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Effect of Ginger Drinks on Nausea Vomiting in The First Trimester of Pregnancy

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Abstract. The purpose of the study was to describe the effects of consumption ginger drinks to against nausea vomiting in the first trimester of pregnancy. In the experiment method, ginger drink was given to patient with a dose of 250 mg of ginger, 250 mL of hot water, and 1 tablespoon of sugar. The ginger drink was consumed 2 times daily for 7 days and measured use Index Rhodes. The result showed that ginger drinks can reduces nausea vomiting in the first trimester of pregnancy. The main chemical contains of ginger are shogaols, gingerols, bisapolene, zingiberol, sesquiphellandrene, atsiri oil dan resin. Content of ginger that has been researched in effect to prevent nausea vomiting. Based on the result, we conclude that the ginger drinks reduce nausea vomiting in the first trimester of pregnancy. Thus, we believe that this drink will be effective for further developments regarding pregnancy patient.

1. Introduction

In the first trimester, most women will experience nausea with or without vomiting. Nausea and vomiting often occur in younger pregnancies, starting from week 6 after the first day of last menstrual period and lasting for approximately 10 weeks. Nausea and vomiting occur in 50 - 70% of all pregnant women [1]. Sense of nausea usually begins in the first weeks of pregnancy and ends in the fourth month. Natural products such as ginger, red raspberry, and wild yam have been suggested as alternative treatments [2]. Ginger is effective to reduce nausea vomiting during pregnancy. The use of ginger to overcome nausea vomiting will not increase the risk negative to the fetus [3].

Here, the purpose of the study was to describe the effects of consumption ginger drinks to against nausea vomiting in the first trimester of pregnancy. Although number of studies have reported several researched ginger and nausea vomiting, this study was to investigate the effect of ginger drinks in first trimester of pregnancy. In addition, ginger was selected because it has been found to be superior to



dimenhydrinate in reducing motion sickness. Ginger was also found to significantly reduce postoperative emetic sequelae [2].

2. Experimental methods

In the experiment method, ginger drink was given to patients with a specific dose. Actually, ginger can be extracted [4]. But, in this study, we directly used a ginger without any purification process. A dose contains 250 mg of ginger, 250 mL of hot water, and 1 tablespoon of sugar. The ginger drink was consumed 2 times daily for 7 days and measured use Index Rhodes.

To ensure the effectiveness of the present study, the method used in this research is Pre Experiment with One Group Pre and Post-test Design. In short, the study used a research design containing pre-test before being treated and post-test after being treated. The study was done at *Bidan Praktik Mandiri* from November 2016 until February 2017. Samples were first trimester pregnancy amounted to 31 respondents. Sampling used purposive sampling technique. The instrument used the Index Rhodes sheet. The data were analyzed by univariate and bivariate using Wilcoxon test. The first sample group measured the scale of nausea vomiting with the Rhodes Index then fed a ginger drinks, twice daily, taken for 7 days then measured again the scale of nausea vomiting using the Rhodes Index.

3. Results and discussion

Table 1 shows the average score of rhodes for the occurrence of nausea vomiting before additional ginger drink. The result showed that the score was between 13 to 32 with the average of 23.9. This value shows that most of the samples have problems in nausea.

Table 1. Frequency Distribution of Nausea Event Vomiting Before Giving Ginger drinks

No	Rhodes score	F	Percentage (%)
1	13	2	6.5
2	14	1	3.2
3	17	1	3.2
4	20	2	6.5
5	22	5	16.1
6	23	2	6.5
7	24	3	9.7
8	25	6	19.4
9	26	2	6.5
10	29	2	6.5
11	31	3	9.7
12	32	2	6.5
Total		31	100

Mean = 23.9 Median = 24 Modus = 25 Min = 13 Max 32 SD pre-test 5.1

Table 2 shows the average score of the Rhodes index for the occurrence of nausea vomiting after giving ginger drink. The minimum value was 8, and the maximum was 20. The average was 13.4.

Based on Tables 1 and 2, there are a decrease in the average Rhodes score. Interestingly, the final value was a half of the initial value. The values decreased from 23.9 to 13.4. This informs that there is a decrease in the vomiting in the patient.

Table 2. Distribution of Frequency of Nausea Event Vomiting After Giving Ginger Drinks

No	Rhodes score	F	Percentage (%)
1	8	1	3.2
2	9	2	6.5
3	10	4	12.9
4	11	3	9.7
5	12	3	9.7
6	13	6	19.4
7	14	1	3.2
8	15	1	3.2
9	16	4	12.9
10	17	2	6.5
11	18	1	3.2
12	19	2	6.5
13	20	1	3.2
Total		31	100

Mean = 13.4 Median = 13 Modus= 13 Min = 8 Max=20 SD Posttest 3.3

To ensure the above analyses, the effect of ginger drinks on the decrease of nausea of vomiting is re-evaluation using Wilcoxon test. Based on Wilcoxon test with significance level $\alpha = 0.05$, we obtained value $p = 0.000$ ($p < 0.05$). Then, this means there is influences of ginger drinks on the reduction of nausea vomiting in pregnancy; Specifically, we found the effect of ginger drinks on nausea vomiting in the first trimester of pregnancy.

Based on the results obtained, the average score of nausea vomiting before being given ginger drinks in the prevention of nausea vomiting has a score of 23.9 and the average score of nausea vomiting after being given ginger drinks is 13.4. Nausea and vomiting is a common disorder that will occur in the first trimester of pregnancy but not closed the possibility of these symptoms will remain experienced by pregnancy women in the next trimester [5]. Nausea and vomiting of pregnancy can reduce the ability and stamina of pregnancy in large portions.

The mean decrease of nausea of vomiting in pregnancy after being given ginger beverages showed score 4.9 and Wilcoxon test result $p < 0.005$ this means ginger beverages significantly effective decrease nausea vomiting. This research is in line with Choiriyah et al. research on the effectiveness of ginger extract consumption with frequency of nausea vomiting in pregnancy showed that the incidence of nausea vomiting in pregnancy after consuming ginger extract in the intervention group on average 2 times / day with standard deviation 1,237[6]. This shows that there is a significant decrease in the intervention group after being given ginger extract as one of alternative treatment to the incidence of nausea vomiting on pregnancy.

As many as 80% of pregnant women experience nausea vomiting occurring in the first trimester of pregnancy and 2% of pregnant women in the first trimester have severe problems of nausea and vomiting. Thus, medical care is required. Nausea in early pregnancy can be reduced by using complementary therapies, among others, with herbs or traditional plants that can be done and easily obtained such as ginger, peppermint leaves, lemon etc. Natural products such as ginger, red raspberry, and wild tubers have been suggested as an alternative to prevention [7].

The result showed that ginger drinks can reduces nausea vomiting in the first trimester of pregnancy. The main chemical contains of ginger are shogaols, gingerols, bisapolene, zingiberol, sesquiphellandrene, atsiri oil and resin. Content of ginger that has been researched in effect to prevent nausea vomiting. Indeed, we believe that organic materials can be also used for againsting the problems in the patient [8].

4. Conclusion

Average Rhodes Index score before given ginger beverages 23.9 and after being given ginger beverages the average score of Rhodes index decreased to 13.4. There is effect of ginger drinks to reduce nausea vomiting in the first trimester of pregnancy.

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