Anemia and Chronic Energy Malnutrition based on Nutrition Knowledge in Pregnant Woman in Medan Tuntungan District Medan

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Abstract: Anemia and Chronic Energy Malnutrition (CEM) in pregnant women, especially in the third trimester potential harm to mother and child, until now the incidence is still high in Indonesia. This study aims to determine the description of anemia and chronic energy malnutrition events in terms of maternal knowledge about nutrition in Medan Tuntungan district Medan city. This research includes an explanatory research survey with cross sectional design, conducted in Medan Tuntungan district in 34 pregnant women. Blood Hb level was measured by means of "Hemoglobin Testing System: Quik-Check", CEM was determined by measuring Upper Arm Circumference (UAC), and mother's nal knowledge of nutrition was obtained by interview using questionnaire. Data analysis is done descriptively. The results showed that the incidence of anemia in pregnant women of 3rd trimester was 52.9%, and pregnant women with chronic energy malnutrition was 20.6%. As many as 85.3% of pregnant women have less knowledge of nutrition, 57.1% of mothers whose knowledge is chronic energy malnutrition, while in mother with good nutrition knowledge also have anemia as much as 60%. The conclusion of research that anemia in pregnant mother of 3rd trimester in sub district of Tuntungan field still high and most of mother have nutrition knowledge which still less.

1 INTRODUCTION

One of the undernutrition problems in Indonesia is the anemia and the group of sufferers in pregnant women. Anemia in pregnancy is a national problem because it reflects the socio-economic well-being of the community, and its influence is great on the quality of human resources. Anemia in pregnant women is called "potential danger to mother and child", which is why anemia requires serious attention from all parties involved in health services (Manuaba, 2010). Anemia in pregnancy can adversely affect especially during pregnancy and childbirth. The high rates of anemia affecting pregnant women have a negative effect on the fetus conceived from the mother in pregnancy, perspectives, or puerperium, such as preterm birth, low birth weight, premature partus, abortion, postpartum hemorrhage, and long-term partnerhood. This is related to many factors, among others, age, parity, education, employment, and knowledge. The results of the 2015 nutritional status assessment survey in Indonesia show that pregnant women with chronic energy malnutrition (CEM) risk of 13.3%, one in 4 pregnant women have not received iron tablet services in an attempt to decrease anemia, and 87.1 % mother or 9 out of 10 pregnant women did not get complementary feeding (Kemenkes RI, 2016). Data from North Sumatra Provincial Health Office 2014 the number of occurrences of anemia in the pregnant women in North Sumatra of 28.7% which is generally caused by pregnant women who do not consume enough iron.

The report of Health Office of North Sumatera Province in 2014 number of anemia in pregnant mother in North Sumatera is 28,7%, which is caused by pregnant women who do not consume iron. While the results of research in Medan (Northern Medan), the incidence of anemia was 44.7% and the incidence of chronic energy malnutrition 23.7%. Furthermore it was said that the occurrence of anemia significantly associated with low intake of energy that is less than 80% recommended sufficiency and gestational distance is too short or less than 2 years (Zulhaida, 2017).

2 METHODS

This research is a survey of explanatory research with crossectional design. This research was conducted in Medan Tuntungan district Medan. The samples were all pregnant women with 3rd trimester of pregnancy in Medan Tuntungan Health Center from May to July 2018 that was 34 people. Data on mother's identity and mother's nutritional knowledge were obtained by interview using questionnaire, Hb rate was measured by using Hb Quik-Check, and Hb levels of pregnant women are categorized into 2, namely anemia if Hb levels are <11g / dl and Normal if Hb levels> = 11 g / dl [4]. CEM was determined by Upper Arm Circumference (UAC). Data analysis to describe the incidence of anemia and CEM was done descriptively by frequency tabulation, then analyzed the tendency of anemia and CEM incidence based on nutritional knowledge by cross tabulation.

3 RESULT AND DISCUSSION

The occurrence of anemia was measured based on Hemoglobin (Hb) levels of pregnant women with criteria expressed anemia when Hb levels were less than 11mg / dl. While the occurrence Chronic Energy Malnutrition (CEM) stated if the value of Upper Arm Circumference (UAC) <23.5 cm. In Table 1 it can be seen that pregnant women who have anemia as many as 18 people (52,9%). This figure is high compared to the incidence of anemia in pregnant women in northern Medan city of 44.7% and the incidence of anemia is said to be significantly associated with low energy intake (Zulhaida, 2017).

Table 1. Frequency Distribution of anemia Incidence in Pregnant Women

Incidence	N	%
Anemia	18	52,9
Normal	16	47,1
Total	34	100,0

The results showed the incidence of CEM in 3 trimester pregnant women was 20.7% (Table 2). This figure is slightly lower with the findings in the North Medan region is equal to 23.9% (WHO, 2011). In addition the study found that the incidence of CEM in pregnant women is significantly associated with the incidence of anemia. The levels of hemoglobin in pregnant women were associated with maternal nutritional status (UAC), consumption of iron tablets

and meal consumption patterns on expectant mothers in Maros South Sulawesi (Fatimah, 2011).

Table 2. Prequency Distribution of Chronic Energy Malnutrition Incidence in Pregnant Women

Incidence	N	%
CEM	27	20,6
Normal	7	79,4
Total	34	100,0

The description of mother's nutritional knowledge shows that there are 29 people (85,3%) of pregnant women have less nutritional knowledge. The incidence of anemia and CEM in pregnant women based on mother's nutritional knowledge can be seen in Table 3 and Table 4.

Table 3. Distribution of Anemia in Pregnant Women Based on Mother's nutritional knowledge

Nutritional knowledge	Incidence				Total	
	Anemia		Normal			
	N	%	N	%	N	%
Less	15	57,1	14	48,3	29	100,0
Good	3	60,0	2	40,0	5	100,0

Table 3 shows that in mothers with less knowledge 15 people (57.1%) had anemia and mother with good knowledge of nutrition as many as 3 people (60%) also had anemia. A lack of nutritional knowledge will have an impact on the mother's dietary intake patterns so that increased nutritional adequacy during pregnancy such as energy, protein, iron and folic acid can not be met which causes malnourished mothers such as anemia. In a review article about anemia and eating habits of pregnant women in Indonesia said that the incidence of anaemia in pregnant women is closely related to economic and cultural factors (Atiek, 2016). The other factors that also play a role is the knowledge of mothers and families about the importance of nutrition and foods that are good for women of fertile age, moreover for pregnant women. Another factor that also plays a role is the knowledge of mothers and families about the importance of nutrition and food for women's fertility, especially for pregnant women. While the results of the study in Karawang district showed that there was no significant relationship between family economic factors and hemoglobin levels of third trimester pregnant women, but more important was the knowledge of nutrition and maternal health and good food intake (Surgiasih, 2013). The results of research in Yokyakarta show

that there is a significant relationship between nutritional knowledge of pregnant women with anemia status (Purwanti, 2014).

Table 4. Distribution of Chronic Energy Malnutrition in Pregnant Women Based on Mother's nutritional knowledge

Nutritional knowledge	Incidence				Total	
	CEM		Normal			
	N	%	n	%	N	%
Less	7	24,1	22	75,9	29	100,0
Good	0	0,0	5	100,0	5	100,0

Based on mother's knowledge it can be seen that CEM incidence was found in 7 people (24,1%) mother with less knowledge. While mothers with good nutrition knowledge (100%) normal nutritional state (Table 4). This shows that the occurrence of CEM in pregnant women with nutritional knowledge is less related to low nutrient intake, especially energy and protein. If the increased nutritional needs during pregnancy, especially in the 3rd trimester is not enough to affect the development of the fetus and the baby's weight when born.

4 CONCLUSIONS

The incidence of anemia in pregnant women in Medan Tuntungan district was 52.9%, and CEM (Chronic Energy Malnutrition) was 20.6%. As many as 85.3% of pregnant women have less nutritional knowledge, and most of them have anemia.

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