ANEMIA IN CONNECTION WITH PREGNANCY TRIMESTER III POSTPARTUM BLEEDING IN DANDY CLINIC DISTRIC OF MABAR 2014

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ABSTRACT

Maternal mortality rate (MMR) in Indonesia is quite high which is 359 in 100000 live births.Generally, there is a distinction between a direct maternal death that is the result of a complication of the pregnancy, delivery, or management of both, and an indirect maternal deatht is pregnancy-related death in a patient with a preexisting or newly developed health problem unrelated to pregnancy. Fatalities during pregnancy but unrelated to pregnancy are termed accidental, incidental, or nonobstetrical maternal deaths. The WHO notes that in 2014 the major direct causes of maternal deaths globally are severe bleeding/hemorrhage (27%), infections (11%), unsafe abortions (8%), high blood pressure during pregnancy/pre-eclampsia and eclampsia (14%), obstructed labour (9%), blood clot/embolism (3%) and pre-existng conditions (28%). In Indonesia 63,5% pregnant women have anemia and 59% found in Medan city. This research aims to know the relationship between iron deficiency anemia during 3rd trimester pregnancy and Postpartum haemorrhage (PPH).

This in an analytical research with crosssectional data collection. Population were all women have given birth, the number of population is 286 people and each individual was chosen randomly and entirely by chance as many as 83 people. The data were obtained from both primary and medical records by using guetionaries as the instrument. The data were then analysed by common univariate and bivariate analysis using chi-square test.

Research showed that out of 83 respondents, 46 women had history of anemia in 3rd trimester pregnancy and 27 women experienced postpartum hemorrhage (32,53%). 37 women were found with no history of anemia and still expereinced postpartum hemorrhage are 11 people (13,25%). Chi-square test with X^2 coun>X^2 table (6,93 > 3,841) indicates that there is a relationship between iron deficiency anemia and during 3rd trimester pregnancy and postpartum hemorrhage (PPH).

To be expected to health workers to improve maternal motivation for regular antenatal health promotion of nutrition of pregnant women, especially the consumption of foods thet contain enough iron and vitamin c.

Key words: Pregnancy, anemia of pregnancy, and postpartum hemorrhage

Introduction

One of strategic goals in health development in 2010-2014 is to reduce maternal mortality rate from 228 to 102 in 100.000 lives birth. And also to reduce infant mortality rate from 34 to 24 in 1.000 births (Republic of Indonesia Health Ministry, 2010).

Based on IDHS 2012, an average of MMR is 359 per 100,000 live births. In contrast to the 2007 IDHS AKI reached 228 per 100 thousand live births. This increase is probably caused by the distribution of health workers who are less prevalent in every region in Indonesia and the government made Jampersal program to reduce the death rate did not run effectivelyThis is certainly contrary to the government's target to reduce AKI up to 102 per 100 thousand in accordance with the 2015 MDG targets (Hamadi, 2013).

In the other hand North Sumatra successfully reduced maternal and infant mortality rates in 2013, in September 2013, the maternal mortality rate was 126 inhabitants. This figures showed a decrease compared to the end of 2012 in which 274 AKI was found and the end of 2011 there were 313 inhabitants. Head of North Sumatra Health Office of Health Care: Kustinah said, that one of the causes of maternal mortality is due to bleeding during childbirth. If left untreated, condition may not be correctable anymore (DHO Provsu, 2013).

According to the Household Health Survey of 2001, 90% of the causes of maternal death is indirectly due to frequent

complication during childbirth and immediately after childbirth. The cause is known by Trias Classical, ie bleeding (28%), eclampsia (24%), and infections (11%). While the indirect causes include pregnant women suffering from chronic energy deficiency (CED) 37%, anemia (Hb less than 11 g%) 40%. The incidence of anemia in pregnant women will increase the risk of maternal mortality compared to mothers who are not anemic (Gift, 2011)

Anemia in pregnant women is a health problem associated with high incidence and complications that can arise both in the mother and the fetus. In the world there happens to be 34% of pregnant women with anemia of which 75% are in developing countries (WHO, 2005 in Syafa, 2010). In Indonesia, 63.5% of pregnant women are with anemia, whereas in the city of Medan, 59% of pregnant women are with anemia (Syaifuddin, 2008).

In some studies, anemia is closely associated with high maternal mortality rate. Anemia causes low physical ability due to insufficient oxygen supply to body. In pregnant women, anemia increases the frequency of complications in pregnancy and childbirth. The risk of maternal mortality, the rate of prematurity, low birth weight and perinatal mortality rate increase (Boyle, 2008).

Anemia in pregnancy can also cause interference his (inersio uteri), straining strength so the mother becomes weak and experiences prolonged labor. In addition anemia in pregnancy can also lead to atonic uterus and cause PPH (Melisa, 2013).

In Indonesia, there are an estimated 14 million cases of bleeding in pregnancy. Every year at least 128,000 women bleed to death. Bleeding, especially post-partum hemorrhage, occurs suddenly and is more dangerous if it occur in women who suffer from anemia. A mother with bleeding can die in less than an hour (Sembiring, 2010).

Meanwhile, deaths from hemorrhage often occurs due to a number of obstetric complications which predispose to bleeding and subsequent death if treatment is not available, including proper blood replacement therapy. The main causes of maternal deaths are haemorrhage reaches 40% - 60%, infections 20% - 30%, eclampsia approximately 20% - 30%, while the indirect causes of maternal death ie maternal disease (5.6%) which will get worse with the onset of pregnancy, such as heart disease, kidney or other chronic disease and iron deficinecy anemia in pregnant women (Nugroho, 2012).

Based on the survey in the District Dandy Clinic Mabar year 2012-2014, the total number of 486 normal delivery childbirth, where in 2012 the number of women giving birth normally were 132 people and the number of mothers experiencing childbirth bleeding due to anemia is 9 cases, in 2013 the number of women with normal delivery were 146 people and 12 cases of bleeding due to anemia was found, and in 2014, 188 cases were normal delivery and 16 cases were bleeding due to anemia. Based on the description above, the writer interested in conducting research on the relationship of anemia in the third trimester of pregnancy with the incidence of postpartum hemorrhage in the District Dandy Clinic Mabar Year 2014, research issue is "Is there any relationship with the incidence of anemia in pregnancy is postpartum hemorrhage in the District Dandy Clinic Mabar 2014? ".

Objective: The general is to investigate the relationship with the incidence of anemia in pregnancy is postpartum hemorrhage in the District Dandy Clinic Mabar 2014.

Hypothesis: There is a relationship of anemia in the third trimester of pregnancy with the incidence of postpartum hemorrhage

framework concept

Independent Variables Dependent Variable anemia in pregnancy, postpartum hemorrhage, the parity age birth

Operational Definition

1. Anemia in pregnancy is a state of maternal hemoglobin level less than 11gr% in the third trimester of pregnancy, which is taken from the documents of respondents
2. Post Partum Hemorrhage is the amount of blood that comes out of the birth canal more than 500 ml after the baby is born, the data from respondents document.
3. Risk factors for bleeding such as: age, parity and birth spacing is taken as the characteristics of respondents.

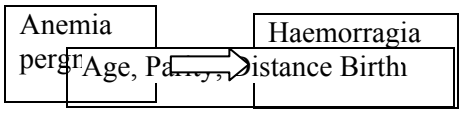
Special goals

a. To know the prevalence of anemia in pregnant women in the third trimester at Dandy Clinic District of Mabar 2014.

b. To determine the frequency distribution of the incidence of post partum hemorrhage in the District Dandy Clinic Mabar 2014.
c. To determine the relationship between anemia in pregnancy with postpartum hemorrhage in the District Dandy Clinic Mabar Medan 2014.

Methods

Frame work study



Analytical Cross-sectional study design. The population is all women giving birth in the District Dandy Mabar Clinic in 2014 as many as 284 people, and those with anemia during pregnancy 286 people.
The sample is calculated using the formula in theory Notoatmodjo Tarro Yamane (2010), A large sample of 83 people taken at random systematic / random sampling.

Analysis of Data was Univariatt Univariate and Bivariate statistical analysis using chi square test with a confidence level of 95%.

Results

The number of patients who delivered recorded in 2014 was 286 people, samples of 83 people with the following caracteristics :

Table 4.1 Distribution Overview Dandy Mother Maternity Clinic District of Mabar 2014

No	Other Factors	Frequency (N)	Percentage (%)
1	Age	28	33.74
	<20 years	42	50.60
	20-35 years	13	15.66
	> 35 years		
2	Parity	32	38.55
	≤ 2 people	51	61.45
	> 2 people		
3	Distance Birth	47	56.63
	<2 years	36	43.37
	> 2 years		
4	Anemia TM III	46	55.42
	Anemia	37	44.58
	Not anemia		
5	Perdaraha Postpartu	38	45.78
	Perdaraha	45	54.22
	Not Perdarahan		
	Total	83	100.00

From Table 4.1 above it can be seen that the majority of women giving birth in the age group of 20-35 years as many as 42 people (50.60%), and the remaining were in the age group <35 years as many as 13 people (15.66%)
Based on parity, the majority of women are multiparous ie with parity> 2 accounts for 51 people (61.45%), and the remaining with parity ≤ 2 people as many as 32 people (38.55%)
The majority of maternal with spacing <2 years were 47 people (56.63%), minority spacing> 2 years were 36 people (43.37%)
Maternal characteristics based on a history of anemia of pregnancy, the
majority of women suffer from anemia as many as 46 people (55.42%), and who do not have anemia as many as 37 people (44.58%).
Based on the cases of postpartum hemorrhage were found to be maternal bleeding were 38 cases (45.78%) and mother did not bleed were 45 people (54.22%)
Table 4.2 Relationship Analysis Anemia In Pregnancy Trimester III With Postpartum
Bleeding Events in Clinical Dandy District of Mabar 2014

No.	Hb Mother	Bleeding events				Total	%	Statistics Test Results	
		Bleeding		Not bleeding				X2 arithmetic	X2 table
		F	%	F	%				
1	Anemia	27	32.53	19	22.89	46	55.42	6.931	3,841
2	Not Anemia	11	13,25	26	31,33	37	44,58	P value = 0,008	
	Total	38	45,78	45	54,22	83	100,00		

From Table 4.2 above, out of 46 mothers who suffered anemia in the third trimester of pregnancy, were found to experience PPH as may as 27 mothers (32.53%) and the remaining 19 mothers (22.89%) did not develop PPH. In the other hand out 37 women who were found with out anemia, 11 were discovered to experience PPH, while hte other 26 were not (31.33%)

Results of Chi-square test resulted x^2 count > x^2 table (6.931> 3.841) with df = 1, p value is 0.008 <0.05 which means that Ho is rejected and Ha accepted, thus there is a relationship between anemia in the third trimester of pregnancy and the incidence of postpartum hemorrhage

Discussion

Statistical analysis using Chi-Square test found that there is a relationship between third trimester pregnancy anemia and incidence of PPH.

These results is accordance with other study (Ayu Wurianti,2010) which stated that there is relationship between 3rd trimester pregnancy anemia and PPH. This result is also consistent with the stury by Salis (2004), stating that there is a significant relationship between anemia and PPH.

Maternal anemia experiencing postpartum haemorrhage may be due to inadequate nutritional intake, especially foods that contain iron. If the iron requirement is not sufficient then the level of hemoglobin in red blood cells is reduced. Lack of hemoglobin levels cause the amount of oxygen bound in the blood is also reduced, which results inadequate uterine contractions. Inadequate contraction will cause bleeding. This is in accordance with Arisman (2010) who said that anemia during pregnancy is associated with less nutritious food, inadequate absorption, and increased iron demand. Anemia can reduce the mother's immune system and elevate the frequency of complications of pregnancy and childbirth, one of which increase the risk of postpartum hemorrhage.

Manuaba (2007) disclose any pregnant women with anemia are at risk for postpartum hemorrhage. Bodnar research results, et.al. (2011) The United States claimed that mothers who are anemic 3 times risk of experiencing postpartum hemorrhage compared with mothers who did not have anemia. (OR = 2.76; 95% 1,25; 6,12). It is not in accordance with the research because there are still pregnant women with anemia but did not experience postpartum haemorrhage which were 19 people (22.89%) and pregnant women who are not anemic during pregnancy but expereinced postpartum hemorrhage as many as 11 people (13.25%). In the study we found, women with a history of anemia, but did not experience postpartum hemorrhage. This is due to the physical state mother, mothers of reproductive age are healthy or not included in the high-risk groups such as being too young or too old, and maternal hemoglobin level which is not so low or only presents to be mild anemia.

We also found mothers who didn't suffer anemia but still expereinced PPH. This is due to the weak state of the mother, or have a history of certain diseases, poor obstetric history such as previous history of placental abruption, maternal reproductive age which is healthy such as being too young (maternal age <20 years too old or> 35 years, the research is still Being too young (< 20 years of age) or too old (>35 years of age) may lead the woman to higher risk of complication during pregnancy. In women who are < 20 years of age, the optimal biologis and psychologis condition have not been reached. These lead to prolonged labor that may result in atonic uterus or other disorders that may lead to PPH. In the other hand, women who are > 35 years of age usually are weaker and unable to exert adequate force to push during delivery that also leads to PPH. This is consistent with study by aminuddin (2007) that stated that age is one of predeisposing factors of PPH.

In addition to age, parity also influences the occurrence of PPH. Women with history of multiple parity tend to be inefficdient in every stage of labor which is the risk factor of PPH (Pritchard, 1991). Multiparities women tend to experience atonic uterus due to weaker myometrium, inadequate muscle tone, causing compression of vessels failure at the site of placental implantation which all lead to PPH. This is consistent with Winkjosastro (2002) which stated that high parity is one of the risk factors of postpartum hemorrhage. These results are consistent with research Pardosi (2009) that also concluded that parity was significantly associated with the incidence of postpartum hemorrhage. Pregnant women with parity of 1 or more than

5 are at risk of postpartum hemorrhage occurred 3.86 times more likely than pregnant women with parity 2-5. This research is in accordance with Salis (2004) and Syriac (2008) which stated there is a significant association between parity and postpartum hemorrhage.

Spacing between births that are too close can cause pregnancy complications which will result in a decrease uterine contractions. According to Moir and Meyerscough (1972) cited Suryani (2008) mentions the distance between the birth of a predisposing factor for postpartum hemorrhage due to successive deliveries in short periods of time will lead to decreased uterine contractions become less good. It take 2-4 years for the mothers to regain their previously fit condition. According to Yuniarti (2004) the proportion of cases with spacing between birth less than 2 years was 41% (OR = 2.82). This indicates that women with spacing between birth < 2 years have 2.82 times higher risk of PPH.

Mothers who did not suffer anemia indicated adequate nutritional status, good maternal preparation for pregnancy especially in primigravida, and healthy reproductive age. According to the authors, maternal anemia may be due to insufficient iron intake due to poor nutritional status. Iron defficeincy leads to low level of hemoglobin leading to inadequate supply of oxygen to uterus. In addition, anemia also lowers immune system which may increase complication during childbirth. Maternal health status, such as for being too young or too old for pregnancy also lead to increased risk of PPH.

Conclusion

1. The number of women giving birth with a history of anemia in the third trimester of pregnancy were 46 people (55.42%) and with out anemia were 37 people (44.58%)
2. The number of mothers who suffered postpartum hemorrhage were 38 people (45.78%), and who didn't suffer PPH 45 people (54.22%).
3. The statistical test Chi - square count obtained x^2 table (6.931> 3.841) or the value of the probability p = 0.008 <0.05 means that there is a relationship of anemia in the third trimester of pregnancy with incidence of postpartum hemorrhage.

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