The Relationship Between Fetal macrosomia Malpotition and with Premature Rupture of Membrane (PROM) at Hospital Dr. H. Moch. Ansari Saleh Banjarmasin

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ABSTRACT

Objective: to identifying relationship of fetal macrosomia malpotition and with premature rupture of membranes at Hospital Dr. H. Moch. Ansari Saleh Banjarmasin.
method: This research used a case control approach. The population consists of all delivery mothers at Hospital Dr. H. Moch. Ansari Saleh Banjarmasin in 2016. The sample is 148 delivery mothers. The Data was taken from medical records and Analyzed using Chi-Square at $\alpha = 0.05$.
Result: The result of the research shows that there is a correlation between fetal malpotition with PROM incidence p = 0.004, and there is significant relation between macrosomia with PROM incidence p = 0.028. Among These two variables, macrosomia is the variable that had the most significant relationship with PROM incidence. The values of OR is = 4.985. It means macrosomia 4,985 times more at risk of PROM than Reviews those who did not experience PROM.
Conclusion: There is a relationship between fetal macrosomia malpotition and with premature rupture of membranes. routine antenatal care is expected to Prevent the incidence of KPD

Keys Word: fetal malpotition, macrosomia, premature rupture of membranes, delivery mother

INTRODUCTION

Health is one of the indicators for the prosperity of the population Also the success of the development program. Generally, the degree of public health is seen through conditions of morbidity, mortality, and nutritional status. Mortality is the death during pregnancy or period of 42 days after delivery, due to all causes associated with or aggravated by pregnancy or treatment, but not the caused by an accident / injury.

In 2014, the World Health Organization reported that the Maternal Mortality Rate (MMR) about 289,000 mothers in the world. MMR in Indonesia has fluctuated from 1991 to 2015. The decline in MMR in Indonesia occurred from 1991 to 2007, from 390 to 228. However, in 2012, Indonesia Demographic Health Survey Showed a drastic increase is in MMR of 359 / 100,000 births. MMR again declined to 305 / 100,000 live births based on the Intercensal Population Survey in 2015.[1]

Maternal Mortality Rate (MMR) in 2011 in South Kalimantan amounts to 120 / 100,000 live births and increases in 2012 of 123 / 100,000 live births.17MMR in 2013 is 123 / 100.000 birth of life and Increased again in 2014 being 231 / 100.000 birth of life.[2] The cause of maternal death is divided into two: direct and indirect causes. The immediate cause of maternal death is bleeding 40-60%, 20-30% Preeclampsia, Infection 20-30%. One cause of infection is premature rupture of membranes that are not getting treatment Immediately.[3]

Premature rupture of membranes is defined as leakage of amniotic membrane prior to their delivery. The incidence is about 3-10% of deliveries. PROM nearly 10% of all births, 11% occurred in the United States and even more in developing countries. Premature rupture of membranes are the causes of premature birth, also the high level of pain perinataldan death. In addition, 40% - 75% of neonatal deaths occur due to rupture of membranes premature.[4] In China, premature rupture of membranes at gestational age less than 37 weeks was 2.7% from 3% of all cases of labor with PROM.[5]

The incidence of PROM in 2013 as many as 50-60%. Indonesia has the incidence of PROM approximately 39.1% in 2012, while in 2013 as many as 35% knew.[6] Causes premature rupture of membrane include

infection, incompetent cervix, intra-uterine pressure increases, trauma, aberration, and social circumstances economy. Macrosomia is also one of the causes of PROM.[7]

Premature rupture of membranes dangerous for pregnant women and their babies. Premature rupture of membranes may cause infection, rupture of membranes make babies are no longer protected by the amniotic membrane and direct contact with the outside world. Although there is no dilatation, bacteria from the birth canal can propagate into the uterus and infect the mother and baby. The result can endanger the mother and the baby. Premature rupture of membranes in cases of obstetric complications usually occur in association with mothers and fetus, even though pathogenesis of premature rupture of membrane itself is not yet known.[8]

Research on parity and malposition, shows that the incidence of PROM at Puskesmas Balongsari Surabaya in 2013 is more more likely due to malposition (43%), compared to that caused not malposition (21%), while those without PROM though experiencing malposition as much as 57%.[9] The factors most associated with premature rupture of membranes is macrosomia with p-value = 0.0004 and OR 5.202, the chances of macrosomia 5 times more risk cause PROM.[10]

Based on the preliminary study conducted at Hospital Dr. H. Moch. Ansari Saleh Banjarmasin, the incidence of premature rupture of membranes is high, ie 142 cases (4%) of the 3,123 deliveries in the epidemic of 2013, increased to 598 cases (10.0%) out of 5,951 deliveries in 2014, 266 (5.6%) cases of 4,776 deliveries in 2015, and 74 cases (2.4%) out of 3,035 deliveries in the period from January to September 2016.

Based on this background, researchers interested in conducting research entitled "Relationship Disorders layout and Macrosomia With Premature Rupture Membranes Genesis On Maternity Mother In Hospital Dr. H. Moch. Ansari Saleh Banjarmasin ".

METHODS

This research used analytic survey research with case control design. The sample was divided into two sample case and control samples. Sample case iswhole maternal who experience premature rupture in dr. H. Moch. Ansari Saleh Banjarmasin In 2015 a total of 74

puerperal women with total sampling, whereas the control samples are mothers who do not experience premature rupture in dr. H. Moch. Ansari Saleh Banjarmasin, using a ratio of 1: 1 to equate (matching) parity and gestational age with purposive sampling technique. Retrieving data using a form of research with data processing using chi square test.

RESULT

Respondent Characteristics

Table 1 Distribution of Respondent Characteristics at RSUD Dr. H. Moch Ansari Saleh Banjarmasin

Characteristics	Frequency	Persentation
Age		
< 20 y.o	13	8,8
20 – 35 y.o	122	82,4
> 35 y.o	13	8,8
Parity		
Primiparas	62	41,9
Multiparas	84	56,7
Grandemulti	2	1,4
Gestation Age		
<37 weeks	8	5,4
37-42 weeks	138	93,2
>42 weeks	2	1,4

Table 1 shows that most maternity mothers in hospitals dr. H. Moch. Ansari Saleh Banjarmasin in 2015 is 20-35 years old, as many as 122 mothers. Multiparas are the most numerous, ie 84 mothers, and the most numerous maternal mothers are pregnant women with 37-42 weeks' gestation, which is 138 mothers.

Univariate Analysis

Table 2 Distribution of Research Variables in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin

No	Variables	Frequency	Presentation
1	PROM		
	Yes	74	50
	No	74	50
2	Malposition		
	Yes	35	19,3
	No	113	80,7
3	Macrosomia		
	Yes	11	7,8
	No	137	92,2

Table 2 shows that the maternity mother in dr. H. Moch. Ansari Saleh Banjarmasin who experience premature rupture membrane is 74 maternity mother. There are 35 maternity mothers who have malposition and 11 maternity mothers diagnosed macrosomia.

Bivariate Analysis

Relationship between Malposition with Premature Rupture of Membranes

Table 3 Chi-Square analysis results and Oods Ratio for variable malposition with premature rupture of membranes in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin in 2016

Malpositi	Cases		Controls		Total	
on	n	%	n	%	N	%
Yes	25	33,8	10	13,5	35	19,3
No	49	66,2	64	86,5	113	80,7
Total	74	100	74	100	148	100

Chi Square p = 0,004, α = 0,05 p < α
Odds Ratio (OR) = 3,265 (1,435 – 7,431)

Table 3 shows that the maternal case maternal cases were 25 people, whereas in the control group there were 10 people. Chi-Square analysis result is p-value = 0,004 at α = 0,05. This means there is a significant relationship

between variables malposition with premature rupture of membranes in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin. The OR value of 3,265 means malposition 3,265 times more likely to have premature rupture of membranes than those not experienced.

Relationship between Macrosomia with Premature Rupture of Membrane

Table 4 Chi-Square Analysis and Oods Ratio of macrosomia variable with the incidence of premature rupture of membranes in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin in 2016

Macrosomia	Cases		Controls		Total	
	N	%	n	%	N	%
Yes	9	12,2	2	2,7	11	7,8
No	65	87,8	72	97,3	137	92,2
Total	74	100	74	100	148	100

Chi Square p = 0,028, α = 0,05 p < α
Odds Ratio (OR) = 4,985 (1,039 – 23,922)

Table 4 shows that maternal cases of macrosomia women were 9, while the control group was 2. Chi-Square analysis result obtained p-value = 0,028 at α = 0,05. This shows that there is a meaningful relationship between macrosomia variables with premature rupture of membranes in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin. The OR value of 4.985 means that macrosomia is 4.985 times more likely to have premature rupture of membranes than those not.

DISCUSSION

1. Incidents of Premature Rupture of Membranes

The incidence of premature rupture of membranes in dr. H. Moch. Ansari Saleh Banjarmasin 2016 as many as 74 people (50%) in the case group and did not undergo premature rupture as many as 74 people (50%) in the control group.

Premature rupture of a rupture prematurely gave birth, which can occur in late pregnancy and long before the time of childbirth. The risk factors that can lead to premature rupture of membranes, among others, excessive amniotic fluid, premature rupture of membranes prior history, disorders or damage to the membranes, aberration, and macrosomia. Premature rupture of membranes can cause various health effects for both mother and fetus. It is also in line with research that says that the incidence of premature rupture of membranes at Hospital Dr. H. Moch Ansari Saleh Banjarmasin in 2015 is quite high.

2. Malposition

In this study, there were 19% of pregnancy that have malposition. Malposition can be caused by several factors, among which a narrow

pelvis, hydramnios (excess amniotic fluid), small fetus (premature), multiparity, and gamelli (multiple pregnancy). The relationship between pregnancy breech with the incidence of premature rupture of membranes in the strong category and have a positive direct corellation which means pregnancy breech position have more risk to experinece premature rupture of membranes.[11]

Labor with breech presentation doesn't cause harm to the mother but it poses a serious matter to the fetus or baby. Infant deaths in breech deliveries four times greater than usual pesalinan. Placental separation may occur in the second stage due to the pull of the cord. After head into the pelvic cavity can occur pressure on the head, the umbilical cord and it will cause fetal hypoxia. Another danger is the fracture, rupture of the abdominal organs and many dangers to muscles syaraf.[7]

The results also found 57% of women giving birth are multiparous. Multipara is one cause of the aberration. Mothers who have given birth to many children so that her womb is very elastic and make the fetus a great opportunity to rotate up to week 37 onwards which ultimately lead to aberration. Other studies mentioned in mothers who had breech deliveries majority is multipara as much as 60% .[12]

3. Macrosomia

The results of this study, 8% of pregnancy diagnose macrosomia. Macrosomia can be caused by several factors, including diabetes mellitus (DM), obesity, gestational age> 42 weeks, multiparity, and a history of previous macrosomia. Characteristics previously shown that most of the samples are multiparous. Multiparas who have a history of previous macrosomia then 5 times higher risk for macrosomia birth to their babies than women who have never given birth macrosomia because generally the weight of a baby on the next increased by about 80 to 120 g. [7]

4. Relationship between Malposition with PROM

Results of research on malposition incidents with premature rupture of membrane with samples obtained from 148 women giving birth in RSUD Dr. H. Moch. Ansari Saleh Banjarmasin of cases and controls that are 34% of women giving birth with malposition of the cases, 14% of women giving birth with malposition of the control group. Statistical analysis showed that the results of the value (p

= 0.002) means that there is a significant relationship between malposition with the incidence of premature rupture of membranes and results OR = 3,265 that means malposition 3 times more risk of premature rupture of membranes than those do not.

The results showed that the number of women giving birth from both case and control groups experienced malposition that is breech, amounting to 35 maternal. Location of the fetus in utero fetus depends on the process of adaptation to the room in the uterus. In pregnancy <32 weeks, the amount of amniotic fluid is relatively more so as to allow the fetus to move freely, and so the fetus can put yourself in a breech position. At the end of the trimester of pregnancy the fetus grows rapidly and relatively reduced amount of amniotic fluid. Because the buttocks with both legs folded bigger than the head butt forced to occupy more space in the fundus, while the head is in a smaller space in the lower uterine segment. Breech position can allow the tension of the uterus increases, thus making PROM.[7]

The results are consistent with previous studies of the relationship between malposition with premature rupture of the incident with the results calculated $\chi 2$ (4.50)> $\chi 2$ table (3.84), then H_0 rejected and H_1 accepted meaning there is a relationship between the aberration with the occurrence of amniotic Balongsari premature rupture at the health center of Surabaya in 2013.[9] Similarly with other studies that showed PROM significantly more pronounced in the group of samples with malposition (not the head).[13] During the PROM known that fetuses experience complications such as malpresentation, cord compression, oligohydramnios, enterocolitis necrotizing, neurological disorders, intraventricular hemorrhage, and distress respiration syndrome.[14]

But not all pregnancy with malpopsition experinced premature rupture of membranes, there are many other causes that lead to premature rupture of Mass infection, incompetent cervix, intra-uterine pressure berlebiham, multiple pregnancy, blood type, and previous history of premature rupture of membranes. However, while the research that says that there is no connection location of the fetus with premature rupture of the incident with the results of statistical analysis of the relationship through chi-square test was

obtained p = 0.171> 0.05, which means that Ho is accepted and Ha rejected that there is no relationship between the incidence of premature rupture of membranes the location of the fetus in women giving birth in hospitals Sleman Yogyakarta.[15]

5. Relationship between Macrosomia with Premature Rupture of Membranes

Results of research on the incidence of macrosomia with premature rupture of membranes with samples obtained from 148 women giving birth in hospitals Dr. H. Moch. Ansari Saleh Banjarmasin of cases and controls are 12% of women giving birth with macrosomia group and 3% of cases with macrosomia birth mothers of the control group. Statistical analysis showed that the results of the value (p = 0.028) means that there is a significant relationship between the incidence of macrosomia with premature rupture of membranes and results OR = 4,985 that means macrosomia 4 times greater risk of premature rupture compared with those not experiencing macrosomia.

Some of the risk factors associated with fetal macrosomia such as diabetes (Macrosomia detected 70-80% of pregnancies with complications of diabetes mellitus three), maternal obesity and excessive weight gain during kehamilan.[7]

One of the complications that can occur in women is korioamnioritis is an infection of the membranes, which when membranes had been infected then it would lead to the occurrence of premature rupture of membranes, coupled with fetal weight exceeding 4000 g will cause teregangnya membranes due to a heavy load in the womb, would potentially rupture the cause of macrosomia Pregnancy dini.16 distention of the uterus increases or overdistention and cause intrauterine pressure increases, putting pressure on the membranes, causing the membranes become stretched, thin, and the strength of the membrane is reduced, causing the membranes to break easily.

Factors associated with premature rupture of membranes In RSUD Dr. H. Moch. Ansari Saleh Banjarmasin In 2015, it was found that there is a correlation with the incidence of macrosomia premature rupture with the results of the analysis of Chi-Square p = 0.001 <0.05, which means that there is a correlation with the incidence of macrosomia premature rupture of membranes, the value of OR = 5.276, which

means macrosomia 5.276 times risk of premature rupture of membranes than those who did not experience macrosomia.

CONCLUSION

The results showed that there are relationship between malposition and macrosomia with incidents of premature rupture of membranes.

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