Obesity as a Risk of Pre Eklamsia

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A B S T R A C T
Maternal mortality is one of the indicators used to measure health status. In Indonesia, the 3 largest maternal deaths are caused by pre eklamsia / eclampsia caused by obesity during pregnancy. The purpose of this study was to determine the relationship of obesity pregnant women with pre eklamsia.

The research design used was analytic correlation. The population of obese pregnant women as much as 72 people, And the sample amounted to 72 people with total sampling techniques. Test Analysis in this study using Chi squared with a significant level of 0.05 and closeness relationship using contingency coefficient.

Results of the study of 72 obese pregnant women, 56 pregnant women (77.8\%) had pre eklamsia and 16 pregnant women (22.2\%) were not pre eklamsia. Results of analysis using SPSS Chi Square with significance value $\alpha = 0.05$ obtained $p = 0.002$ so that $\alpha < 0.05$ it is a relationship of obesity pregnant women with the incidence of pre eklampsia. The results of contingency coefficients show 0.513 which means the closeness of the relationship is moderate.

Obesity in pregnant women provides a significant relationship in the incidence of pre-eclampsia.

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I. INTRODUCTION

Pre-eclampsia listed as the main cause of death and disease in infants and pregnant women around the world. And in Indonesia 3 of the greatest maternal deaths one of them is caused by pre eclampsia / eclampsia caused due to obesity during pregnancy. Pre-eclampsia has been found to have been over 10\% of obese pregnant women and 12\% of obese women who experienced morbidity, compared with 4.8\% in a population with normal weight. Obesity in pregnant women increases fetal mortality and morbidity. This appears to be related to the presence of insulin resistance in women who have high blood glucose and / or insulin resulting in hyperinsulinemia in the fetus. Perinatal mortality rates also increase in the fetus from obese mothers (1).

The World Health Organization (WHO) estimates that there are 500,000 maternal deaths worldwide each year, 99\% of which occur in developing countries of 100-1000 / 100,000 live births, while in developed countries ranging from 7-15 / 100,000 live births. Maternal mortality in Indonesia is the highest in Southeast Asia.

According to Indonesia Demographic Health Survey 2002-2003, maternal mortality rate (AKI) in Indonesia is 307 per 100,000 live births. One of the causes of maternal and fetal morbidity and mortality is pre-eclampsia with rates ranging from 0.51% - 38.4\% (2).

In East Java Province in 2012 the maternal rate of 97.43 per 100,000 live births. Judging from the cause of death, 25.09\% maternal mortality caused by bleeding, Pre-eclampsia / Eclampsia 34.71\%, infection 4.98\%, Heart 8.25\%, Others 26.98\%. Until 2011 the main cause of maternal deaths in East Java was bleeding. But in 2012 the main cause of maternal mortality shifts to Pre-eclampsia / Eklampsia. Trends in Pre eklamsia / Eclampsia as the cause of maternal mortality has increased since...
In 2009, 25.93% of maternal deaths were due to pre eklamsia / eclampsia. In 2010 it increased to 26.92% and 27.27% in 2011 (3).

The cause of the occurrence of pre eklamsia is unknown, but several studies have concluded that a number of factors affect the occurrence of pre eklamsia, one of which is obesity during pregnancy. Pregnancy obesity is weight gain in pregnant women exceeding 12-16 kg of normal body weight. Obesity of pregnancy is a serious threat, likely to have problems when labor and postpartum. Obesity during pregnancy is bad for health especially in pregnant women, which can cause hypertension, hypercholesterolemia, hyperglycemia known as (3H). Hypertension in pregnancy causes the fetus to die, placenta disconnects, Intra Uterine Grow Retardation (IUGR), Intra Uterine Fetal Dead (IUFD), and abortion (4).

Based on the things that have been described above, prevention can be done that pregnant women are expected to conduct routine checks to obstetricians every month because it is very important, for the development of body weight, urine and maternal blood pressure can be monitored properly. Consult your doctor before taking supplements while pregnant. Mother should undergo a healthy diet with a balanced menu considering obesity is one of the trigger factors of pre eklamsia. Ideally a healthy diet and balanced diet and maintaining body weight since before pregnancy or when planning a pregnancy can reduce the risk of pre eklampsia. The role of nurses is expected to be more active in counseling and activities that can reduce obesity, closer and more rigorous supervision during the examination of pregnancy for early detection. In order for mothers to understand the danger of obesity in pregnancy that pre eclampsia (5).

Based on the above phenomenon, researchers are interested to conduct research on obesity pregnant women with the incidence of pre eklampsia.

II. METHOD

This research is quantitative research with research analytic surveymethod. The design or design used in this research is approach cross sectional where data concerning independent variable or risk (independent variable) and dependent variable or dependent variable, will be collected in the same time. The population in this study were all obese pregnant women TM II and III recorded in the register book District Gempol Pasuruan during January-May 2017 a number of 36 respondents. Sampling technique in this research is using total sampling that is research by using all population to be sample. Independent variable in this research is obesity in pregnant mother at Midwife Village in District Gempol Pasuruan. The dependent variable in this research is the occurrence of pre eclampsia in pregnant mother in District Gempol Pasuruan. Data collected and then to analyze the relationship of obesity with Pregnant Women occurrence of pre eclampsia, used Test Chi Square by using SPSS program.

III. RESULTS AND DISCUSSION

The result of statistical test of Chi Square Test by using SPSS 16.0 got value significance = 0.002 meaning value significance <0.05, it can be concluded that there is relation between obesity with pre eclampsia event. Besides, Asimp.sig is 0.002 which means p <0.05 which means null hypothesis (Ho) is rejected and working hypothesis (Ha) is accepted. The closeness of the relationship after being tested with Contingency Coefficient is at a moderate level of 0.513 (the results are in the appendix). So the conclusion is there is a relationship between obesity and pre-eclampsia events in District Gempol Pasuruan.

From cross tabulation analysis found that from 72 respondents, almost half (47.2%) have moderate obesity which all have pre eclampsia. People who are obese, their hearts work harder in pumping blood. This can be understood because of the blood vessels squeezed fatty skin, this condition can result in increased blood pressure. Obese people work harder to burn the excess calories in their bodies, burning calories requires an adequate supply of oxygen in the blood, the more calories burned, the more oxygen supply in the blood, the amount of blood supply certainly makes the heart work more hard, and the impact of blood pressure on obese people tends to be higher. In a study based on the
pregnant population in Pittsburgh we found a three-fold increase in the risk of pre eklampsia associated with obesity (6).

People with more weight (obesity) tend to have diseases involvement resulting from obesity include hypertension, stroke, diabetes, coronary heart disease, heart failure until kidney failure. Because people with obesity will affect the process of metabolism in the body, respiratory process, and all the work of organs can be affected due to obesity, especially blood circulation. Eclampsia can occur due to pre eclampsia that is not prevented or handled to the fullest. Pre eclampsia is a sustained pregnancy complication, therefore early detection is expected to decrease or decrease morbidity and mortality (7). To be able to establish the diagnosis of pre-eclampsia is necessary to supervise the pregnant women, by monitoring the weight gain of pregnant women, blood pressure examination, and laboratory examination to determine proteinuria levels. An ante natal care (ANC) examination needs to be done routinely because usually pregnant women do not feel the complaint and even rarely notice the signs and symptoms of pre eclampsia, it is necessary early detection and proper observation during pregnancy (8).

According to researchers most pregnant women have pre-eclampsia due to obesity or weight gain. This is related to the age of pregnant women. Usually this disease occurs in women of childbearing age with extreme age, that is in teenagers (<20 years) and in women aged over 35 years and rarely occurs between the ages of 20-35 years. At <20 years of age, pregnant women are not experienced in pregnancy problems so that all foods are consumed that lead to obesity and lack of prenatal care. While at the age of 35 years or more, vulnerable the occurrence of various diseases in the form of hypertension, and eclampsia. This is due to the change in the network of utility devices. In addition, also caused by blood pressure increases with age. Obesity also relates to parity. Pregnant women with primiparous potentially greater pre-eclampsia experience due to lack of knowledge about pregnancy. While the relationship with education is the more education a person gets, the maturity becomes more mature, they are easy to accept and understand a positive information. Relation to health problems that women who have higher education tend to pay more attention to his health. As for the connection with work, the greater the income of a person, usually associated with the higher level of education that tend to pay more attention to his health.

Obesity or excessive weight gain is a symptom of pre-eclampsia in pregnant women. Excessive weight gain indicates excessive fluid accumulation in body tissues or called oedema which is a sign of pre-eclampsia. Obesity in pregnant women is very dangerous. This is due to the incidence of various diseases that complicate the delivery that will be faced by pregnant women (9).

Midwives provide KIE to pregnant women to reduce the risk of high blood pressure during pregnancy by recognizing the symptoms of pre eklampsia (blood pressure 140/90 or more, the presence of edema and there proteinuria), alert weight gain quickly, blurred vision, severe headache, abdominal pain that usually occurs in the second and third TM pregnancies (10). The causes of pre eklampsia include age over 35 years and under 20 years, obesity, history of hypertension and multiple pregnancy.

IV. CONCLUSION

There is a significant correlation between obesity in pregnant mother and the increase of pre-eclampsia occurrence in Gempol Pasuruan.

V. REFERENCE


