

Effectiveness Of Warm Ginger Milk Consumption In Reduce Emesis Gravidarum In 1st Trimester Pregnant Women In PMB Karawang City Year 2023

Tetin Rismayanti^{1*}, Romih Ratnaningsih²

^{1,2}Abdi Nusantara College of Health Sciences, Indonesia

*Correponding Author:

Email: raihan_tetin@yahoo.com

Abstract.

Background: In early pregnancy, many mothers experience complaints of nausea, vomiting, especially in the morning, which is known as morning sickness or in medical language known as emesis gravidarum. Symptoms of emesis gravidarum in pregnant women can be treated both with conventional and non-conventional treatments or often referred to as complementary therapy, namely with herbal plants that are easily available such as lemongrass, lemon, peppermint leaves and the most popular is ginger. Research Objectives: To determine the effectiveness of consuming warm ginger milk juice in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023 Research Methods: The type of research used in this study is quasi-experimental and post test only design one group. The population in this study were 54 mothers. The sample in this study were 35 mothers who were in PMB Karawang City. Bivariate analysis using the Wilcoxon test. Results: The average frequency of emesis gravidarum in 1st trimester pregnant women before being given warm ginger juice was 9.97, a standard deviation of 1.636, a minimum of 7 and a maximum of 13. The average frequency of emesis gravidarum in 1st trimester pregnant women after being given consumption warm ginger milk juice is 5.54, a standard deviation of 1.039, a minimum of 4 and a maximum of 7. Conclusion: It can be concluded that consumption of warm ginger milk juice is effective in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023.

Keywords: Consumption of Warm Ginger Milk Juice, Emesis Gravidarum and First Trimester Pregnant Women.

I. INTRODUCTION

Pregnancy is defined as fertilization or union of spermatozoa and ovum, then cell division (zygote) occurs followed by nidation or implantation in the endometrial lining of the uterine cavity wall. Normal pregnancy will take place within 40 weeks if counted from the time of fertilization until the baby is born (Sukarni, 2019). Pregnancy causes hormonal changes in the mother because there is an increase in the hormone estrogen, progesterone which is produced by Human Chronic Gonadotropin. These hormones are thought to cause emesis gravidarum, but every mother has a different response to these hormonal changes so not all women experience emesis gravidarum (Henukh, et al 2019). The most common physiological change experienced by pregnant women is emesis gravidarum. Emesis gravidarum or commonly known as nausea and vomiting (morning sickness) is a natural symptom and often occurs in the first trimester of pregnancy. Pregnant women will experience nausea with or without vomiting. In early pregnancy, many mothers experience complaints of nausea, vomiting, especially in the morning, which is known as morning sickness or in medical language known as emesis gravidarum. Complaints of nausea and vomiting in emesis gravidarum are physiological things, but if these complaints are not resolved immediately, they will become pathological (Henukh, et al 2019). The causes of nausea and vomiting are related to hormonal factors, the vestibular system, digestion, psychological, genetic and evolutionary factors. In addition, the causes of nausea and vomiting are caused by psychological factors, such as unplanned, uncomfortable or unwanted pregnancies, workload will cause mental suffering and conflict.

Feelings of guilt, anger, fear and anxiety can increase the severity of nausea and vomiting (Sukarni, 2019). Emesis gravidarum usually appears at 4–9 weeks of pregnancy, reaches its peak at 9–12 weeks and often subsides at 16 weeks. If pregnant women who experience emesis gravidarum do not get proper treatment it can cause other problems, namely Hyperemesis gravidarum which results in disturbances in the body's metabolism which will increase the risk 2 times greater giving birth to preterm babies with lower body weight than women who do not experience Hyperemesis gravidarum and other complications from Hyperemesis gravidarum can cause defects in babies and abortion. Therefore it is necessary to treat emesis

gravidarum so that it does not continue to become Hyperemesis gravidarum (Sukarni, 2019) Efforts to reduce the frequency of vomiting can be given several pharmacological and non-pharmacological actions. Pharmacologically, given vitamin B6, vitamin B Complex, and others. In non-pharmacological terms, it is taking preventive measures and using traditional medicine or using complementary therapies, including herbal or traditional plants that can be done and are easy to obtain, such as ginger, peppermint leaves, lemon and so on (Wulandari, et al 2019).

Emesis gravidarum is said to be normal, but if it is not properly monitored and treated it can lead to a more severe condition, namely hyperemesis gravidarum which can affect fetal development. Symptoms of emesis gravidarum in pregnant women can be treated both with conventional and non-conventional treatments or often referred to as complementary therapy, namely with herbal plants that are easily available such as lemongrass, lemon, peppermint leaves and the most popular is ginger. Ginger is a herbal plant, pseudo-trunked with a length of 30-75cm. Ginger is spread almost throughout the wet tropics, including Indonesia. The content in ginger contains the essential oil of Zingiberene (zingirona), zingiberol, bisabilena, kurkumen, gingerol, flandrena, vitamin A and bitter resin which can block serotonin, a neurotransmitter that is synthesized in serotonergic neurons in the central nervous system and brain cells. enterochromaffin in the digestive tract so that it is believed to be able to give a feeling of comfort in the stomach so that it is believed to be a feeling of comfort in the stomach so that it can overcome nausea and vomiting (Afriyanti, 2017). Research conducted by Putri, et al (2017) showed that after being given a warm ginger drink intervention, the average frequency of nausea and vomiting decreased to 3.18 times a day. Based on research conducted by Wulandari, et al (2019) that the frequency of nausea and vomiting in the intervention group after the procedure obtained an average score of 7.56 which indicates that giving ginger drink is effective on the frequency of emesis gravidarum in trimester I pregnant women at the Nalumsari Jepara Health Center.

In addition, based on research conducted by Giti Ozgoli (2018) in Iran regarding the Effects of Complementary Medicine on Nausea and Vomiting in Pregnancy, it shows that the results of a review of most of the methods used are effective in reducing nausea and vomiting, but ginger is more recommended to reduce nausea and vomiting and does not have negative effects. The incidence of emesis gravidarum reaches 14% of all pregnant women in the world (WHO, 2021). The incidence of emesis gravidarum in Indonesia, which was obtained from 2,203 pregnancies that could be observed completely, was 543 pregnant women who had emesis gravidarum. In Indonesia, around 10% of pregnant women are affected by emesis gravidarum (RI Ministry of Health, 2021). In West Java, the incidence of emesis gravidarum is 10% - 15% of the total 182,815 pregnant women in 2021 (West Java Health Office, 2021). Karawang Regency Health Profile Data for 2021, the high rate of emesis gravidarum in pregnant women is 50-90% (Karawang Regency Health Office, 2021). Preliminary studies have been conducted at PMB Karawang City, it was found that 8 out of 10 first trimester pregnant women experienced nausea and vomiting, two of them did not experience nausea and vomiting. Midwives have provided vitamin B6 which can reduce nausea and vomiting in first trimester pregnant women, but 5 out of 8 pregnant women who experience emesis gravidarum say they are not taking vitamin B6 regularly so that the nausea and vomiting they experience cannot be resolved. The pregnant woman also had never consumed natural ingredients such as ginger drink to treat nausea and vomiting she was experiencing. As previously explained, the symptoms of nausea and vomiting if not handled properly can turn into hyperemesis gravidarum. Based on this background, researchers are interested in conducting research on "Effectiveness of consuming warm ginger milk juice in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023".

II. METHODS

The type of research used in this study i.e. quasi-experimental and post test only design one group. The population in this study was 54 mothers who were in PMB Karawang City. The sample in this study were 35 mothers who were in PMB Karawang City. Bivariate analysis was carried out with the aim of seeing whether there is an influence between the independent variable and the dependent variable which is shown in the conceptual framework. In this study, the researcher used a statistical test, namely the Wilcoxon test.

III. RESULTS AND DISCUSSION

Table 1. Distribution of the frequency of emesis gravidarum in 1st trimester pregnant women before being given warm ginger milk juice consumption at PMB Karawang City in 2023

Mean	Std. Deviation	Min	Max
9.97	1.636	7	13

Table 1 shows that the average frequency of emesis gravidarum in first trimester pregnant women before being given warm ginger juice consumption is 9.97, a standard deviation of 1.636, a minimum of 7 and a maximum of 13.

Table 2. Distribution of the frequency of emesis gravidarum in 1st trimester pregnant women before being given warm ginger juice consumption at PMB Karawang City in 2023

Mean	Std. Deviation	Min	Max
5.54	1.039	4	7

Table 2 shows that the average frequency of emesis gravidarum in first trimester pregnant women after being given warm ginger juice is 5.54, a standard deviation of 1.039, a minimum of 4 and a maximum of 7.

Table 3. Effectiveness of consuming warm ginger milk juice in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023

Group	Mean	N	Std. Deviation	Min-Max	P Value
Before Intervention	9.97	35	1.636	7-13	0.000
After Intervention	5.54	35	1.039	4-7	

Table 3 shows that of the 35 respondents who were given the intervention to consume warm ginger milk, the average frequency of emesis gravidarum before the intervention was (9.97), the average frequency of emesis gravidarum after the intervention was (5.54) and the average difference before and after the intervention was consumption of warm ginger juice (4.43). So it can be concluded that ginger aromatherapy can reduce the frequency of emesis gravidarum. The results of the Wilcoxon test before and after giving consumption of ginger milk juice, obtained a value of $z = -5.215$ and $p\text{-value} = 0.000 < 0.05$, which means that consumption of ginger milk juice is effective in reducing emesis gravidarum in 1st trimester pregnant women at PMB Karawang City in 2023 .

Discussion

Description of emesis gravidarum in first trimester pregnant women before being given warm ginger juice consumption at PMB Karawang City in 2023

The results showed that the average frequency of emesis gravidarum in first trimester pregnant women before being given warm ginger juice consumption was 9.97, a standard deviation of 1.636, a minimum of 7 and a maximum of 13. The appearance of emesis gravidarum in pregnant women is due to hormonal changes. In this case the hormones somatomammotropin, estrogen and progesterone have an important role in some of the changes that occur in pregnant women. Changes due to the hormone estrogen in pregnancy will result in excessive gastric acid secretion, causing nausea and vomiting (Safari, 2017) Emesis gravidarum occurs in 60-80% of primigravidas and 40-60% of multigravidas. Most primigravida mothers have not adapted to the increase in the hormones estrogen and HCG so they experience emesis gravidarum more often (Safari, 2017). Nausea in early pregnancy can be reduced by using complementary therapies, including herbal or traditional plants that can be done and easily obtained, namely by giving ginger (Defrin, 2018). Based on the research results and theory, the researchers assumed that emesis gravidarum would be more pronounced if there was no intervention.

Description of emesis gravidarum in first trimester pregnant women after being given warm ginger milk juice consumption at PMB Karawang City in 2023

The results showed that the average frequency of emesis gravidarum in first trimester pregnant women after being given warm ginger juice consumption was 5.54, a standard deviation of 1.039, a minimum of 4 and a maximum of 7. After giving ginger drink for 4 days, it was found that the consumption of warm ginger milk juice was effective in reducing the intensity of emesis gravidarum in first trimester pregnant women. Giving consumption of warm ginger milk juice is very effective in overcoming emesis

gravidarum in first trimester pregnant women after giving ginger drink intervention in which there is a decrease in emesis gravidarum (Ummi, 2014). Prevention efforts by giving ginger drinks can reduce the intensity of emesis gravidarum. Ginger contains 19 components that are useful for the body, one of which is gingerol which is the most important compound and has been shown to have effective antiemetic (anti-vomiting) activity by blocking serotonin, which is a chemical messenger compound. These compounds cause the stomach to contract which, when blocked, the muscles of the digestive tract will relax and weaken so that the feeling of nausea is greatly reduced. In digestion, ginger is carminative, namely an ingredient that is able to expel gas from the stomach, this will relieve flatulence (Choiriyah, 2013). Research conducted by (Rufaridah, 2019) also showed that the group given ginger drink effectively reduced the frequency of emesis gravidarum. Based on the results of field research, researchers assume that consumption of warm ginger milk juice is an alternative to reduce the intensity of emesis gravidarum in first trimester pregnant women.

The effectiveness of consuming warm ginger milk juice in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023

The results showed that of the 35 respondents who were given the intervention to consume warm ginger milk, the average frequency of emesis gravidarum before the intervention was (9.97), the average frequency of emesis gravidarum after the intervention was (5.54) and the average difference -average before and after the intervention of consuming warm ginger milk juice (4.43). So it can be concluded that ginger aromatherapy can reduce the frequency of emesis gravidarum. The results of the Wilcoxon test before and after giving consumption of ginger milk juice, obtained a value of $z = -5.215$ and $p\text{-value} = 0.000 < 0.05$, which means that consumption of ginger milk juice is effective in reducing emesis gravidarum in 1st trimester pregnant women at PMB Karawang City in 2023. Emesis gravidarum is a natural symptom and is often found in the first quarter of pregnancy, nausea usually occurs in the morning, but can also occur at night and at any time. These symptoms occur more or less after 6 weeks after the first day of the last menstruation and last for approximately 10 weeks (Tiran, 2019). Emesis gravidarum in pregnancy is mild and is a condition that can be controlled according to the condition of the pregnant woman. This condition sometimes stops in the first trimester, but the effects can cause nutritional disorders, dehydration, weakness, weight loss and electrolyte imbalances. Emesis gravidarum not only threatens pregnant women but can also cause side effects on the fetus as well as abortion, low birth weight babies, premature babies, and malformations in newborns (Febriyanti, H, 2021). Some non-pharmacological therapies such as traditional herbal medicine that can be done are plants that are easy to get, such as ginger, mint leaves, lemon and others.

Ginger is included in the 20 best-selling herbal supplements in the United States, because ginger is aromatic, stimulates flatulence, and warms the body. The spicy taste and aroma of ginger are caused by gingerol and volatile compounds (Septi Dwi Kayanti, 2019). Gingerol can reduce nausea caused by drunkenness or pregnancy and can also reduce migraines. Based on the results of Anne Ruffaridah's research on "the effect of steeping ginger (*zingiber officinale*) on reducing emesis gravidarum in 2017 in the working area of the Lubuk Buaya Padang Health Center, it can be concluded that the average frequency of emesis gravidarum before being given ginger infusion is 3.8. The average frequency of emesis gravidarum after ginger infusion was 2.19. There is a difference in the frequency of emesis gravidarum in the first trimester before and after giving ginger infusion. The increase in progesterone causes smooth muscle tone and motility to decrease, resulting in esophageal regurgitation, increased gastric emptying time and reverse peristalsis. So here ginger plays a role by stimulating the motility of the gastrointestinal tract and stimulating the secretion of saliva, bile in other forms, then ginger relaxes and weakens the muscles of the digestive tract, this is what ginger suppresses in the stomach with the gingerol content in ginger (Ardani, 2014). This is in line with Dyah Ayu Wulandari's research (2019) where giving ginger a drink is effective in treating emesis gravidarum in first trimester pregnant women. The advantage of ginger is that it contains essential oils which have a refreshing effect and block vomiting reflex, while gingerol can expedite blood and nerves to work by Good. This research was conducted on 50 respondents using the quasi experimental method with a control group pre-posttest design approach and analysis tests using the Wilcoxon and Mann Whitney tests where the

result was a p value of 0.000 which concluded that there was an effect of giving warm ginger drinks on emesis gravidarum in first trimester pregnant women at the Nalumsari Health Center in Jepara.

Ginger is efficacious as an anti-vomiting agent and can be used by pregnant women to reduce emesis gravidarum. This is in line with research conducted by Iluh Meta Indrayani, et al. of the Bengkulu Ministry of Health Poltekkes with the title the effectiveness of giving ginger wedang to the frequency of emesis gravidarum in first trimester pregnant women in North Bengkulu Regency. in 2017 who conducted a study of 10 pregnant women, the results showed that the average difference in the frequency of emesis gravidarum before and after the ginger wedang intervention was 4.80 with a p-value of 0.000, which means giving ginger wedang is effective in reducing the frequency of emesis gravidarum in first trimester pregnant women in Bengkulu Regency in 2017. According to researchers, the emesis gravidarum that a person feels is the result of a psychological response and physical reflex. Everyone's perception of emesis gravidarum will be different, this is influenced by several factors, such as age and parity, coping mechanisms and relaxation methods used, anxiety and fear of fatigue and the length of time experiencing emesis gravidarum. To treat and reduce emesis gravidarum, several methods of handling emesis have been carried out, such as the herbal method of boiling ginger water. The herbal method of steeping ginger water can be used as an alternative to reduce pain levels without causing adverse effects. The herbal method of brewing ginger drinks will help give a fresh taste because ginger contains gingerol compounds which function as nausea relievers which block serotonin (a chemical that plays a role in inducing emesis gravidarum). So that in this study there was a significant effect on reducing emesis gravidarum in pregnancy with a p-value = 0.000. So that ginger can be an effective alternative therapy to reduce emesis gravidarum in pregnant women as long as it is given in the right dosage and the right way.

IV. CONCLUSION

1. The average frequency of emesis gravidarum in first trimester pregnant women before being given warm ginger juice is 9.97
2. The average frequency of emesis gravidarum in first trimester pregnant women after being given warm ginger juice is 5.54
3. The results of the Wilcoxon test show that the p-value = 0.000. Consumption of ginger milk juice is effective in reducing emesis gravidarum in first trimester pregnant women at PMB Karawang City in 2023.

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