

Research Article

The Analysis of Relationship between Parity and abnormalities of fetal location with the Old Partus Incident in RSIA Permata Hati Makassar

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Abstract: The old partus is one of the causes of maternal and newborn deaths. According to Indonesian Demographic and Health Survey Old Partus data in 2010 reached 1.0%, in 2011 it reached 1.1% and in 2012 it increased to 1.8%. Based on data from the Permata Hati Makassar Maternal and Child Hospital there were 27.4% who experienced prolonged childbirth from 343 women in 2018. This study aimed to determine the relationship between parity and abnormalities of fetal location with the incidence of prolonged maternal delivery with caesarean section at the Permata Hati Makassar Mother and Child Hospital in 2018. This was an analytic observational study with a cross sectional study. The populations in this study were all maternity with sectio caesarean section at the Permata Hati Makassar Mother and Child Hospital, amounting to 343 women. The sample used in this study is total sampling. Data collection is done by looking at secondary data, namely data obtained from medical record recording at the Permata Hati Makassar Mother and Child Hospital in 2018 by using a check list sheet and the data analysis used is chi-square. The results of this study indicate that there is a significant relationship between parity ($p = 0.021$) and fetal location abnormalities ($p = 0,000$) with the incidence of prolonged delivery at the Permata Hati Makassar Mother and Child Hospital in 2018. Health workers are expected to provide information about efforts prevention of maternal complications, especially prolonged labor, in addition the mother is recommended during pregnancy to perform ANC examinations to be able to detect the abnormal fetal location early so that the management of abnormalities of fetal location can be planned properly.

Keywords: Parity, Fetal Disposition Abnormalities, old parturition.

INTRODUCTION

Sectio caesarea (SC) has increased throughout the world over the past few decades and has even been going on for a decade with global SC levels in 2000-2008 at 13.9% and increasing in 2007-2014 to 17% (Hautakangas, T. *et al.*, 2018). Based on the results of Basic Health Research (2013), the number of deliveries with SC actions from 2010 to 2013 was 9.8% of a total of 49,603 births, with the highest proportion in DKI Jakarta (19.9%) and the lowest in Southeast Sulawesi (Basic Health Research 2013). The higher the rate of labor with SC measures, WHO sets the standard for SC in a country is around 10-15% per 1000 births in the world. The Government Hospital is around 11% while the Private Hospital is around 30% (Betrán, A. P. *et al.*, 2016). While at the Permata Hati Maternal and Child Hospital Makassar has passed the prescribed standards where there were 38.8% deliveries with cesarean

section from a total of 884 deliveries (RSIA Permata Hati. 2018). Therefore, the WHO said that the rate of SC labor based on a population of more than 10% was not related to a reduction in maternal and newborn mortality (Betrán, A. P. *et al.*, 2016).

The maternal mortality rate describes the number of women who die from a cause of death related to pregnancy disorders or treatment during pregnancy, childbirth and the puerperium (Yuliasari, D. *et al.*, 2016; Dunn, J. T. *et al.*, 2017). According to the 2012 IDHS, the maternal mortality rate in Indonesia is still relatively high at 359 per 100,000 live births compared to Cambodia which has reached 208 per 100,000 live births, Bangladesh is 200 per 100,000 live births, Nepal is 193 per 100,000 live births, India is 150 per 100,000 live births, Myanmar is 130 per 100,000 live births, Bhutan 250 per 100,000 live births. Even

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now Indonesia has left behind East Timor to reach 300 per 100,000 live births (Indonesian Demographic and Health Survey, 2012). While the maternal mortality target according to the WHO Sustainable Development Goals (SDGs) set in 2030 the maternal mortality rate fell to 70 per 100,000 live births (Ministry of Health, 2015). In cases of cesarean section the mortality rate is 4-6 times greater than vaginal birth, where more than 70% of maternal deaths are caused by severe bleeding (mostly bleeding after giving birth), infection (usually after labor), high blood pressure during pregnancy (preeclampsia and eclampsia), unsafe abortion and prolonged labor, all of which are considered preventable (Andayasari, L. *et al.*, 2015; Eleje, G. U. *et al.*, 2011; World Health Organization, 2016).

The old part is labor that lasts more than 24 hours in primigravida, and more than 18 hours in multigravida. The average incidence of prolonged delivery in the world causes maternal mortality by 8%. The old part causes serious problems with physical and mental complications in the mother and baby. The duration of childbirth is estimated to be between 4.8% and 21% in vaginal delivery and according to the American College of Obstetrician and Gynecologists in 2003, about 60% of cesarean deliveries were caused by prolonged labor. According to data from the old to Indonesian Demographic and Health Survey in 2010 it reached 1.0%, in 2011 it reached 1.1% and in 2012 it increased to 1.8% (Yuliasari, D. *et al.*, 2016; Akhlaghdoust, M. *et al.*, 2014; Sandström, A. 2016).

The causes of prolonged labor occur because it is influenced by several factors including power (strength and pressure), passage (pelvic size and type of pelvis), passanger (large fetus, fetal weight, location / presentation abnormalities), parity, maternal age, postpartum position, administration of maternal epidural and psychic analgesia (fatigue, anxiety and anxiety), limitation of tight mobility and fasting (Manuaba, I. B. G. 2010; Riyanto, R. 2017). Several studies have shown that parity has an effect on the incidence of prolonged delivery, as the study conducted by Ardhiyanti (2016), states that risky parity (> 3) can cause prolonged labor because the uterine muscles in mothers who give birth often weaken and can result in long labor (Ardhiyanti, Y., & Susanti, S. 2016). In addition to the factors that influence the incidence of prolonged delivery, namely abnormalities of fetal location, a previous study conducted by Lusiana (2015), said that mothers who experience abnormalities of fetal risk are at risk of experiencing a long-term delivery event of 13.00 times compared to mothers without fetal abnormalities (Gultom, L. 2015). The purpose of this study was to determine the relationship between parity and abnormalities of fetal location with the incidence of prolonged delivery in maternity with sectio caesarea at the Permata Hati Makassar Mother and Child Hospital in 2018.

METODOLOGY

Research Design

The method used in this study was observational analytic with a cross sectional study design. The study was conducted at the Permata Hati Makassar Mother and Child Hospital, South Sulawesi Province.

Population and Samples

The population in this study were all mothers giving birth with sectio caesarean section at the Permata Hati Makassar Mother and Child Hospital in 2018. The samples used in this study were total sampling, namely all mothers with sectio caesarea measures recorded in the medical record at the Mother Hospital and Child Permata Hati Makassar as many as 343 women giving birth.

Data Collection

Data collection is done by looking at secondary data, namely data obtained from medical record keeping in 2018 at the Permata Hati Makassar Mother and Child Hospital using an instrument in the form of a check list sheet. Data is processed using SPSS for windows to see the relationship of independent variables with the dependent variable using the chi-square test.

RESULTS

Univariate Analysis

Table.1 Distribution of Maternal Cataracts in the Permata Hati Makassar Mother and Child Hospital in 2018

Characteristics	Frequency	
	n	%
Age		
18-22 years old	31	9,0
23-28 years old	110	32,1
29-33 years old	91	26,5
34-38 years old	67	19,5
≥ 39 years old	44	12,8
Education		
Elementary school	14	4,1
Junior high school	53	15,5
High school	152	44,3
College	124	36,2
Work		
Housewife	248	72,3
Traders	12	3,5
Civil servants	27	7,9
Private employees	56	16,3

Source: Secondary Data, 2018

Table.1 Shows that based on the distribution of maternal characteristics in the Permata Hati Maternal and Child Hospital, the majority were in the age group of 23-28 years at 32.1% while the lowest was in the 18-22 year age group at 9.0%. The highest level of maternal education is graduating from high school at 44.3% and mothers with a low education level who

graduated from elementary school at 4.1%. The highest maternal occupation is as a housewife by 72.3% while the lowest maternal occupation is traders at 3.5%.

Table.2 Distribution of research variables in the Permata Hati Makassar Mother and Child Hospital in 2018

Characteristics	Frequency	
	N	%
Old partus		
Yes	94	27,4
No	249	72,6
Parity		
High Risk (Primipara) and grandemultipara)	249	72,6
Low Risk (multipara)	94	27,4
Fetal Laying Abnormalities		
Yes	78	22,7
No	265	77,3

Source: Secondary Data, 2018

Table2. Shows that based on the distribution of research variables, the mothers with sectio Caesarea who did not experience prolonged labor were 72.6% while the mothers who experienced long-term delivery events were 27.4%. The parity of mothers with a high risk category is 72.6% while the parity of mothers with a low risk category is 27.4%. Mothers who do not have a fetal location abnormality of 77.3% while mothers who have fetal location abnormalities are 22.7%.

Bivariate Analysis

Table.3 Relationship between birth parity and distance with the incidence of prolonged delivery at Permata Hati Makassar Mother and Child Hospital in 2018

Independent Variables	Old partus				p value
	Yes		No		
	n	%	n	%	
Parity					
High risk	77	30,9	172	69,1	0,021
Low risk	17	18,1	77	81,9	
Fetal Laying Abnormalities					
Yes	6	7,7	72	92,3	0,000
No	88	33,2	117	66,8	

Source: 2018 Secondary Data

Table.3 shows the results of variable parity analysis with a high risk category for maternity with sectio caesarea taking 30.9% while the parity with a low category for maternity with sectio caesarea experienced a long period of 18.1%. The results of the statistical test using chi-square obtained a value of ρ value 0.021 <0.05, so H_a is accepted. This means that there is a significant relationship between parity and the incidence of prolonged delivery in the mother with sectio caesarea at Permata Hati Hospital, Makassar City. The results of the analysis of variable abnormalities of fetal location in this study indicate that

mothers who do not have abnormal fetal location experience a long period of birth that is equal to 33.2% compared to mothers who have abnormalities of the location of the fetus experiencing a long delivery by 7.7%. The results of the statistical test using chi-square obtained the value of ρ value 0,000 <0,05, so H_a is accepted. This means that there is a significant relationship between abnormalities of the location of the fetus with the incidence of prolonged delivery at the Permata Hati Makassar Mother and Child Hospital.

DISCUSSION

This study found that there was a relationship between parity and the incidence of prolonged childbirth at RSIA Permata Hati Makassar. The results of this study indicate that mothers who have high risk parity are more likely to experience prolonged labor compared to mothers who have low parity. This is in line with the research conducted by Wijayanti (2015), stating that primiparous parity mothers have a higher risk of experiencing prolonged labor compared to multiparous parity, this is because mothers with primiparous parity (women who give birth to babies live for the first time), have no birth experience beforehand so that the possibility of abnormalities and complications is quite large both in the condition of his (power), birth path (passage) and the condition of the fetus (passanger) (Wijayanti, W. 2015). Previous research conducted by Soviyati (2016) states that high parity (more than 3 children) has a higher incidence of low parity (having 1 child) due to unpleasant birth experience, will have an impact on subsequent labor while in women who first time pregnant, usually before delivery will be haunted by myths surrounding labor pain (Soviyati, E. 2016). However, this study is not in line with the research conducted by Mariam (2018) showing that there is no relationship between maternal parity and the incidence of prolonged labor. This is because family planning programs made by the government through health workers in providing IEC about safe pregnancies such as age, parity and the safe distance of pregnancy for mothers have been successful (Mariam, E. 2018).

The study also found that there was a relationship between abnormal fetal location and the incidence of prolonged labor. This is in line with research conducted at the Regional General Hospital Dr. H Abdul Moeloek Lampung Province, found that there was a significant relationship between abnormalities of fetal location with the incidence of prolonged labor, mothers who had abnormal fetal location had a risk of 3,897 times greater to experience the event prolonged labor compared to mothers who have a normal fetal location (Trismiyana, E. 2011). In fetuses who experience abnormalities of location have a risk of the occurrence of prolonged labor such as latitude and breech location. Breech fetus results in the absence of the lowest part of the fetus covering the upper pelvis which can reduce pressure on the lower

membrane, causing labor with prolonged labor and in the location of the fetal head relative to the pelvis with occiput as a reference point so that it can complicate labor (Nugroho, T 2012; Winkjosastro H, 2012). This research is not in line with the research conducted by Pamingki, *et al.*, (2016), saying that there is no relationship between fetal location abnormalities in mothers giving birth to the incidence of prolonged labor. This is possible because there is no detection of abnormalities of the fetus from the beginning or because the mother does not carry out routine antenatal care (ANC) so that abnormalities in the location of the fetus are not detected early (Pamingki, R. A. *et al.*, 2016).

CONCLUSION

In this research, it was concluded that there was a relationship between parity and abnormalities of fetal location with the incidence of prolonged labor in the mother with sectio caesarea at the Permata Hati Makassar Mother and Child Hospital. Health workers are expected to improve quality services to the community through family planning programs so that mothers can regulate the number of children born to reduce risks during pregnancy and provide information on efforts to prevent maternal complications, especially prolonged childbirth. Early on the location of the fetus is not normal so that the management of abnormalities of fetal location can be planned properly.

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