

THE EFFECTIVENESS OF BOILED RED GINGER ON REDUCING HYPEREMESIS GRAVIDARUM IN FRIST TRIMESTER OF PREGNANCY

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A B S T R A C T

According to the World Health Organization (WHO, 2013) the number of cases of hyperemesis gravidarum reaches 12.5% of all pregnancies in the world. Red ginger is one of natural indigrient which can reduce nausea without any harmful side effects. The purpose of this study was to determine the effectiveness of boiled red ginger on hyperemesis gravidarum in pregnant women in the first trimester of BPM "N" Taram, Harau District in 2018. The research method used was a quasi-experimental design, with a non-equivalent (pretest-posttest) design. the study population was all pregnant women who experienced grade I hyperemesis gravidarum, with a sample of 15 people who were taken by non-random sampling with purposive sampling method. The treatment is by giving red ginger cooking water 2 times a day for 4 consecutive days. The results of the study using the paired t test showed that the average symptom of HEG grade I before being treated for 50 cc of red ginger boiled water was 1.80, and after being given treatment 1.20 with a p value of $0.04 < 0.05$, for treatment 75 cc, p value $0.04 < 0.05$, and treatment 100 cc p value $0.04 < 0.05$. From the results of the one way ANOVA test, it was found that there was no difference in the symptoms of grade I hyperemesis gravidarum by giving 50 cc, 75 cc, and 100 cc of boiled ginger water, the p value was $0.449 > 0.05$. So it is hoped that with this study more red ginger boiled water is applied to reduce HEG symptoms in trimester I pregnant women.

I. INTRODUCTION

Pregnancy (Bobak, et al, 2005) is a continuous process starting from ovulation, conception, oxidation, implantation, and embryo development in the uterus to term. Every process in pregnancy is a crisis condition that requires psychological and physiological adaptation to the influence of pregnancy hormones and mechanical stress due to enlargement of the uterus and other tissues (Lusiana, 2016).

In early pregnancy, it is very influential on hormonal changes, these changes occur due to an imbalance of the hormones estrogen and progesterone released by the placental human chorionic gonadotropin. These hormones are thought to cause emesis gravidarum which will cause several complaints that make the mother feel uncomfortable, including nausea and vomiting or it can be called emesis gravidarum (Istiqoma, et al, 2017).

Although complaints of nausea and vomiting are considered normal for pregnant women and do not harm the fetus in the womb. However, if the frequency of nausea and vomiting is excessive, caution is still needed. Nausea followed by severe vomiting can be a sign of a problem with your pregnancy. For example in wine pregnancy, where the placenta develops into a group of abnormal cysts. Another possibility is hyperemesis gravidarum, which is a condition when pregnant women lose large amounts of body weight and body fluids. So that nausea and vomiting need to be avoided by being given drugs or other alternatives to reduce these complaints (Istiqoma, et al, 2017).

According to the World Health Organization (WHO, 2013) the number of cases of hyperemesis gravidarum reaches 12.5% of all pregnancies in the world. In Indonesia, data on pregnant women with hyperemesis gravidarum reached 1.5 - 3% of all pregnancies (Depkes RI, 2015). The incidence of emesis gravidarum in Indonesia from 2,203 pregnancies that can be completely observed is 543 pregnant women who experience emesis gravidarum. Based on data from the West Sumatra Ministry of Health in 2014, it is estimated that 10% of pregnant women experience emesis gravidarum.

To deal with nausea and vomiting, it can be pharmacological and non pharmacological. Pharmacologically, given vitamin B6, iron / Fe tablets as a blood booster and others. Non pharmacology is by taking preventive measures and with traditional medicine. Traditional medicine using ginger, red raspberry and wild tubers.

Prevention of excessive hyperemesis gravidarum also needs to be implemented by implementing the application of pregnancy and childbirth as a physiological process, providing confidence that nausea and sometimes vomiting are physiological symptoms of early pregnancy and will disappear after 4 months of gestation, recommending changing eating daily with small

but more frequent meals. Besides that, excessive nausea and vomiting in pregnant women can be treated with outpatient treatment, however, some pregnant women are unable to cope with ongoing nausea and vomiting, which disrupts daily life and causes fluid deficiency and disruption of electrolyte balance.

Ginger as a type of herbal plant has many advantages over other herbal plants, especially for pregnant women who are experiencing nausea and vomiting. The first advantage of ginger is that it contains flying oil (essential oil) which is refreshing and blocks the vomiting reflex while gingerol so that it can improve blood circulation and the nerves work properly. As a result, the tension can be relieved, the head is refreshed, nausea and vomiting can be suppressed.

Based on previous research by Rima in 2017, it shows the effect of boiled ginger water on the nausea and vomiting of Trimester I pregnant women. Overcoming nausea and vomiting during pregnancy can be done through pharmacological and non-pharmacological measures. However, it would be nice if pregnant women prefer non-pharmacological ways to deal with nausea and vomiting, such as consuming red ginger cooking water.

For this reason, the authors are interested in researching and continuing existing research by processing ginger in the form of a drink that is easy to manage and can be safely consumed by pregnant women in different ways, namely by giving different amounts of boiled red ginger water to mothers and knowing how much water is boiled ginger. Red ginger is the most effective way to treat nausea and vomiting for pregnant women in the first trimester, between the doses of 50 cc of red ginger, 75 cc or 100 cc of boiled water, so that non-pharmacological therapy is achieved as intended. This research will be carried out at BPM "N", compared to other BPM in Bukittinggi itself, a research has been carried out on giving ginger to nausea and vomiting of pregnant women, and at BPM "N", from the results of a preliminary study conducted by researchers, it was found that many pregnant women who experiencing nausea and vomiting do not know about the benefits of ginger in reducing nausea and vomiting in mothers, and most pregnant women let the nausea and vomiting they experience without prevention.

II. METHODS

Research conducted using this type of quantitative analysis with quasi experimental research design, one group pre-post test. This study was conducted in Private Practice of midwife in Taram. The population in this study were all 1st trimester of pregnancy who experience hyperemesis gravidarum. The sample of this study was taken using non-random sampling technique, namely purposive sample. Intervention of boiled red ginger admission was given for four days, two times a day. Ginger admission devide in to three groups: 50cc, 75cc and

100cc. Frequency of nausea was observed two times, before and after intervention. The results of normally distributed data and using the Paired T-Test with a significance level of $p < 0.05$ in bivariate analysis.

III. RESULT

Table 1. The Effect of Giving 50 cc of Boiled Red Ginger to Hyperemesis Gravidarum Grade I in 1st Trimester Pregnant Women

Variabel	Mean	SD	P value	N
Pre-test	1,80	0,447	0,04	5
Post-test	1,20	0,447		

There is a difference in the average pain frequency of hyperemesis gravidarum symptom before and after the intervention with p -value = 0.04. This means that 50cc red ginger admission has a significant effect on reducing hyperemesis gravidarum symptom.

Table 2. The Effect of Giving 75 cc of Boiled Red Ginger to Hyperemesis Gravidarum Grade I in 1st Trimester Pregnant Women

Variabel	Mean	SD	P value	N
Pre-test	1,80	0,447	0,04	5
Post-test	1,20	0,447		

There is a difference in the average pain frequency of hyperemesis gravidarum symptom before and after the intervention with p -value = 0.04. This means that 75cc red ginger admission has a significant effect on reducing hyperemesis gravidarum symptom.

Table 3. The Effect of Giving 75 cc of Boiled Red Ginger to Hyperemesis Gravidarum Grade I in 1st Trimester Pregnant Women

Variabel	Mean	SD	P value	N
Pre-test	1,80	0,447	0,04	5
Post-test	1,20	0,447		

There is a difference in the average pain frequency of hyperemesis gravidarum symptom before and after the intervention with p -value = 0.04. This means that 100cc red ginger admission has a significant effect on reducing hyperemesis gravidarum symptom.

Table 4. The Effectiveness of Ginger Boiled Water 50 cc, 75 cc, and 100 cc Against Grade I Hyperemesis Gravidarum in Pregnant Women

Measure of ginger	Mean	SD	CI	P value
50 cc	1,80	1,304	0,18-3,42	0,449
75 cc	1,20	0,447	0,64-1,76	
100 cc	1,20	0,447	0,64-1,76	

After being given boiled red ginger water, the average symptom of grade I hyperemesis gravidarum experienced by mothers in the 50 cc group was 1.80 with a standard deviation of 1.304, the mean symptoms of grade I hyperemesis gravidarum in the 75 cc group was 1.20 with a standard deviation of 0.447, in the 100 cc group the symptoms of grade I hyperemesis gravidarum were 1.20 with a standard deviation of 0.447. Statistically there is no significant difference because the obtained p value = 0.449 ($p > 0.05$).

IV. DISCUSSION

Red ginger is a pseudo-rooted herb that is not branched and belongs to the Zingiberaceae family, which contains the most essential oils compared to other types of ginger. According to Megawati (2007), Dr. Francesca Borelli and colleagues from the University of Naples Federico reviewed some medical literature to study ginger, they found six studies that tested ginger in pregnant women. It is argued, ginger works better than placebo or vitamin B6 and is considered safe for pregnant women. Ginger has been shown in several studies to treat nausea, vomiting, and even hyperemesis gravidarum. Eating ginger can stimulate saliva and improve digestive juices.

According to research by Hernani and Hayani (2001), red ginger has a higher content of starch (52.9%), essential oil (3.9%) and alcohol-soluble extracts (9.93%) than emprit ginger (41.48. ; 3.5 and 7.29%) and elephant ginger (44.25; 2.5 and 5.81%). (USU). Ginger works as an anti-vomiting, based on research, the pharmacological actions of ginger include preventing nausea and postoperative nausea with a mechanism of action to increase motility in the gastrointestinal tract. How ginger works in reducing nausea and vomiting of pregnant women, namely substances contained in ginger, including gingerol, shogaol, zingerone, zingiberol and paradol. The spicy taste contained in ginger is caused by the zingerone substance, while the distinctive aroma in ginger is caused by the zingiberol substance. It is said that ginger works to inhibit serotonin receptors and has anti-emetic effects on the gastrointestinal system and central nervous system.

The results of this study are in accordance with research conducted by Fitria (2013) which shows that from statistical tests there is a significant difference in the frequency of nausea

and vomiting before intervention is 1.78 and after intervention is 0.38, statistical test results are obtained (p is 0.000). . In the same study by Sarberi et al. (2013) there is a significant difference in the mean reduction in the Rhodes Index score. The percentage reduction for the total Rhodes Index score is 48% when using ginger, 13% for placebo, and 10%.

The results of other studies that tested ginger tablets were Rahingtyas's research, the results of variance showed that the differences in formulations in the manufacture of ginger lozenges did not have a significant effect on the dissolving time of lozenges (> 0.05) but had a significant effect (<0.05) on the hardness and degree of acidity (pH) lozenges. Based on the hedonic quality test, the three types of tablet formulas obtained the same percentage (70%) on the sweetness parameter. Judging from the parameters of flavor, taste of ginger, aroma of ginger, flavor, mouthfeel and color, formula 3 tablets obtained the highest percentage results.

According to the researchers' assumption, giving red ginger boiled water can be drunk by the mother how much she is able to drink it, so that the purpose of giving the boiled ginger water is achieved as desired. For this reason, the researchers examined how the most effective dose of ginger boiled water from the 3 intervention groups where the researchers gave red ginger boiled water, but from the results the researchers did not find any difference in the effect of the three groups of mothers who drank 50 cc or 75 cc or 100 cc of boiled ginger water. red. The opinion of the researchers, no matter how much mothers who experience grade I hyperemesis gravidarum drink boiled ginger water besides the mother does not have a history of ulcers or gastric ulcers, then the benefits of this red ginger boiled water will be there. Therefore, from the three groups studied, 15 respondents experienced a decrease in symptoms of grade I hyperemesis gravidarum after drinking this red ginger boiled water. Because respondents want to drink red ginger cooking water regularly.

From the results of the post hoc test table to determine the average difference of each dose of red ginger boiled water given, the following results were obtained as follows: the difference in the average of 50 cc and 75 cc boiled water is 0.600, 50 cc red ginger boiled water with 100 cc with an average of 0.600. It can be concluded that there is no significant average difference between 50 cc of red ginger cooking water with 75 cc or 100 cc of red ginger cooking water. Both the red ginger cooking water average 75 cc to 50 cc and red ginger boiled water 100 cc also did not have a significant difference in average. For this reason, there is no difference in the effect of each given red ginger cooking water.

V. CONCLUSION

Ginger works as an anti-vomiting, based on research, the pharmacological actions of ginger include preventing nausea and postoperative nausea with a mechanism of action to increase motility in the gastrointestinal tract. It can be advised to pregnant women who experienced hyperemesis gravidarum to reducing their hyperemesis syndrom.

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