

OVERVIEW OF NEONATAL SEPSIS IN DR. H. MOCH ANSARI SALEH HOSPITAL DURING THE PERIOD FROM JANUARY 2016 - MAY 2017

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ABSTRACT

Background: According to the Demographic and Health Survey(2012), the primary cause of early neonatal death are infections (56%), asphyxia (45%), and congenital abnormalities (11%).Data of neonates who suffer neonatal sepsis obtained at Hospital Dr.H. Moch Ansari Saleh Banjarmasin in the year 2013-2017 is 299 cases

Objective: to determine the incidence Overview of Neonatal Sepsis in Dr.H. Moch Ansari Saleh Hospital Banjarmasin, covering the characteristics of mother and baby characteristics.

Methods: This research uses descriptive method.Sampling with total sampling is all neonates with sepsis.Data processing is presented through table and calculation of sepsis presentation.This study has secondary data taken from register books, medical records and documented into the research checklist.

Results: The mothers of newborns with sepsis aged 20-35 years as many as 46 people (49.46%). Mothers with primiparous parity are as many as 50 people (53.76%). Mothers with gestational age at term by 62 (59.52%) cases. Mothers who gave birth spontaneously as many as 71 (76.34%). Neonatal sepsis with normal weight were 72 (77.42%). Neonatal sepsis with male gender is the most that is equal to 57 (61.29%).

Conclusion: The incidence of neonatal sepsis is more common in women with no risk of primiparous age gestation and spontaneous labor at term. While the characteristics of neonates who have sepsis on normal birth weight and male gender

Keywords: Neonatal sepsis, maternal characteristics, the characteristics of neonatal

INTRODUCTION

Neonatal death rate worldwide according to World Health Organization data (WHO) is 10,000,000 persons per year, neonatal death rate in Indonesia is 25 per 1000 births with 0-7 days of early neonatal deaths of 15 per 1000 births. The results of the household health survey in 2001 stated that the neonatal death rate is of 180 cases with 79.4% of neonatal deaths occur at 0-7 days of age and 20.6% between the ages of 8-28 days. One of the Infectious diseases that occur in the neonate is neonatal sepsis. Neonatal sepsis is a clinical syndrome of bacteremia characterized by systemic signs and symptoms and shows a positive blood culture that occurs in the first month of life. The incidence of sepsis in developing countries are quite high, from 1.8 to 18 per 1,000 births by number of deaths of 12-68%, whereas in developed countries are sepsis incidence rates ranging from three per 1,000 live births with a mortality rate of 10.3 % (Maryunani, 2009).

According to data from Indonesia Demographic and Health Survey 2012 (IDKI 2012) Neonatal death rate in Indonesia is 19

deaths / 1000 births, while infant death rate is 32 deaths / 1000 births (Muliyadi, 2009). The main causes of early neonatal mortality were infections (56%), asphyxia (45%), and congenital abnormalities (11%), whereas advanced neonatal deaths were infections (56%), LBW and prematurity (14%), jaundice (14 %), congenital abnormalities (11%), as well as intestinal obstruction 7% (Simbolon, 2008). These data suggest that infection is the leading cause of death in neonates.

Data WHO showed that cases of neonatal sepsis death In Indonesia by 50% -60%. In Indonesia, neonatal sepsis or neonatal infection occurs in less than 30% in newborns. The incidence of neonatal sepsis in some referral hospitals in Indonesia ranged between 8.76% and 30.29% with a mortality rate of 11.58% (Simbolon, 2008).

Data obtained from Dr. H. Moch Ansari Saleh Public Hospital about the number of patients with neonatal sepsis year 2013-2017 are 299 cases. In 2013 there were 55 cases and there are two neonates who died. In 2014 there were 79 cases and 19 neonates who died of sepsis. In 2015 there were 72 cases with 28

neonates who died with sepsis. In 2016 there were 73 cases of neonatal sepsis and by 2017 from January to May there were 20 cases of neonatal sepsis. From the data on the possible increased incidence of neonatal sepsis and an increase in neonatal deaths due to neonatal sepsis. Based on the description above, the researcher is interested in conducting a study entitled "Overview of Neonatal Sepsis in Dr. H. Moch Ansari Saleh Hospital Banjarmasin during the period from January 2016 – May 2017 ". The objective of this research is to know the overview of neonatal sepsis in Dr. H. Moch Ansari Saleh Hospital Banjarmasin during the period from January 2016 – May 2017.

MATERIALS AND METHODS

This research uses descriptive research method. This study was conducted by looking at neonatal sepsis events in Dr. H. Moch Ansari Saleh Hospital Banjarmasin during the period from January 2016 – May 2017.

The population of this study is all of the neonates who had sepsis who were treated in Dr. H. Moch Ansari Saleh Hospital

Banjarmasin during the period from January 2016 – May 2017 as many as 93 samples.

Sample in this research is saturated sample taken from total population. So that the sampling of the entire Neonates who had sepsis treated in RSUD DR. H. Moch Ansari Saleh Banjarmasin in January 2016 until the month of May 2017 is a total of 93 samples, subjected to experiments by using a measuring instrument checklist.

RESULTS

The results of this study will be presented through tables of distribution and presentation of sepsis calculation based on factors maternal and fetal factors by adding up all the appropriate frequency of neonatal sepsis predetermined sub-variables is then divided by the number of observations, as follows:

Table 1 Distribution of frequency characteristics of the mothers in the
1 Dr. H. Moch Ansari Saleh Hospital by age.

No	Age	F	%
1	<20 years	24	25.81
2	20-35 years old	46	49.46
3	> 35 years	23	24.73
amount		93	100

Source: Secondary Data

Based on the table, it can be seen that 93 neonates in the research samples can be inferred the frequency of maternal age categories of neonatal sepsis that most are aged 20 -35 years old with a frequency of 46 (49.46%).

Table 2 Distribution of frequency characteristics of the mothers in the Dr. H. Moch Ansari Saleh Hospital by Parity.

No	Parity	F	%
1	1	50	53.76
2	2-4	32	34.41
3	> 4	11	11.83
	amount	93	100

Source: Secondary Data

Based on the table, it can be seen that 93 neonates in the research samples can be concluded that the highest frequency of maternal parity neonatal sepsis who have a child that is 1 (primiparous) with the number 50 (53.76%) votes.

Table 3 The frequency distribution of maternal characteristics at Dr. H. Moch Ansari Saleh Hospital by Age of Pregnancy.

No	Pregnancy Age	F	%
1	22-27 weeks	0	0.00
2	28-36 weeks	28	30.11
3	37-42 weeks	62	66.67
4	> 42 weeks	3	3.23
	amount	93	100

Source: Secondary Data

Based on the table above, it can be seen that 93 neonates in the research samples can be inferred the frequency of occurrence of sepsis most occurred in the mother of us who neonatal sepsis by category u drain term pregnancy is 37-42 weeks of age with a frequency of 62 (66.67%).

Table 4 Distribution of the frequency characteristics of the mother in the Dr. H. Moch Ansari Saleh Hospital by Type of Labor.

No	Type of Labor	F	%
1	Spontaneous	71	76.34
2	Artificial	18	19.35
3	Suggestions	4	4.30
	amount	93	100

Source: Secondary Data

Based on the table above, it can be seen that the 93 neonates in the research

samples can be inferred the frequency of occurrence of sepsis most occurred in neonates born with spontaneous labor with a frequency of 71 (76.34%).

Table 5 Distribution of frequency characteristics of newborns in Dr. H. Moch Ansari Saleh hospital based on Weight.

No	Weight	F	%
1	<2500	19	20.43
2	2500-4000	72	77.42
3	> 4000	2	2.15
amount		93	100

Source: Secondary Data

Based on the table above, it can be seen that 93 neonates in the research samples can be inferred the frequency of occurrence of sepsis in neonates occurs most normal weight 2500-4000 grams with a frequency of 72 (77.42%).

Table 6 Distribution of frequency characteristics of newborns in Dr. H. Moch Ansari Saleh hospital by Gender.

No	Gender	F	%
1	Man	57	61.29
2	Women	36	38.71
amount		93	100

Source: Secondary Data

Based on the table above, it can be seen that 93 neonates in the research samples can be inferred the frequency of occurrence of sepsis

most occurred in male neonates with frequency of (61.29%).

DISCUSSION

1. Age

The age of the most mothers is between 20-35 years old as many as 46 people (49.46%), which means that at this age most people are at a healthy reproductive age and safe and not at risk. While for persons aged <20 years as many as 24 people (25.81%), and age > 35 with 23 votes (24.73%), but when added, sepsis at the age of mothers at risk aged <20 years and > 35 years occurred about the same as the age 20-35 age without risk that the number of 47 cases.

According to Lestari (2012), mother giving birth less than 20 years is likely to bear risk to newborn mortality because, reproductive organs of mother aged less than 20 years still premature. Emotional state is also not yet stable and still depends on others. Pregnancy over the age of 35 years is not recommended because, at the age above 35 years not only it is very dangerous also because of this age the

mother often vulnerable to infectious diseases so that it increases the risk of complications in pregnancy and childbirth impacting on the newborns. Based on the results above, the researchers can draw the conclusion that many cases of sepsis happen at maternal age of 20-35 years, because many mothers who gave birth at reproductive age and is recommended for being pregnant and giving birth in on the productive age, so that cases of sepsis happens more at the age of productive.

2. Parity

Based on the results from the research obtained, the incidence of neonatal sepsis in Dr. H. Moch Ansari Saleh hospital Banjarmasin in January 2016 - May 2017 the incidence of neonatal sepsis is most common in mothers who have one child (primipara), as many as 50 people (53.76%) and mothers of 2-4 parity there are 32 (34 , 41%) cases of neonatal sepsis, whereas in the classification of unsafe parity more than four only as many as 11 (11.83%) cases of neonatal sepsis. According to Mubarak (2012) parity or the

number of children as well as experience.

Experience is an event that someone has experienced. Parity of two or multigravida actually has enough experience compared to parity one, because mothers who have more than one child have more experience so that the occurrence of neonatal sepsis mostly occurs in mothers who have one child because of lack of motherhood experience in caring for the baby.

According Junara (2012), based on baseline characteristics data on the incidence of sepsis, the first pregnancy is the largest number of 52.8%. Leal (2012), getting parity affects the occurrence of sepsis.

3. Gestational age

Based on research results obtained in Dr. H. Moch Ansari Saleh hospital Banjarmasin in January 2016 - May 2017, neonatal sepsis is more common in infants born at 37-42 weeks gestation as many as 62 cases (59.52%). The results showed that from 93 samples, neonatal data obtained from mothers with high risk gestation (<37 weeks or> 42 weeks) were 28 cases

(30.11%) at 28-36 weeks' gestation and 3 cases (3, 23%) at gestation > 42 weeks.

Early research on FN 2014 that full-term gestation is at increased risk for neonatal sepsis 6 times greater. The results are consistent with research conducted by Shahyang called *risk factors in early neonatal sepsis* in 2006. The research showed that 37-42 weeks gestation have a meaningful relationship to the incidence of neonatal sepsis ($P = 0.0001$) and are at increased risk for neonatal sepsis 5 times larger (OR 4.85) than those who were born with gestation <37 weeks or > 42 weeks.

4. Type of Labor

Based on the results of the research, the incidence of neonatal sepsis in Dr. H. Moch Ansari Saleh Hospital Banjarmasin in January 2016 - May 2017 is most prevalent in women who have a history of spontaneous labor in the amount of 71 (76.34%) cases, and in women with a history of artificial birth with caesarean section or vacuum that is equal to 18 cases (19.35%). While the number of cases of neonatal sepsis occurring in women with a

history of recommendation or by induced only 4 cases (4.30%).

Lihawa's research (2013) states that the percentage of labor types in the incidence of neonatal sepsis is spontaneous childbirth 3.9%, cesarean section 5.6%, vaccination with 10.5% vacuum extraction. Infants born with risky action 2,142 times had neonatal sepsis than normal-born babies (Simbolon, 2008). Unlike the case with research conducted by Kardana (2011) which said that the baby is born spontaneously and not spontaneously have no effect on the incidence of sepsis. Due to where the delivery took place and the sanitary of the process concerning the tools and the health worker of the delivery is also one of the factors the occurrence of sepsis, in which health services are not both primarily for mothers giving birth and neonates leading to high rates of infection. Infection can be caused by a high intervention procedure in the infant from an early age. It can be infected by germs in the delivery room. Delivery of infants is not on health facilities and is not

performed by trained health workers (birth attendants) that occur in many developing countries, May also cause an increased risk for neonatal sepsis.

5. Weight

Based on the results of the research, the incidence of neonatal sepsis in Dr. H. Moch Ansari Saleh hospital Banjarmasin in January 2016 - May 2017, occurred most commonly in neonates with normal weight 2500-4000 with a frequency of 72 (77.42%). While in neonates who have weight <2,500 g only there were 19 cases (20.43%) and in neonates with Weight >4000 gram attached 2 cases sepsis (2.15%).

It is consistent with the research conducted by Simbolon D. in Curup Rejang Lebong hospital (2008), the results showed that there was no association with birth weight incidence of neonatal sepsis. However, the results of this study did not match the theory that infants with LBW at high risk of infection or neonatal sepsis. LBW infants at risk of developing neonatal sepsis for infants with LBW maturation of

the organ (liver, lung, gastrointestinal, brain, immune system against infection, and others) are not perfect, the LBW infants often develop complications that lead to death. Also Manuaba (2010) states that LBW infants central regulator of respiration is not perfect, pulmonary surfactants still lacking, so development is not perfect, respiratory muscles and ribs are still weak which resulted in more oxygen into the brain less, if oxygen (O₂) Less than the anaerobic bacteria easily developed to cause easy infection.

6. Gender

Based on the results of the research, the incidence of neonatal sepsis in Dr. H. Moch Ansari Saleh hospital Banjarmasin January 2016- May 2017 occurred most commonly in male neonates as many as 57 (61.29%) cases. The incidence of sepsis in female neonates are as many as 36 (38 , 71%) cases. In line with the theory that male neonates are more active than female neonates, so male neonates need more O₂, if the O₂ in the body, it is less likely to cause anaerobic bacteria to develop.

Simbolon (2008) study, about the risk factors of sepsis in newborns in Rejang Lebong district of Curup Hospital of 327 live births, 117 of whom suffer from neonatal sepsis. A frequent risk factor is the sex of a male infants at twice the risk of female infants.

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