Hospital General Area Dr. Zainoel Abidin Banda Aceh Year 2013 " , it was suggested that from 35 respondents who frequently did breast feeding, the majority had jaundice (68,6%) with yellow color not seen within the first 24 hours after the baby was born and from 16 respondents who did not often give The majority breast milk 87.5% had jaundice with a yellow color seen in the first 24 hours after the baby was born.

According to Rufia Desi Maria (2013) study on the "Frequency of Breastfeeding with Ikterus Incidence at BBL 2-10 H in BPM" N "Padang Panjang T 2013 " , indicating that of 30 babies with physiological jaundice, 18 infants (60%) had jaundice because of the lack of breastfeeding and as many as 12 babies (40%) did not experience jaundice because they often breastfed.

Nofrida Pratistiyana (2011), the results of research on *"an association* of *Breastfeeding Frequency with Jaundice Neonatorum an incident in Surabaya Adiguna RSB"* showed that of 30 term infants, there were 7 term infants who had neonatal jaundice with a frequency of breast feeding <8 times per day, whereas 23 term infants did not have neonatal jaundice is almost entirely infants with a frequency of breastfeeding 8-12 times per day 22 infant (95.65%).

Based on practice experience in June 2014 at Gambiran Hospital Kediri for 2 weeks in baby room, found 5 babies who have jaundice. Sela y n received phototherapy, babies with jaundice also DIBE offered are in the form of infusion fluid and breast milk. While breastfeeding alone found 1 baby only .

Thus, breastfeeding in the early weeks of life, is very important for newborns who have jaundice. Breastfeeding is done on demand according to infant needs within 24 hours between 8-12 times. In addition to regular breastfeeding, babies are sunning every morning, or the use of phototherapy also helps lower high total bilirubin levels, thus preventing the jaundice of the newborn.

II.   METHODS

The research method used in this research is an analytic survey using *cohort* research design. Analytical survey is a survey or research that tries to explore how and why health phenomenon that happens. Then perform the analysis of the correlation dynamics between phenomena or between risk factors and effects factors (Notoatmodjo, 2012).

III.   RESULTS

This chapter shows the results of data collection that has been implemented on July 3 to 23 , 2017 at Aura Syifa Hospital Kediri regency that discusses the relationship of frequency of breastfeeding with jaundice in the newborn with a total sample of 28 respondents .

In the results of this study, the data will be presented among them consists of general data and special data. General data in this study describes the characteristics of newborns consisting of sex and type of labor. While the special data describes the variables that exist in the study, among others, the frequency of breastfeeding and the incidence of jaundice in newborns.

Table 1 Frequency Distribution Binds Sex on New Baby L ahir at Aifera Syifa Hospital Kediri Regency.

No.	Gender	Amount (n)	Percentage (%)
1	Man	18	64.29%
2	Women	10	35.71%
	Total	**28**	**100%**

Source: Primary Data from 3 - 23 July 2017

Based on table 1 it can be seen that most of the respondents are male, namely 18 newborns (64.29%).

Table 2 Frequency Distribution by Type of Labor on New B ay i Lirir at Aifeh Syifa Hospital Kediri Regency

No.	Type of Labor	Amount (n)	Percentage (%)
1	Spontaneous Birth	19	67.86%
2	Delivery of *Sectio Secarea*	9	32.14%
	Total	**28**	**100.00%**

Source: Primary Data from 3 - 23 July 2017

In Table 4.2, the majority of respondents, ie 19 newborns (67.86%), were born spontaneously.

Table 3 Frequency Distribution Based on Frequency of Breastfeeding in Newborns at Aura Syifa Hospital Kediri Regency.

No.	Frequency of Breastfeeding	Amount (n)	Percentage (%)
1.	≥ 8 times / day	12	42.86%
2.	<8 times / day	16	57.14%
	Total	**28**	**100.00%**

Source: Primary Data from 3 - 23 July 2017

Newborns were breastfed with frequencies <8 times / day more with 16 newborns (57.14%), whereas breast-fed bay with a frequency of ≥8 times / day of 12 newborns (42, 86%) as shown in table 3.

Table 4 Distribution of frequency based on the incidence of jaundice on day 2 and 3 on newborn at Aura Syifa Kabupaten Kediri Hospital

No	The incidence of Jaundice	Day 2 (n)	Percentage (%)	Day 3 (n)	Percentage (%)
1	Baby Jaundice	18	64.29%	22	78.57%
2	The baby is not Jaundice	10	35.71%	6	21.43%
	Total	**28**	**100.00%**	**28**	**100.00%**

Source: Primary Data from 3 - 23 July 2017

On the 2nd day, 18 newborns (64.29%) had jaundice, and almost all respondents had jaundice on the 3rd day of 22 newborns (78.57%), as shown in table 4.

Table 5 Table of Relation of Frequency of Breast Feeding with Genital Jaundice in Newborns at Aura Syifa Hospital Kediri Regency

No.	Frequency of	The incidence of Jaundice		Total	%

	Breastfeeding	Baby Jaundice		The baby is not Jaundice			
		Amount (n)	%	Amount (n)	%		
1	≥ 8 times / day	9	32.14%	3	1 0.71%	12	42.86%
2	<8 times / day	13	46.43%	3	10.71%	16	57.14%
	Total	22	78.57%	6	21.43%	28	100.00%

Source: Primary Data from 3 - 23 July 2017

Based on table 5 it can be seen that almost half of the newborns who were breastfed with frequencies <8 times / day and had jaundice, 13 newborns (46.43%) were higher than breastfed babies < 8 times / day and do not have jaundice.

To analyze the relationship between frequency of breastfeeding and the incidence of jaundice in newborns, a statistical test using *Fisher Exact* obtained with values   calculate equal to 0,33 with error level 0,05 ($\alpha = 0,005$), then got result   calculate that is 0,33> $\alpha = 0,005$ then H_0 accepted and H_1 rejected which mean there is no relation between frequency of breastfeeding with incidence of jaundice in newborn in Aura Syifa Hospital Kediri Regency.

IV. DISCUSSION

Based on the results of research conducted on 3 to 23 July 2017 at Aura SyifaHospital Kediri district, from 28 newborns who were treated with his mother, 12 newborns (42.86%) were given breast milk with frequency ≥ 8 times / days. This is because during 24 hours the mother gives breastfeeding to her baby *on demand* . This is consistent with Hegar's (2008) theory which states that the frequency of breastfeeding is breastfeeding as often as possible according to the baby's needs at least 8 times within 24 hours, even at night the milk is also given. Breastfeeding at night can maintain breast milk supply because the hormone prolactin increases at night.

In the observation of frequency of breastfeeding, 16 newborns (57.14%) of 28 newborns studied, the frequency of breast feeding <8 times / day. Asih (2016) explains, breast milk in the baby's stomach will be empty within 2 hours. The statement is supported by Handy's (2012) revelation explaining that in the first 24 hours of life, the baby will only awake the first 2-4 hours, and sleep for up to 20 hours. It is important for the mother to wake the baby every two hours to breastfeed, so that the baby's need for breastfeeding is fulfilled.

The results of observation research showed, from 20 breastfeeding mothers, 17 mothers have a short nipple shape and 3 other mothers drown nipples. Monika (2016) says, the high amount of breastfeeding is one of the frequency factors of breastfeeding. Adequacy of breastfeeding expenditure may trigger the mother to breastfeed as often as possible. Breast milk that can be out in time but its production is not optimal due to several factors, one of which is the form of the nipple is less prominent / flat / immersed, thus blocking the flow of milk out through the nipple.

The lack of breast milk that comes out to be an initial problem for breastfeeding mothers postpartum. A total of 20 mothers said that the milk that came out was a little, so the mother found it difficult to give milk to the baby, because the baby is hungry while a little milk that comes out. Mom becomes anxious and lazy to give milk. According to research conducted by Amalia (2016) with the title "Stress Relation with the smoothness of breastfeeding in the mother breastfeeding after delivery in RSI A.Yani Surabaya" from 15 respondents experiencing stress, 11 respondents found the milk is not fluent, and 4 other respondents expenditure ASI classified smoothly. This is because the mother still feels exhausted postpartum, has pain

wound stitches perineum / SC which causes the mother to fear mobilization, and the mother worried about himself because he felt a heavy burden postpartum.

Not frequent breastfeeding given to infants, can make milk production decreases. Almost all respondents, have a short nipple shape so that the mother difficulties breastfeeding and difficult attachment. Because the milk produced a little, make the mother lazy to breastfeed her baby.

On the second day after the baby was found 18 newborns (64.29%) had jaundice and on the third day, the number of jaundiced babies increased to 22 newborns (78.57%). This is in accordance with the theory presented by Hidayat (2009) that physiological jaundice is jaundice that arises on the second day and the third day after birth and disappears in the first week, no later than the first 10 days after birth.

Increased number of newborns on the 3rd day after a jaundiced birth due to immature liver function. According to Sodikin (2011), the maturity of liver function affects the ability of the liver in conjugating bilirubin. The function of liver excretion and bile flow associated with excretion and recirculation of bile acids. Maturation of bile acid metabolic processes affects overall liver excretion function, including bile excretion. When unconjugated bilirubin is buried in the blood, the skin, sclera and mucous membranes settle into yellow called jaundice. The function of the heart starts matur, when the baby enters the age of 2 weeks. At 2 weeks of age the liver is able to perform bilirubin conjugation and remove bile.

The result of statistical test using Fisher Exact test yields value   calculate equal to 0,44 with error level 0,05 (α = 0,005), meaning H0 accepted H1 is rejected or there is no relation between frequency of breastfeeding with incidence of jaundice in newborn.

UDPGT (Uridine Diphospat Glucoronide Transferase) enzyme and G6PD enzyme present in liver, are not actively working. Both enzymes work in bilirubin synthesis. Immature liver conditions interfere with the breakdown of red blood cells. In short the breakdown of red blood cells in bilirubin results in the accumulation of bilirubin on the skin so that jaundice can arise (Rahardjo, 2015).

with the title of the study "The association of breastfeeding with the incidence of Ikterus Neonatorum in UPT Sumberglagah Mojokerto Hospital" mentions that based on bivariate test with independent sample t - test between breastfeeding with neonaturum jaundice resulted in a group of -0.46   > 0.005 (= 0.084) with 95% CI -0.097; 0.63, and Mann Withney test = 0.111 by means of meaningless signification, so there was no difference between breast-fed and formula-fed groups.

After the baby is born, the baby must be able to defend themselves even without being breastfed. Newborns have glucose reserves stored in the liver in the form of glycogen. The chocolate fat that babies have for months, can help break down the fat into heat using glucose so babies can get energy without having to be breastfed. Babies can survive not breastfed as long as chocolate fat reserves are still abundant. The number or absence of brown fat produced, judging from the sufficient or less gestational age at birth

V.   CONCLUSION

Based on the results of research and discussion in the previous chapter, researchers dance k conclusion as follows:

Most newborns are breastfed with a frequency of breast feeding <8 times / day. Most newborns develop jaundice on day 2 and almost all newborns develop jaundice on day 3. There is no correlation between the frequency of breast-feeding with an kejadi jaundice in newborns at Aura Shifa Hospital Kediri.

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