Compliance Consumption of Iron Tablets with Anemia in Pregnant Women at Community Health Center District Kediri

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A B S T R A C T

The incidence of anemia among pregnant women is affected by noncompliance of pregnant women consuming iron tablet. The purpose of this study was to determine the relationship of Compliance Consuming Iron Tablets With Anemia Occurrence In Community Health Center District Kediri. The research design used is analytic associative research with cross-sectional population of all pregnant women with anemia with a sample of 78 respondents. Samples of pregnant women with anemia. Sample of some pregnant women with anemia, data collection using questionnaires and Hb examination using Hb Sahli. The sampling technique uses accidental sampling. Independent Variables Compliance in pregnant women consuming iron tablets and dependent variable of pregnant women with the incidence of anemia. The result of the research was found that most of the respondents dutifully consume iron tablets 58 respondents (85.29%), mild anemia incidence by 30 respondents (44.12%) There is a relationship of compliance to consuming iron tablet with anemia occurrence at Community Health Center District Kediri (Chi-square with Asymp value Sig = 0.00 <0.05 then H0 is rejected). Iron tablet helps to increase Hemoglobin in pregnant women so it can decrease or anticipate the occurrence of anemia. It is expected that pregnant women are obedient in consuming iron tablets.

I. INTRODUCTION

Anemia in pregnancy is a problem that reflects the socio-economic well-being of the community and has a profound effect on the quality of human resources. Anemia in pregnant women is called "Potential Danger of mother and child", un requiring serious attention from all parties who perform health services especially midwifery services. [1]

Anemia in pregnancy has an adverse effect on the mother, especially during labor, and the puerperium. Various diseases can arise from anemia such as abortion, premature partus, old partus, and post partum bleeding. Anemia in pregnant women increases the risk of preterm delivery or low birth weight, as well as the risk of bleeding before and during labor that can result in maternal and infant death. Iron deficiency anemia is the most common nutritional problem in the world and affects more than 600 million people with a fairly high frequency between 10% and 20% [2]

The prevalence of pregnant women in the world with anemia is 41.8% and in Southeast Asia 48.2%. According to WHO in 2008 mortality in mothers in developing countries is associated with anemia in pregnancy of 4%. In Indonesia in 2016 pregnant women who suffer from anemia as much as 40.2%. University of Indonesia survey results conducted in 2012 pregnant women found 50-63% of pregnant women have anemia. [3]

East Java Province, the percentage of anemic pregnant women was 42.7%. [4] District of pregnant mother about 5,324 and get Fe1 tablet 4,233 (79.32%). [5] In Puskesmas District of Kediri Regency in 2016 there are 474 pregnant women with 139 pregnant women who have anemia (29.32%), July 2017 there are 303 pregnant women with 97 pregnant women anemia (32.01%) so that there is gap of (2.69%).
Preliminary study on 24 to 25 July 2017 at Kediri District Health Center of 10 pregnant women with anemia, one of the contributing factors was lack of adherence to iron tablets due to side effects of nausea as many as 4 pregnant women (40%), less rest as many as 3 pregnant women (30%), and as many as 3 pregnant women (30%) due to busy work.

The most common cause of anemia is deficiency of nutrients. About 75% of anemia in pregnancy is caused by iron deficiency showing erythrocyte hypochromic microsity in peripheral blood intake. The second most common cause is megaloblastic anemia that can be caused by folic acid deficiency and vitamin B12 deficiency. Other rare causes of anemia include hemoglobinopathy, inflammatory processes, chemical toxicity, and malignancy [2]

Iron requirement during pregnancy increases. Some literature says iron needs have doubled from pre-pregnancy needs. This occurs because during pregnancy, the blood volume increases by 50%. So it needs more iron to form hemoglobin. In addition, the growth of the fetus and placenta very rapidly also require a lot of iron. In the absence of pregnancy, the need for iron can usually be met from a healthy and balanced diet. But in pregnancy, the supply of iron from food is still inadequate so that it takes supplements of iron tablets [6]

Supplementation of iron tablets is one useful way to overcome anemia. Iron tablets are tablets containing 60 mg of elemental iron and 0.25 mg of folic acid. Iron is an essential element of most organisms except for a small part of bacteria. For humans, iron is needed in the formation of red blood cells, namely hemoglobin. In hemoglobin, Iron is at the center of a heterocyclic-formed molecule known as profein. Because this profein contains iron it is called heme. Heme is the origin of the word hemoglobin which means heme and globulin, which is a series of heterocyclic heme molecules and protein globulin [7]. Conception results require 0.5 grams of iron for growth, which requires 1/10 of all the iron present in the body. At 5-6 months of pregnancy, the fetus requires iron. [8]

To detect pregnancy anemia examined levels of pregnant women Hemoglobin. Examination of hemoglobin levels is recommended in the first trimester once and the third trimester twice, but some pregnant women have their pregnancies checked in the second trimester so that the Hemoglobin examination is also done in the second trimester so that the hemoglobin examination that should be in the first trimester does not go according to the conditions. [9] Based on these problems, the researchers are interested to conduct research on compliance pregnant women in consuming Fe tablets.

II. METHOD

The research design used is analytic associative research with cross sectional approach. Samples of pregnant women with anemia in Kediri District Health Center are 68 pregnant women with anemia. Sampling technique using total sampling method. Independent variables Compliance in pregnant women consuming Iron. Varaibel dependent tablets are Genetic anemia. The population in this study is all pregnant women anemia in Kediri District Health Center as much as 68 pregnant women.

III. RESULT AND DISCUSSION

Iron Tablet consumption compliance with Pregnant Women.

Table I Compliance Rate of Iron Tablets to Pregnant Women

<table>
<thead>
<tr>
<th>No</th>
<th>Compliance Level</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Obedient</td>
<td>58</td>
<td>85.29</td>
</tr>
<tr>
<td>2</td>
<td>Disobedient</td>
<td>10</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>68</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on table 1 can be seen that the level of Compliance Iron Tablet in Pregnant Women mostly obedient that is equal to 85.29% or as many as 58 respondents.

**Anemia Occurrence in Pregnant Women**

**Table 2** Anemia Occurrence in Pregnant Women

<table>
<thead>
<tr>
<th>No</th>
<th>Anemia Occurrence</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mild Anemia</td>
<td>30</td>
<td>44.12</td>
</tr>
<tr>
<td>2</td>
<td>Medium Anemia</td>
<td>20</td>
<td>29.41</td>
</tr>
<tr>
<td>3</td>
<td>Severe Anemia</td>
<td>18</td>
<td>26.47</td>
</tr>
</tbody>
</table>

Amount 68 100

Based on table 2 it can be seen that most respondents suffer from mild anemia that is equal to 44.12% or as many as 30 respondents.

**Statistical Test Results**

Table 3 Statistical Test Results Compliance Relations Consuming Iron Tablets With Anemia Occurrence In Pregnant Women

<table>
<thead>
<tr>
<th>Compliance</th>
<th>Anemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>33,882a</td>
</tr>
<tr>
<td>Df</td>
<td>1</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>3,647b</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>.161</td>
</tr>
</tbody>
</table>

Based on table 3 is known value (p-value = 0.000 <0.05 then H0 is rejected and H1 accepted) which means there is Compliance Relations Consume Iron Tablets With Anemia Occurrence In Pregnant Women In Community Health Centers in Kediri District.

**IV. DISCUSSION**

**Compliance Consuming Iron tablets in Pregnant Women.**

**Diagram 1** Frequency Distribution of Compliance Rate of Iron Tablet Consumption in Pregnant Women

Based on Diagram 1 shows that from a total of 68 respondents, most pregnant women found in Kediri District Health Care Center Compliance Compliance level of iron category obedient is 85.29% or as many as 58 respondents.

The results showed that most of the respondents obedient in consuming iron tablets. This proves that there is already awareness of pregnant women to consume iron tablets because they know the benefits and functions of iron tablets for pregnant women and also the fetus. [2]
Of the total 68 respondents found 10 respondents are not obedient in taking iron tablets, this is due to the effects of nausea when taking iron tablets. This disobedience will be detrimental to pregnant women, because pregnant women will suffer from anemia. This is in accordance with wiwit research in Banyumas that oral iron supplements can cause nausea, vomiting, stomach cramps, heartburn, and constipation. However, the degree of nausea caused by each preparation depends on the amount of iron element absorbed. Iron doses above 60 mg can cause unacceptable side effects in pregnant women resulting in non-compliance in the use of iron tablets. [10]

Pregnant women need to consume iron tablets during pregnancy, because iron requirement of pregnant mother increases during pregnancy. Iron tablets are iron salts in tablet / capsule form, if taken regularly can increase the number of red blood cells. Pregnant women experience dilution of red blood cells requiring additional iron to increase the number of red blood cells and for fetal red blood cells [11]

**Anemia Incidence in Pregnant Women**

**Diagram 2** Frequency Distribution of Anemia Incidence in Pregnant Women

- **Severe Anemia** 18 ; 26 %
- **Anemia Mild** 30 ; 44 %
- **Medium Anemia** 20 ; 29 %

Based on Diagram 2 the results showed that of the total respondents 68 respondents obtained most of the respondents of pregnant women with mild anemia in Puskesmas Kediri District (44.12%) or 30 respondents suffered mild anemia.

The study showed that most of respondents suffered from mild anemia. This proves that the knowledge of pregnant women about how to reduce anemia is good because it already knows the impact of the incidence of anemia for pregnant women and fetus.

Pregnancy anemia can be caused by many factors one of which is the lack of iron intake during pregnancy. Lack of iron can be caused by the lack of entry of iron in the food, resorption disorders or the amount of iron that comes out of the body. Iron deficiency will inhibit the formation of hemoglobin which results in inhibition of red blood cell formation. [12]

Pregnant women should take measurements of Hemoglobin levels to monitor the condition of the mother if the pregnant Hemoglobin content of less than 11 gr%, can be done immediately such as adding the consumption of foods and beverages that contain lots of iron.

**Relation of Compliance Levels Consuming Iron Tablets With Anemia Occurrence In Pregnant Women.**

Table 4 Compliance Levels Consuming Iron Tablets With Anemia Occurrence In Pregnant Women.

<table>
<thead>
<tr>
<th>Compliance Consuming Iron Tablets</th>
<th>Anemia Occurrence</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild</td>
<td>Medium</td>
</tr>
<tr>
<td>Obidient</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Obidient</td>
<td>23</td>
<td>33.8</td>
</tr>
<tr>
<td>Disobidient</td>
<td>7</td>
<td>10.3</td>
</tr>
<tr>
<td>Amount</td>
<td>30</td>
<td>44.1</td>
</tr>
</tbody>
</table>

P = 0.000
Based on table 4 it can be seen that pregnant women who have severe anemia and non-adherence consume iron tablets (8.8%) less than those who adhere to iron tablets (17.7%). Pregnant women with mild anemia and obedient consume iron tablets (33.8%) more than those who did not adhere to iron tablets (10.3%).

The result of data analysis strong relationship and form linear line between compliance rate consuming iron tablet with the incidence of anemia at Kediri Regency Health Center. This is indicated by the magnitude of Asymp's value. Sig = 0.00, so 0.00 <0.05 which means reject H0. This shows that the higher level of adherence to consume iron tablets the lower the incidence of anemia. Anemia has a harmful effect on pregnant women. Anemia can lead to abortion, prematurity, fetal growth in the womb, infection easy, chronic decompensation, molahidatidosa, hyperemesis gravidarum, antepartum bleeding, and premature rupture of membranes. [1]

Anemia is very dangerous for pregnant women and the fetus it contains. Pregnant women should prevent the occurrence of anemia by conducting a healthy lifestyle. How to prevent iron deficiency anemia among others by consuming green vegetables, meat, liver and dairy products, taking iron supplements, taking vitamin C to help the process of absorption of iron in the digestive tract, avoid caffeine, such as coffee / tea in large quantities as it can interferes with the absorption of iron. The effort to overcome the anemia of iron deficiency is easy and cheap is by giving iron tablet of folate (Fe). [13]

V. CONCLUSION

Adherence to iron tablets consumed in pregnant women in Kediri District Public Health Center mostly in obedient category that is equal to 85.3% or as many as 58 respondents.

The incidence of anemia in pregnant women that compliance in community health center of Kediri regency got pregnant women with mild anemia (44.12%) or 30 respondents.

Result of analysis with Chi-Square statistical test by using SPSS for windows help obtained by Asymp result. Sig = 0.00, so 0.00 <0.05 which means reject H0. So there is a relationship between the compliance rate of pregnant women consume iron tablets with the incidence of anemia in Kediri District Health Center

VI. BIBLIOGRAPHY


