Description of Maternal Age and Premature Occurrence in RSUD Sidoarjo For The Period October-November 2021

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Abstract

Background: According to the World Health Organization (WHO), the number of premature births in the world increases to 15 million premature births each year. Indonesia is the fifth largest contributor to the number of premature births in the world with around 675,700 births in 2018. This is due to several factors, one of which is the age of the mother during pregnancy. The young age of the mother (< 20 years old) has the potential to be unprepared for the body to accept pregnancy. Likewise, maternal age (> 35 years old) whose reproductive function has begun to decline has the potential to be a factor in premature birth. **Methods:** This study uses observational analytic with a cross sectional approach. The total sample obtained was 77 postpartum mothers who were taken by accidental sampling. **Result:** It was found that there were 3 mothers (3.9%) with young age (<20 years old), 54 mothers (70.1%) with average age (20-35 years old), and 20 mothers (26%) with elder age (>35 years old). With the incidence of prematurity in young mothers as many as 2 cases (66.7%), moderate age as many as 23 cases (42.6%), and elder age as many as 12 cases (60%). **Conclusion:** Premature events often occur at the age of young mothers, namely <20 years old and elder age> 35 years old.

Keyword: Maternal Age; Premature

1. Introduction

Preterm labor is delivery that occurs at less than 37 weeks of gestation (between 20-37 weeks) or with a fetal weight of less than 2500 grams. Preterm labor is labor that begins any time after the beginning of the 20th week of gestation until the end of the 37th week of gestation. Premature delivery is a major cause of 60-80% of neonatal morbidity and mortality worldwide. Indonesia has a premature incidence rate of around 19% and is the main cause of perinatal mortality.

Premature babies are prone to head compression due to soft skull bones and immaturity of brain tissue, intracranial bleeding is 5 times more common in premature babies, respiratory distress syndrome (RDS) can occur which causes 44% of babies to die in infants less than 1 month old, if the baby's weight is low. less than 100 grams the mortality rate is 74%, jaundice (jaundice), necrotising enterocolitis (inflammation of the intestines, hypoglycemia, hypothermia, and infection.[1]

Theoretically, premature risk factors are divided into 4 factors, namely iatrogenic factors, fetal factors, behavioral factors, and maternal factors. Maternal factors include previous history of premature birth, maternal age, maternal parity, and other maternal health history. Maternal age is very influential on the

condition of her pregnancy, according to Riyanti 2012 that the risk of premature birth is mostly found in mothers aged <20 years old and >35 years old as much as 54.3%. Mother's age is also related to the level of education, physical and mental readiness that will be experienced by the impact on the mother and fetus.[2]

Based on the description above, the purpose of this study was to determine the description of maternal age and the incidence of prematurity in RSUD Sidoarjo. It is hoped that it can be a source of information for further research.

2. Methods

This type of research is descriptive analytic using a survey to postpartum mothers in the Delivery Room of the RSUD Sidoarjo in the period October - November 2021. The population of this study is postpartum mothers at the RSUD Sidoarjo. The sample size used in this study was 77 postpartum mothers and obtained through the Accidental Sampling process. The data that has been collected is processed and presented in tabular form and analyzed based on the percentage results.

3. Result

The results of the research conducted at the RSUD Sidoarjo, got the results on 77 postpartum mothers during the period October - November 2021. Table 1 shows the frequency of postpartum mothers' age at the RSUD.

Table 1. Frequency of Postpartum Maternal Age in RSUD Sidoarjo

Maternal Age	Frequency	Percentage
Young (< 20 years old)	3	3.9%
Average (20 – 35 years old)	54	70.1%
Elder (> 35 years old)	20	26%
Total	77	100%

Based on the data in table 1, the incidence of prematurity that occurs in the young, moderate, and elder age groups are as follows: 3 (3.9%) young mothers (< 20 years), 54 (70.1%) mothers with sufficient age (20 -35 years old) and 20 (26%) elderly mothers (> 35 years).

Table 2. Frequency of premature occurrence in RSUD Sidoarjo for the period October-November 2021

Occurrence	Frequency	Percentage
Premature	37	48%
Aterm	40	52%

Total	77	100%

Based on table 2, premature events that occurred in Sidoarjo Hospital in the period October-November 2021 were 37 events (48%), while at term there were 40 events (52%).

Table 3. Description of premature occurrence in maternal age group

Delivery/ Maternal age	Premature		Aterm		Total	
	F*	%**	F	%	F	%
Young (< 20 years old)	2	66.7	1	33.3	3	100
Average (20 – 35 years old)	23	42.6	31	57.4	54	100
Elder(> 35 years old)	12	60	8	40	20	100

* F = Frequency
**% = Percentage

Table 3. shows that it was found that there were 3 mothers (3.9%) with a young age (<20 years old), 54 mothers (70.1%) with average age (20-35 years old), and 20 mothers (26%) with elder age (>35 years old). With the incidence of prematurity in young mothers as many as 2 cases (66.7%), average age as many as 23 cases (42.6%), and elder age as many as 12 cases (60%).

4. Discussion

In this study, the number of premature births was mostly experienced by women in the young age group (< 20 years old) as much as 66.7% and the elder age (> 35 years old) as much as 60%. Several studies have been conducted where the characteristics of mothers who experience preterm labor are those aged under 18-20 years and above 35 years old and mothers who work heavily. Other literature also says that young mothers or pregnant women with the age of less than 20 years old are at high risk that can threaten both mother and baby.

This is due to young mothers or pregnant women with the age of less than 20 years, the development of reproductive organs and physiological functions has not been optimal and psychologically, psychologically mature emotions have not been achieved, so that it will affect the acceptance/preparation of pregnancy, which in turn will have an impact. on the maintenance of the development of the fetus it contains, this is also one of the factors that increase the risk of preterm labor.[3]

According to Wahyuni, 2017 states that physically the reproductive organs at the age of <20 years old are not yet fully formed, in general the uterus is still relatively small due to incomplete formation and the growth of the pelvic bones is not wide enough so that the risk of maternal complications during pregnancy and childbirth increases. This complication will lead to premature birth.[4]

If this pregnancy is continued at a relatively young age from the point of view of obstetrics, it can result in significant complications (complications) of pregnancy including preterm delivery (prematurity), incomplete growth of the fetus in the uterus, pregnancy with poisoning that requires special handling, frequent delivery. takes place with surgery, bleeding after childbirth is increasing, the return of the reproductive organs is late after delivery, infection is easy to occur after delivery, insufficient breast milk is issued. According to Setyowati in Suriani (2010) the risk of giving birth to a baby with low birth weight in mothers aged less than 20 years is 1.34 times compared to mothers aged 20-35 years.[5]

Likewise, older mothers, especially pregnant women with the age of more than 30 years old, are at high risk for preterm labor because it will cause complications in pregnancy and harm fetal development during the pregnancy period, this is due to a general decline in physiological and reproductive functions. In addition, elderly mothers do not rule out having an obstetric history, such as a history of preterm delivery, a history of abortion or elder age. This obstetric history may increase the incidence of preterm delivery.[6]

For adult women aged over 35 years and over, the condition of their reproductive organs is inversely proportional to those under 20 years. At that age women begin to experience the aging process. With such conditions, there will be a regression or setback in which the reproductive organs are not as good as normal, so it will greatly affect the acceptance of pregnancy and childbirth.[7]

Based on the results of the research and theory above, it can be concluded that pregnancies that occur at a young age <20 years old or >35 years old are more likely to be at risk of having preterm delivery compared to those aged 20-35 years. For this reason, it is recommended that health workers continue to provide counseling to adolescents or groups of pregnant women who are less than 20 years old to delay their pregnancy and to mothers who are more than 35 years old to end their pregnancy to prevent pregnancy or high-risk childbirth.

5. Conclusion

The description obtained in this study is that the young age group (< 20 years old) and the elder age group (> 35 years old) experienced a lot of premature events. This can be a new source of information to attract the interest of further researchers to continue this research.

Suggestion

1. For respondent
   It is hoped that respondents will pay more attention to the conditions of pregnancy and childbirth in accordance with the risks to the age characteristics of each group. Perform screening and pregnancy planning so that the pregnancy can be optimal.

2. For institution
   It is hoped that this data can be used as evidence of the potential that can lead to increased prematurity if this is allowed. Perhaps the institution can provide counseling and information about the appropriate maternal age for pregnancy and provide special services for young and elder patients who are at risk for premature events.

3. For next researcher
   It is hoped that it can be a source of data or information in exploring the issue of prematurity more

deeply. Helping future researchers to find out in more detail about the description of maternal age and this premature occurrence

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