Relationship Characteristics of Pregnant Women with Premature Rupture Ketubban

Nurhadimah Kasum
Medicine Academy, Helvetia Medan
Correspondence author: nurhadimah@gmail.com

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ABSTRACT
The World Health Organization (WHO) predicts that between 2010-2014, there would be 300-400 maternal deaths per 100,000 live births, with hemorrhage accounting for 28% of these deaths and preterm membrane rupture for 20%. Premature membrane rupture is a complication of preterm pregnancy that significantly increases the risk of perinatal death and premature birth. The purpose of this study is to ascertain the association between the prevalence of early membrane rupture at RSU Haji Medan and the age and parity of pregnant women. This study adopted a cross-sectional methodology and an analytical survey research design. All pregnant women who suffered early membrane rupture and other problems made up the population of this study, and a total of 71 pregnant women were sampled. Data from medical records as a source. It was done using both univariate and bivariate analysis. According to the study's findings, there were 35 pregnant women, of whom 13 were under 20 years old (18.3%), 11 were between 20-35 years old (15.5%), and 11 > 35 years old (15.5%) when their membranes ruptured prematurely. With a 95% confidence interval, the values are $\alpha = 0.005$ and $P = 0.046$. Consequently, the findings indicate that there is a correlation between age and the frequency of premature membrane rupture, with $\alpha = 0.005$ and $P = 0.022$. The findings thus indicate a connection between parity and the frequency of early membrane rupture at RSU Haji Medan.

Keywords: Age, Parity Amniotic Rupture Events Early, Premature

INTRODUCTION
Many pregnant women want a normal delivery without any complications (Chi et al., 2021). Without the knowledge that pregnant women get, the mother does not know about any complications on the way to delivery. So, that when the mother experiences heartburn, mucus mixed with blood and a clear liquid are secreted with it. The mother only knows that she wants to give birth, but the mother does not know the impact of the discharge (Granero-Molina et al., 2019). Where the normal amniotic fluid ruptures when the opening has reached > 4 cm. However, this often occurs in women giving birth when the opening is <4 cm. This is what is often called premature rupture of membranes, which can harm the fetus.

One of the complications that occur during pregnancy is abnormalities in the amniotic fluid (Vasani & Kumar, 2019; Bakhsh et al., 2021). Too much amniotic fluid will stretch the uterus and put pressure on the mother's diaphragm (LoMauro et al., 2019). This can result in severe breathing problems in the mother or premature labor. Pregnancy should not occur in women aged 15 years or less. due to the significant danger of this pregnancy. PROM at preterm (<37 weeks), which occurs in 2-4% of singleton pregnancies and 7–10% of twin pregnancies, is a common complication in these pregnancies. At term (> 37 weeks), 8–10% of pregnancies have KPD. Premature membrane rupture can result in a variety of complications, depending on gestational age. Labor normally occurs after the membranes have ruptured. 90% of deliveries in term pregnancies take place within 24 hours after the membranes rupturing; in pregnancies between 28-34 weeks, the percentage is 50%. The bursting of the membranes at term in 2008 is a
physiological event, according to Anwar. The features of the mother (age, parity, and employment), polyhydramnios, cervical incompetence, repeated pregnancies, anomalies, or injury to the amniotic membranes (chorioamnionitis) can all result in premature membrane rupture.

Age and parity can cause premature rupture of membranes due to two factors directly related to the ability of the reproductive organs (Kook et al., 2018). Women who become pregnant at a young age (<20 years), often experience disease or complications for the mother or fetus (Howard & Khalifeh, 2020). This is due to the immaturity of the reproductive organs to get pregnant. Meanwhile, those aged > 35 years also have health risks for the mother and baby, because the pelvic floor muscles are no longer elastic. The World Health Organization predicts that in 2010, the maternal death rate would be greater than 300-400/100,000 live deliveries, with hemorrhage accounting for 28% of cases, preterm membrane rupture for 20%, and eclampsia accounting for 20%. Abortion accounts for 13%, extended labor accounts for 18%, and other reasons account for 2%. The maternal mortality rate in Indonesia remains the highest in ASEAN, with 230 deaths per 100,000 live births. Other nations with similar birth rates include Vietnam (130/100,000), the Philippines (200/100,000), Malaysia (41/100,000), and Singapore (15/100,000). According to the 2012 Indonesian Demographic Health Survey (SDKI), The Maternal Mortality Rate (MMR) in Indonesia was 359/100,000 live births, while the Infant Mortality Rate (IMR) was 32/100,000 live births. Meanwhile, the Indonesian Ministry of Health states that 5019 mothers died during pregnancy and delivery in 2013, while 160,681 babies perished in Indonesia, according to 2012 SDKI figures (Ministry of Health RI 2014). Premature membrane rupture happens 8-10% of the time during a term pregnancy, 2-4% during a preterm pregnancy, and 7-10% with a twin pregnancy.

According to the findings of the Ministry of Health's Basic Health Research (Riskesdas) in 2007, the leading causes of child death were problems of pregnancy and delivery (17.5%), preterm rupture of membranes (12.7%), and antepartum haemorrhage (12.7%). Ten women suffered preterm rupture of membranes, according to the findings of a first study done by researchers at RSU Haji Medan from January to April 2015. KPD prevalence in mothers. 8 people between the ages of 20 and 35, with 5 primiparas, 2 secundiparas, 1 multipara, and KPD in mothers over the age of 35, totaling 2 people with 1 primipara parity and 1 multipara person. Based on the foregoing, the authors are interested in investigating the relationship between pregnant women's characteristics and the incidence of premature rupture of membranes, so the title chosen is the relationship between pregnant women's characteristics and the incidence of premature rupture of membranes. The study's issue formulation was "is there a relationship between the characteristics of pregnant women and the incidence of premature rupture of membranes at RSU Haji Medan?" To investigate the association between pregnant women's features and the occurrence of preterm membrane rupture at RSU Haji Medan.

LITERATURE REVIEW

Pregnancy is defined as the fertilization or union of spermatozoa and ovum, followed by nidation or implantation. From the moment of conception until the baby is born, a typical pregnancy will span 40 weeks, or 10 months or 9 months according to the international calendar. Pregnancy is divided into three trimesters: the first is 12 weeks, the second is 15 weeks (13 to 27 weeks), and the third is 13 weeks (28 to 40 weeks). Premature rupture of membranes (PROM) occurs when the membranes break before delivery. This might happen towards the end of the pregnancy or even earlier. Premature rupture of membranes (PROM), sometimes known as premature rupture of membranes (PROM), is a kind of membrane rupture is one of the grounds for a cesarean section.

Premature rupture of membranes (PROM) is a condition of preterm pregnancies that contributes significantly to perinatal death and premature newborns. The membranes normally break towards the conclusion of the first and early second stages of labor. Premature rupture of membranes occurs when the membranes break before it is time to give birth/before parturition, with a 4 cm opening (latent phase). Preterm KPD is KPD that occurs before the age of 37 weeks.
Prolonged KPD is KPD that occurs more than 12 hours before the due date.

METHODS

The research design is a component of the study that includes descriptions of the research flow, which characterizes the attitude of researchers when conducting research, and is usually referred to as the research paradigm. The study method employed is an analytic survey using a cross-sectional approach, in which cause and effect components are calculated concurrently. The knowledge of pregnant women with early rupture of membranes at RSU Haji Medan was determined using a cross-sectional technique. This research was conducted at RSU Haji Medan, street address Rs. Haj Medan Estate Medan, location Deli Serdang, North Sumatra, Type B State. The choice of location was based on the reason that there were many KPD cases found at the Medan Hajj Hospital, namely 35 incidents. This research was conducted in the period February-April.

Population and Sample

The population is a generalization area made up of people or items with certain attributes and characteristics chosen by the researcher to be investigated and conclusions generated. This study included all pregnant women who suffered preterm rupture of membranes and visited the Medan Hajj Hospital in 2015, totaling 35 KPD incidences. The sample is a subset of the population in terms of size and features. (15) In this study, the researchers took samples using the total population, namely the entire population was included in the study, namely the entire population was used as a sample, with 35 cases of PROM.

Data Collection & Analysis Technique

The data were obtained from secondary data, namely data obtained directly from the medical records of Medan Hajj Hospital. Univariate analysis was used to evaluate the age distribution and parity of pregnant women with preterm rupture of membranes. Bivariate analysis was used to assess the relationship (correlation) between the independent factors and the dependent variable. Chi-square analysis is used to establish a statistically significant relationship between the independent factors and the dependent variable at the p value (0.05). If the computation results show a < p value of (0.05), (Ho) is rejected and Ha is accepted, suggesting that the two variables have a statistically significant relationship. The link (relationship) between the dependent variable and the independent variable is then explained using cross-tabulation analysis.

RESULTS & DISCUSSION

Explain The association between pregnant women's age and the occurrence of preterm membrane rupture in public hospitals at the 95% confidence level, Chi-square findings with $\alpha = 0.005$ produced p = 0.046, thus p (0.046) $< \alpha$ 0.005. Thus, it is known that there is a link between the mother's age and the prevalence of preterm membrane rupture at Medan Haji General Hospital. The duration of time lived or since birth is referred to as age. A mother's health is highly influenced by her age; a pregnant woman is said to be at high risk if she is under 20 years old and over 35 years old. Age is important for forecasting health-problem diagnosis and actions. According to the research, the majority of individuals aged 20-35 years (uncertain) received prenatal checkups in accordance with norms (≥ 4 times), compared to those aged < 20 or > 35 years according to rest.

According to the findings of a study published in the journal Bachelor of Medicine in 2015 about the relationship between maternal characteristics and the incidence of premature rupture of membranes at Bhakti Yudha Hospital in 2009-2010, mothers under the age of < 35 have a rate of 18.8%, which is significantly higher than mothers over the age of > 35, who have a rate of 18.2%. According to the authors of the research findings, the incidence of premature membrane rupture happens at an age that is either too young or too old. Because at a very young age the uterus is not ready for implantation or is not ready to be able to carry a fetus in her womb. Whereas at an age
that is too old, namely due to reduced function of the reproductive organs and weakening of the reproductive organs or reduced effectiveness as a place for implantation, it is not at the time before he reaches the age of >35 years.

The Chi-square findings at 95% confidence with = 0.005 achieved a value of α = 0.005 obtained a value of p = 0.022 then p = 0.022 <α = 0.05. for the link between parity of pregnant women and the incidence of early rupture of membranes at the Medan Haji General Hospital. Thus, it is known that there is a link between pregnant women's parity and the occurrence of early rupture of membranes at the Medan Hajj General Hospital. Parity refers to a woman's situation in relation to the number of children she bears. In terms of maternal mortality, the second and third child parity is the safest. More than three children have a greater maternal mortality rate. As a result, mothers who are expecting their first child or more than their third child should have their pregnancies monitored as frequently as possible to avoid maternal mortality. Pregnant women with poor parity do not fully comprehend pregnancy and the significance of prenatal care (Warri & George, 2020).

Mothers who have children < 3 (low parity) can be categorized as a good pregnancy examination. This is because low parity mothers have a greater desire to have their pregnancies checked, because for low parity mothers this pregnancy is something that is highly expected. So, they really take care of the pregnancy as well as possible good. They maintain their pregnancy by carrying out routine prenatal checks to maintain the health of the fetus. Mothers who have low parity ≤ 2 most of them do pregnancy checks compared to mothers who have High Parity > 2. This is because low parity mothers have a pregnancy that is something they really hope for. So, they really take care of the pregnancy as well as possible. They maintain their pregnancy by carrying out routine prenatal checks to maintain the health of the fetus.

According to the findings of a 2015 study published in the journal Bachelor of Medicine on the association between maternal features and the occurrence of premature rupture of membranes at Bhakti Yudha Hospital in 2009-2010, it can be seen that mothers who experienced premature rupture of membranes with parity <1 was 77.3%. Meanwhile, mothers who experienced premature rupture of membranes with parity > 1, namely 22.7%. According to the researchers, the authors of the research results obtained that premature rupture of membranes occurs in parity of mothers who are too young, do not yet have children and have too many children because if mothers who do not have children or are primigravida have only 1 child, the implantation site is still not too strong to hold in case of impending pregnancy. Whereas in grandemultigravida the place of implantation is quite a lot used for placental adhesions. So, it is said that the parity factor is related to the level of abortion, especially incomplete abortion. Therefore, the medical staff advises pregnant women to have their pregnancies checked as often as possible, so that what is unwanted does not occur when the gestational age is getting older and the fetus in the uterus is getting bigger, this parity is very influential in the occurrence of incomplete abortion or non-abortion incomplete. The examination is crucial in determining the development of the fetus in the pregnancy. Thus, this study supports Seryana Eva Nurlailis' research, which found a link between age and parity and the likelihood of incomplete abortion.

CONCLUSION

Following research at Medan Haji General Hospital, the following conclusions were reached: The age distribution of pregnant women at Medan Haji General Hospital. Parity distribution for pregnant women at Medan Haji General Hospital. According to the frequency distribution of 71 pregnant women, 35 pregnant women (49.3%) who had premature rupture of membranes at Haji Medan General Hospital had a relationship between their age and the incidence of preterm rupture of membranes. Based on the Chi-square values at a 95% confidence level, p = 0.046, thus p (0.046) <α 0.005. At Haji Medan General Hospital, there is a relationship between pregnant women's parity and the occurrence of early membrane rupture. According to the Chi-square values at a 95% confidence level, α = 0.005, p = 0.022, so p = 0.022 < α = 0.05.
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For Researchers: The findings of this study can help to add information and understanding about the association between age and parity and the incidence of preterm membrane rupture, as well as help to build future research. For Educational Institutions: The findings of this study may be utilized as a source of reading for Medan Helvetia Academy students, as well as to continue research on factors connected to the occurrence of premature membrane rupture using improved approaches in improving this research. For Health Workers: It is expected that health providers, particularly midwives, will give health promotion regarding pregnancy risk indications during their trimesters.

REFERENCES


