The Correlation Between The Type Of Childbirth With Neonatal Asphyxia At Dr. H. Moch. Ansari Saleh General Hospital Of Banjarmasin

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ABSTRACT

Objective: This is to analyze the correlation between the type of childbirth with Neonatal Asphyxia
Method: This study uses observational analytical survey with cross-sectional study design, the sample taken as many as 195 women giving birth are purposive sampling based criteria. The research instrument used Checklist with secondary data. Statistical data analysis using Chi-square test (X2) and Test Relative Risk (RR) with a limit of significance ($\alpha = 0{,}05$).
Results: Most types of childbirth is a normal delivery, namely 135 (69,2%) and the highest neonatal asphyxia was asphyxia was 103 (52,8%). Analysis of the data obtained the value of ρ value of 0,005, so that $\rho < \alpha = 0{,}05$, which means there is a significant relationship between the type of delivery with neonatal asphyxia later to assess the major risks with Test Relative Risk (RR) showed that the risk of labor actions have 2, 36 or 2 times greater than its Neonatorum gave birth asphyxia normal delivery with 95% CI 1.50 to 6,92 LL and UL.
Conclusion: The results of this study stated that there is a significant relationship between the type of delivery with neonatal asphyxia, where the labor action has a greater risk of having a baby with asphyxia neonatorum.

Keywords: Asphyxia neonatorum, Maternity follow, Normal Delivery, Type Delivery

I. INTRODUCTION

Health development in Indonesia is still characterized by fragility of the health of mothers and children. It is characterized by high maternal mortality rate (MMR) and infant mortality rate (IMR). Maternal and infant mortality high reflecting the weak capacity of the state in providing health care.

The average maternal mortality rate (MMR) was recorded at 359 per 100,000 live births, and the infant mortality rate (IMR) was 32 per 1,000 live births. In this case, to achieve the Millennium Development Goals (MDG's) that lower the maternal mortality rate to 108 per 100,000 and the infant mortality rate 23 per 1,000 would be difficult to achieve unless a

more intensive effort to reduce maternal mortality rate and infant mortality rate [1].

Efforts to control and the most effective prevention is to perform maintenance and monitoring efforts as early as possible antenatal, safe delivery and good treatment [2].

The infant mortality rate in South Kalimantan is still quite high at 44 per 1,000 live births, this figure has increased dramatically from previous data that the infant mortality rate is 34 per 1,000 live births in 2010 [3].

In 2013 there were 727 cases of infant mortality in South Kalimantan, this figure is still relatively high, but has decreased in comparison from the previous year there were 816 cases of infant death in 2012. The cause of infant mortality in 2013 was low birth weight 258 cases, asphyxia 178 cases, and others as many as 185 cases [4].

Based on data from the medical records there are 115 cases of infant death in 2013 at the Regional General Hospital Dr. H. MOCH. Ansari Saleh Banjarmasin. The main causes of infant mortality are asphyxia (44,3%), low birth weight (38,2%) and other causes (16,5%)

Based on a preliminary study conducted by researchers in the delivery room and nursery Regional public hospital Dr. H. MOCH. Ansari Saleh Banjarmasin on 22 December 2014, the data delivery and asphyxia neonatorum cases in the year 2013 there were 1636 cases of labor, which is contained in 1098 (67,1%) cases of normal deliveries and 538 (32,8%) cases of deliveries to the action, while Data delivery with advice such as labor induction is not recorded in the data register of the room. In 2013 there were 44,3% of cases of infant deaths caused by asphyxia, neonatal asphyxia while the cause of the incident in terms of factors kind of labor that is most abundant in labor with action that is vacuum extraction (85,1%), Labor Breech (78,8 %), Cesarean Section (52,5%) and in normal childbirth (47,4%).

Based on the results of preliminary studies, it is known that the incidence of asphyxia in newborns at Regional public hospital Dr. H. Moch. Ansari Saleh is still very high even become a major cause of infant mortality.

Factors childbirth are the factors most likely to cause asphyxia neonatorum due to childbirth is the final process that is crucial for the state of the baby is born, if the delivery takes normally uncomplicated it is expected that the baby can also be born with a normal state, but on certain conditions of delivery should use some specific interventions that can have an impact on the condition of babies born.Hence the importance of knowing the causes of asphyxia as seen from the type of delivery is to appeal for birth attendants to be expected to know the risk factors that could potentially cause asphyxia can take measures to minimize the occurrence of asphyxia neonatorum with a way to communicate with mothers and families to decide to do safe delivery and carry out the management of the care of pregnant women, maternity and

Neonatal appropriately in accordance with the duties and authority [5].

The purpose of this study to identify the type of delivery and neonatal asphyxia and analyze the relationship between the type of delivery with neonatal asphyxia in Regional public hospital Dr. H. Moch. Ansari Saleh Banjarmasin

The results of this research can be used as an enhancer insight, expand scientific knowledge in the development of science as well as an additional literature or information in conducting further research and provide information for health-care facilities with the discovery of various problems in the field, can be used as an addition to the experience and insight in the field of obstetrics existing in the work area, and can be used as an appeal and input of science in improving the quality of obstetric care in the prevention and treatment of cases of asphyxia Neonatorum possibility on every delivery.

II. RESEARCH METHOD

The location of this research is Regional public hospital Dr. H. Moch. Ansari Saleh Banjarmasin.This study uses an observational analytic survey with the cross-sectional design.The study population was all women giving birth in the Regional General Hospital Dr. H. Moch. Ansari Saleh Banjarmasin commencing from October-December 2014. The sampling technique used is nonprobability sampling, which is purposive sampling based on criteria, is a normal birth mother, and action (breech, vacuum extraction, and Cesarean Section) were aged <20 years and> 35 years, in order to get a sample size of 195 people.

Data collection techniques used in this study by using the documentation checklist

Once the data is collected, and then in the tabulation. Then analyzed according to the frequency distribution of the study variables. The data obtained were processed and analyzed using computer auxiliary program. Data analysis using chi-squared test (X2) and the greater the risk analysis (Relative Risk Test) level of 95% with a limit of significance (= 0.05).α

III. RESULT

This study was conducted to identify the type of delivery and neonatal asphyxia and analyze the relationship between the type of delivery with neonatal asphyxia in Regional public hospital Dr. H. Moch. Ansari Saleh Banjarmasin.

Table 1 VariabeI Frequency Distribution Type Childbirth in Regional Public Hospital Dr. H. Moch. Ansari Saleh Banjarmasin

types Childbirth	Frequency	%
Normal delivery	135	69,2%
Maternity Action	60	30,8%
Total	195	100%

Based on Table 1 note that from the overall sample of 195 women giving birth, type of delivery is the most normal deliveries which are 135 (69,2%) of women giving birth.

Table 2 Variable Frequency Distribution Genesis asphyxia neonatorum

asphyxia neonatorum	Frequency	%
Vigorous Baby	63	32,3%
Medium asphyxia	103	52,8%
Heavy asphyxia	29	14,9%
Total	195	100%

According to the table 2 are known from the overall sample of mothers who totaled 195 people, most babies born with neonatal asphyxia state that the asphyxia was as much as 103 infants (52,8%) and severe asphyxia as many as 29 infants (14,9%).

Table 3 Frequency Distribution Type Childbirth Genesis asphyxia neonatorum

types Childbirth	Asphyxia incident Neonatorum						*Total*	*X2*	*ρ Value*
	Vigorous Baby		Medium asphyxia		Heavy asphyxia				
	n	%	n	%	n	%			
Normal delivery	53	39,3 %	66	48,9 %	16	11,9 %	135	10,53	0,005
Maternity Action	10	16,7 %	37	61,7 %	13	21,7 %	60		
Total	63		103		29		195		

Relative Risk (RR) = 2,356 with LL and UL value (95% CI 1,509 to 6,923)

Based on table 3 it can be concluded that more labor action having a baby with neonatal asphyxia circumstances which amounted to 83,4% while in normal deliveries amounted to 60,5%.

Furthermore, to determine the relationship between the Genesis Maternity type asphyxia neonatorum, the data were analyzed with Chi-Square Test Statistic with the aid of a computer program with Confident Interval of 95% ($\alpha = 0,05$) ρ values obtained value of 0,005 so that it can be concluded that $\rho < \alpha$, which means that Ho refused and Ha is received, it can be concluded that there is a significant relationship between the type of delivery on the incidence of neonatal asphyxia in the Regional General Hospital Dr. H. Moch. Ansari Saleh Banjarmasin. Then, followed by analyzing the Relative Risk (RR) to see the big risk types of labor against neonatal asphyxia using a computer program to help Confident Interval of 95% ($\alpha = 0,05$)

IV. DISCUSSION

In Table 1 indicates that the majority of deliveries occur normally in the amount of 69,2%. Research conducted at the Regional General Hospital Ahmad Yani Metro 2008 is also mentioned that the proportion of mothers who gave birth to a normal delivery is greater (70,3%) compared to delivery action (29,7%) in general because more than 80% of deliveries will run normally and 15-20% will experience birth complications [6].

Moreover Regional General Hospital Dr. H. Moch. Ansari Saleh Banjarmasin is a hospital with a referral program Social Security Agency of Health (BPJS), so most mothers delivered assume want to get better services and free with full facilities in the hospital despite the circumstances that allow for the delivery normally in Midwife Practice or Maternity Clinic. Research conducted in Mother and Child Hospital Kumalasiwi Pecangaan Jepara also stated that the majority of normal birth mothers as many as 787 respondents (68,4%) due to the majority of respondents to the circumstances under which maternity normally choose to give birth at the

Hospital for wanting to use the program Jampersal (Delivery Guarantee) [7].

In Table 2 states that most babies born with birth asphyxia neonatal circumstances which amounted to 67,7%. Many factors that cause asphyxia neonatorum among other maternal factors, factors babies, factors placenta and factors of labor This is because, the complications that accompany the mother and fetus during pregnancy or childbirth or during the birth process possibility of improper handling and intervention excessive as well as errors in decision-making so as to increase the risk of neonatal asphyxia but it can also be caused by less skilled rescuers in handling emergency cases [8].

Therefore, efforts are undertaken to minimize the occurrence of asphyxia neonatorum by preventive measures such as providing care Pregnancy Antenatal Care (ANC), early detection of complications ways of communicating with mothers and families to decide to make childbirth safer and perform management of care for pregnant women , maternity and BBL appropriately in accordance with the conditions of the mother and fetus. [9]

In Table 3 provides that women undergoing labor more action a baby with asphyxia Neonatorum circumstances amounting to 83,4% while in normal deliveries amounted to 60,5%. This suggests that every type of delivery poses a risk of asphyxia if done in accordance with the conditions that accompany the mother and fetus. for example in women with normal delivery in a position to want to be Cesarean Section birth because of various reasons, either because they do not want to feel pain, labor is relatively fast, aesthetic factors (do not want to change the elasticity of the vagina, can determine the date of birth). Excessive intervention in normal pregnancy can affect the state of the fetus in the womb, the use of drugs during labor Cesarean Section certainly have an impact on the fetus is born. [10].

In addition to the women who are at high risk decided to perform labor is abnormal due to various factors, one of which economic factors and infrastructure, for instance in women who go into labor at high risk should be done referral but due to various factors decided to still impose labor normally so can cause complications because it is not done with appropriate care in accordance with the conditions. This suggests that every type of delivery poses a risk of asphyxiation if done in accordance with the conditions that accompany the mother and fetus [11].

Research conducted at the Regional General Hospital Pembalah Batung Amuntai also stated that the factors that led to the incidence of asphyxia in newborns most often caused by childbirth with action-that of 189 cases of labor to the action, as many as 121 (64%) infants asphyxiated and 68 (36%) do not asphyxiate, and of 122 cases of normal deliveries 73 (59,8%) suffered asphyxia and 49 (40,2%) did not asphyxiate. Based on these studies it can be concluded that the factor of

labor may cause asphyxia in newborns, both in normal labor and delivery action [12].

Normal delivery can occur spontaneously behind the head of asphyxia due to the emphasis on the fetus during labor process underway, includes engagement events, decreased head, flexion, rotation, extension, external rotation and expulsion [13].

Asphyxia can also occur in normal deliveries were prolonged labor, Normal childbirth, in general, lasts for 24 hours in primiparous and more than 18 hours in multiparas. if labor lasts too long can lead to complications in the mother and the fetus, such as dehydration, infections, maternal fatigue, asphyxia and fetal death in utero (KJDK). In addition, on the state of women who experienced rapid delivery (parturition premature) lasting 3-4 hours commencing after their opening asphyxia can occur due to the rapid delivery of the fetus cannot be readjusted when entering the mother's pelvis, causing congestion resulting in pressure increased intracranial which can cause complications such as intracranial hemorrhage, brain damage (cerebral palsy) and hypoxia and even death [10]

Asphyxia on normal delivery can also occur if the presence of risk factors maternal such as (hypotension, shock and maternal malnutrition), factor uterus (contraction hypertonic and impaired vascularization), factor cord like (prolapse of the umbilical cord or umbilical cord prolapse, and torque on the cord thus inhibiting the circulation of oxygen from mother to fetus) and the placenta factor (vascular degeneration, placenta abruption and placenta previa) [7].

One of the risk factors that influence in this study is that maternal age factor is at risk due to sampling in this research is the age group of mothers at risk so that the possibility of the normal labor there is also a baby is born with neonatal asphyxia due to other factors, the maternal age factor. Gestational age less than 20 years old or over 35 years included in the criteria for high-risk pregnancies where both served to increase morbidity and mortality in the mother and fetus [5].

In this study, the highest maternal exist in the age group> 35 years who have a greater risk factor due to the physical condition of the mother and the condition of the reproductive organs have deteriorated so much at risk of labor is accompanied by complications during pregnancy and childbirth can cause neonatal asphyxia. The risk of pregnancy complications in the age group below 20 years and the age group over age 35 are three times higher than a healthy reproductive age group (20-35 years). [14]

In this study, the risk of labor with action had 2.356 or 2 times greater for the occurrence of neonatal asphyxia compared with a normal delivery. This is according to research conducted in hospitals Sawerigading Palopo on the risk factors of neonatal asphyxia labor by stating that from a sample of 182 mothers who gave birth, 57,7% of mothers giving birth to labor action and had 4.44 times

the risk of having a baby with neonatal asphyxia compared with mothers who give birth normally. because most mothers delivered by measures already have an indication or a history of risky pregnancies that require them to undergo delivery by measures to avoid more severe complications. Besides labor accompanied by special intervention measures, such as manual aid, use of tools and medicines that can harm and interfere with fetal wellbeing. [15]

Labor actions include (Cesarean Section, Vacuum Extraction, and Breech deliveries). Cesarean Section delivery is the safest alternative for aid delivery if delivery does not normally do. But in Section Cesarean delivery may also cause asphyxia due to factors of drug use anesthesia/analgesia in excess in the mother directly that can cause respiratory depression. This is according to research at the Hospital Dr. Sardjito which concluded that a Cesarean Section delivery with general anesthesia increases the risk of neonatal asphyxia by 5,32 times, while the use of spinal anesthesia neonatal asphyxia risk dropped to 1,27 times [16]

This is because the spinal anesthesia (anesthesia lumbar block subarachnoid) is a type of regional anesthesia by inserting the drug into the subarachnoid space (between the vertebrae L2-L3 or L3-L4 or L4-L5), so that the drugs used do not pass through the blood vessels and placenta so it does not cause respiratory depression in the fetus while in general anesthetic drugs used to penetrate the placenta and thus may cause depression in the fetus and respiratory reflexes become slow. Besides emergency, Cesarean Section decided suddenly (cyto), for example, in emergencies such as fetal distress, eclampsia, and preeclampsia, prolonged labor, a narrow pelvis. can cause asphyxia because it is done without pre-operative treatment were adequate and without planned [17].

Labor with such actions vacuum extraction is used to accelerate the delivery when the state of the mother or fetus is threatened, to shorten the second stage of labor.In the prolonged second stage mother straining efforts to increase the risk to the baby because it reduces the amount of oxygen to the placenta. In addition the used tool in the form of a vacuum or suction cup that is placed on top of the head can cause trauma to the pressure on the head which can suppress the vital centers in the medulla oblongata and it can cause nerve paralysis that causes neonatal asphyxia, Asphyxia can occur because there is the birth of the fetus's head for a long time in addition to the withdrawal too strongly on the vacuum extraction can cause intracranial hemorrhage in infants that can disrupt the nervous system of the brain and cause hypoxia continued so that the motion babies is reduced, effort breath weak, the ability of contraction decreased heart muscle so that cardiac output is reduced, followed by damage to vital organs. [18]

A breech deliveries manual labor with aid, the aid manual action helper should not

undertake stimulus to the chest because it will trigger a dangerous tactile stimulation when fetal breathing nose and mouth before birth because mucus and amniotic fluid will be sucked and block the airway. On the mechanism of breech deliveries can be divided into three stages: the first stage of labor slow phase of the buttocks to the umbilicus, called the slow phase because in general this phase there are things that endanger the course of labor. The second stage of labor is the fast phase of the umbilicus to the mouth, called rapid phase for the time <8 minutes (1-2 times the contraction of the uterus) This phase should be over. In this phase, the cord is between the fetal head with the pelvis, when pinched umbilical cord can cause fetal asphyxia. The last phase is the phase where the slow second stage of labor from the mouth to the whole head, help at this stage should not be in a hurry because the delivery head too fast in breech presentation can cause sudden decompression of the fetal head is causing intracranial hemorrhage. [19]

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