

The Effect of History of Premature Rupture of Membranes and Asphyxia on the Occurrence of Premature Rupture of Membranes at RSIA Aulia Jagakarsa in 2018

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Abstract

Premature rupture of membranes is the rupture of the membranes before the birth process occurs, either at term or preterm gestation. The causative factors are incompetent cervix, excessive uterine tension, multiple pregnancies, hydramnios, abnormal membrane physiology, predisposing factors such as parity, maternal age, gestational interval, and nutritional status. Complications that arise can include maternal or neonatal infection, premature delivery, hypoxia, compression of the umbilical cord, fetal deformities, increased incidence of cesarean delivery. The purpose of this study was to determine the effect history of premature rupture of membranes and asphyxia on the incidence of premature rupture membranes at RSIA Aulia Jagakarsa 2018. The descriptive method with a cross-sectional approach was used in this study. The sample was taken using random sampling. The data was collected from the medical record—analysis using a univariate and bivariate test. The results show that respondents with PROM at RSIA Aulia in 2018 were 57 people (65.5%), and 30 people (34.5%) did not experience PROM. A total of 31 (81.69%) respondents with PROM have a history of PROM, and 26 (53.1%) respondents with PROM have no history of PROM. The incidence of asphyxia in patients with PROM was 27 (54%) respondents and as many as 30 (81.1%) without asphyxia despite PROM. From these results, there is a relationship between a history of PROM and the incidence of PROM. However, there is no relationship between asphyxia and PROM.

Keywords: Premature rupture of membranes, asphyxia

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1. Introduction

Premature rupture of membranes (PROM) is the rupture of the membranes before there are signs of labor. According to Eastman, the incidence of PROM was 12% of all pregnancies. The cause of PROM was still unclear, so preventive measures cannot be taken except to suppress the occurrence of infection. Although the membranes often rupture spontaneously before delivery, the longer the membranes rupture before birth, the greater the risk of infection to the fetus and mother.^[1]

The management of PROM is still a controversial issue in obstetric. PROM with

term gestational age will be faced with two problems, namely immediately ending labor by increasing the proportion of cesarean sections or waiting for spontaneous delivery, which is at risk of increasing the occurrence of infection. While PROM at preterm gestational age, if the pregnancy is being terminated, it must be ensured that the baby will overcome the problems that will occur in life outside the womb.^[2]

PROM is a spontaneous rupture of membranes at any gestational age before labor begins.^[3] In the case of PROM, induction of labor was carried out once the

diagnosis was made without the need to consider the high or low Bishop score.[4]

Premature rupture of membranes affects asphyxia because oligohydramnios, which compresses the umbilical cord, causes the mother's oxygen to be constricted to the baby, causing neonatal asphyxia or hypoxia.^[5]

2. Method

This study used a descriptive cross-sectional approach to assess the incidence of premature rupture of membranes at RSIA Aulia Jagakarsa in 2018. The data using secondary data from medical records of mothers with PROM in January-March 2017. The instrument for data collection in the study was a checklist.^[6,7] Samples were taken based on clinical examination results; mothers who gave birth indicated PROM treated at RSIA Aulia Jagakarsa and obtained 87 respondents.

3. Results and Discussion

Table 1. Distribution of PROM

PROM	f	%
Yes	57	65.5
No	30	34.5
Total	87	100.0

Table 1 shows that of the 87 samples who experienced PROM at RSIA Aulia were 57 (65.5%), and those who did not experience PROM were 30 (34.5%).

Table 2. Distribution of History of PROM

History of PROM	f	%
Yes	38	43.7
No	49	56.3
Total	87	100.0

Table 2 shows that of the 87 samples who experienced PROM at RSIA Aulia, respondents with a history of PROM were 38 (43.7%), and respondents who did not have a history of PROM were 49 (56.3%).

Table 3. Distribution of Asphyxia

Asphyxia	f	%
Yes	50	57.5
No	37	42.5
Total	87	100.0

Table 3 shows that from 87 samples, 50 (57.5%) were found with asphyxia, and 37 (42.5%) were not asphyxiated.

Table 4. Correlation of History of PROM with the Incidence of PROM.

History of PROM	PROM		p-value
	Yes	No	
Yes	31 (81.69%)	7 (18.4%)	38 (100%)
No	26 (53.1%)	30 (34.5%)	49 (100%)
Total	57 (65.5%)	30 (34.5%)	87 (100%)

Table 4 shows that 31 (81.6%) respondents with PROM have a previous history of PROM. The respondents without a history of PROM found that as many as 26 (53.1%) experienced PROM and 23 (46.9%) did not experience PROM. These results indicate that there is no significant relationship between the history of PROM and the incidence of PROM (p-Value < 0.05 OR 3.918 (95% CI)). This finding does not follow theory^[8], which says that mothers who experience PROM usually experienced it in their previous pregnancies. In previous pregnancies, this type of discharge has also occurred without abdominal pain and discharge of mucus and blood, so they are required to rest and require further treatment.

Table 5. Correlation of Asphyxia with the Incidence of PROM

Asphyxia	PROM		Total
	Yes	No	
Yes	27 (54%)	23 (46%)	50 (100%)
No	30 (81.1%)	7 (18.9%)	37 (100%)
Total	57 (65.5%)	30 (34.5%)	87 (100%)

Table 5 shows 27 (54.0%) of the 87 samples based on the asphyxia variable experienced PROM (54.0%). Based on not asphyxia experienced PROM as many as 30 (81.1%). It shows that there is no significant relationship between asphyxia and the incidence of PROM (p-Value <0.05 and OR 0.274 (95% CI)). This finding is not following the theory that PROM will cause the fetus to experience disturbances in the fulfillment of O₂ so that hypoxia or asphyxia can occur in the fetus. PROM will affect the Apgar score of the fetus, so that it will affect the welfare of the newborn. The Apgar score in the first minute can show the newborn's condition and can assess whether the baby needs medical attention or not. Even though the newborn has problems in the first minutes after they were born, it does not mean that there will be problems for the baby in the long term. However, if there is an increase in the number of Apgar scores in the baby in the fifth minute and the test in the next minute, there will be a risk to the baby, where the baby will experience long-term nerve damage, and there is a risk of brain damage.^[9]

4. Conclusion

Based on the results, the researchers concluded that there is no significant relationship of history of PROM with the incidence of PROM (p-Value <0.05 and OR 3.918 (95% CI)). There is also no significant relationship between asphyxia and the incidence of PROM (p-Value <0.05 and OR 0.274 (95% CI)).

In this study, there were limited data available because the data used were secondary, and the information contained in medical records was limited so that not all matters relating to PROM can be explored in depth.

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6. References

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