

Description of Ginger and Peppermint Boiled Water on the Intensity of Nausea/Vomiting in Pregnant Women in Trimester I at Dahlia Public Health Center

Rika Asmirah¹, Rika Handayani², Syamsuriyati³, Sutrani Sharif⁴,
Fadjriah Ohorella⁵, Risna Ayu Rahmadani⁶

^{1,2,3,4,5}Faculty of Nursing and Midwifery, Megarezky University, Indonesia

⁶Faculty of Health Sciences, Trinita University, Indonesia

Corresponding Author: Rika Asmirah

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ABSTRACT

Introduction: The content in ginger contains essential oil Zingiberena (zingirona), zingiberol, bisabilcna, curcumin, gingerol, flanderena, vitamin A and bitter resin which can block serotonin, a neurotransmitter that is synthesized in serotonergic neurons in the central nervous system and enterochromomyphin cells. in the digestive tract so that it is believed to give a comfortable feeling in the stomach so that it can overcome nausea and vomiting. Mint leaves contain asitri, namely menthol which has the potential to facilitate the digestive system and relieve stomach spasms or stomach cramps because it has a mild anesthetic effect and contains carminative and anti-spasmodic effects that work in the small intestine in the gastrointestinal tract to overcome or eliminate nausea and vomiting.

Method: The research design used was quasi-experimental by dividing 2 treatment groups. In determining the effectiveness test, measurements were carried out before and after treatment. The population is pregnant women who are registered in the Dahlia Makassar Health Center registration.

Results: This study shows that of the 30 respondents who were sampled, the average decrease in the intensity of nausea and vomiting are given ginger boiled water was 3.80, while the administration of Mint Leaves was 5.73.

Conclusion: There was a change in nausea and vomiting after being given Ginger Boiled Water whereas before and after treatment the average value was before 9.47 and the average value was 3.80 and p value 0.00. There was a change in nausea and vomiting after being given Mint Leaves where before and after treatment the average value was before 9.00 and the average value after was 5.73 and p value 0.00.

Keywords: Ginger, Peppermint, Nausea and Vomiting

INTRODUCTION

Nausea and vomiting (emesis gravidarum) is a common thing in early pregnancy (Trimester I). Nausea and vomiting usually occur in the morning, therefore it is also called morning sickness, but it is also possible to occur during the day and at night. Gunanegara revealed that nausea and

vomiting is a complaint that is often experienced by pregnant women, especially in the first trimester, and is experienced by 50-80% of pregnant women.

According to the World Health Organization (WHO), the incidence of hyperemesis gravidarum reaches 12.5% of all pregnancies in the world. Pregnancy

check-up visits for pregnant women in Indonesia obtained data on mothers with hyperemesis gravidarum reaching 14.8% of all pregnancies (Depkes RI, 2013). Nausea and vomiting are the most common major complaints felt by pregnant women almost every year throughout the world (Einarson, Piwko, & Koren, 2013). Incidence of nausea or vomiting in Sweden by 0.5%, in California 0.88%, in Canada 10.8%, in China 0.9% in Norway, 2.2% in Pakistan and 1.9% in Turkey. In the United States the prevalence of hyperemesis gravidarum is 0.5-2%. In Indonesia, data obtained from mothers with complaints of nausea and vomiting occur in 60-80% primigravida and 40-60% multigravida.

Changes in the gastrointestinal tract and increased levels of Human Chorionic Gonadotropin (hCG) in the blood cause several complaints that make the mother feel uncomfortable during pregnancy, including nausea and vomiting. Emesis gravidarum causes a decrease in appetite so there is a change in the electrolyte balance with potassium, calcium and sodium which causes changes in the body's metabolism (Parwitasari, et al, 2014).

Nausea and vomiting can have an impact on clients, both physically and psychologically. Isbir & Mete (2013) describe the physical effects of nausea and vomiting in pregnant women are weakness, changes in sleep patterns, decreased appetite, inguinal pain, burning sensation and throat irritation, ketosis and urinary incontinence. If the physical impact occurs continuously and is not intervened, it will cause Hyperemesis Gravidarum[1]. This condition requires hospitalization and is common in 1.1% of pregnant women[2]

Ginger contains essential oils of Zingiberena (zingirona), zingiberol, bisabilena, curcumin, 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 enterochromaffin cells. in the digestive tract so that it is believed to give a comfortable

feeling in the stomach so that it can overcome nausea and vomiting[3]In addition to ginger, Mint Leaf contains essential oil, namely menthol which has the potential to facilitate the digestive system and relieve stomach spasms or cramps because it has a mild anesthetic effect and contains carminative and anti-spasmodic effects that work in the small intestine in the gastrointestinal tract so that it can overcome or eliminate nausea and vomiting.[4].

METHODOLOGY

The design of this study was a quasi-experiment with two groups of pre and post tests. The sampling technique uses purposive sampling, namely the sample is based on certain criteria determined by the researcher. The type of statistical test used is the paired T test. In this study, the population limit used was all first trimester pregnancies at the Dahlia Makassar Health Center in 2019. The data analysis used was descriptive analysis to describe all research variables.

RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents at Dahlia Public Health Center, 2019

Characteristics	Total (n=30)	Percentage (%)
Age Group (Years)		
20-25	19	63.3
26-35	11	36.7
Level of education		
Junior High School	9	30.0
Senior High School	17	56.7
S1	4	13.3
Gestational age		
1-6 weeks	6	20.0
7-13 weeks	24	80.0
parity		
Primipara	21	70.0
Multipara	9	30.0
Job		
Household servant	19	63.3
Self-employed	9	30.0
Private employees	2	6.7
Types of Complementary Therapy		
Ginger booked water	15	50.0
Peppermints booked water	15	50.0

Based on table 1 above, it can be seen that the respondents in the 20-25 year age group were 19 respondents (63.3%), and the respondents in the 26-35 year age group

were 11 respondents (36.7%). From table 1 above, it can also be seen that the respondent's characteristics based on education are mostly senior high school with 17 respondents (56.7%) and the least is S1 as many as 4 respondents (13.3%). Next, are the characteristics based on gestational age 1-6 weeks as many as 6 respondents (20%) and 7-13 weeks as many as 24 respondents (80%). Then based on the parity characteristics of the primipara

respondents, there were 12 respondents (70.0%) while the multiparas were 9 respondents (30.0%). Characteristics based on the occupation of the most respondents are IRT as many as 19 respondents (63.3%), while the job of the least respondent is a private employee as many as 2 respondents (6.7%). The characteristics of the type of therapy in the form of giving boiled water of ginger and mint leaves each as many as 15 respondents (50.0%)

Table 2. Average Intensity of Nausea/Vomiting Before and After Intervention To Respondents at Dahlia PublicHealth Center, 2019

Type of Intervention	The intensity of Nausea/ Vomiting	Mean (Average)	P Value
Ginger booked water	Before	9.47	0.00
	After	3.80	
Peppermints booked water	Before	9.00	0.00
	After	5.73	

Based on table 2 above, it can be seen that average nausea and vomiting before being treated using ginger decoction was 9.47, while average nausea/vomiting after the intervention decreased to 3.80 with p value $0.00 < 0.05$. The average respondent who experienced nausea and vomiting before the mint leaf decoction intervention was 9.00, while after the intervention, the intensity of nausea/vomiting also decreased to 5.73 with p value $0.00 < 0.05$.

DISCUSSION

The results showed that 2 pregnant women whose nausea and vomiting persisted after being given boiled water of ginger and Mint leaves, where the cause of nausea during pregnancy was due to increased levels of progesterone, estrogen, and Human Chorionic Gonadotropin (hCG) can be a triggering factor for nausea and vomiting. The increase in the hormone progesterone causes the smooth muscles in the gastrointestinal system to relax, it results in a decrease in gastric motility so that gastric emptying slows down. Esophageal reflexes decreased gastric motility, and decreased secretion of hydrochloric acid also contribute to nausea and vomiting. In addition, hCG also stimulates the thyroid gland which can cause nausea and vomiting. The hormone progesterone is produced by the corpus luteum in early pregnancy and

has the function of calming the body of pregnant women during pregnancy, including the nerves of pregnant women so that the feelings of pregnant women become calm. A person in a state of stress will increase sympathetic nerve activity, to release stress hormones in the form of adrenaline and cortisol. The immune system is an important component and an adaptive response to physiological stress. Stress uses adrenaline in the body to increase sensitivity, performance and energy. The increase in adrenaline will reduce the contraction of the biliary muscles, constrict the peripheral blood vessels, expand the coronary arteries, increase the arterial blood pressure and increase the volume of blood to the heart and the number of heartbeats. Adrenaline also increases the formation of cholesterol and low-density protein fats. including the nerves of pregnant women so that the feelings of pregnant women become calm. A person in a state of stress will increase sympathetic nerve activity, to release stress hormones in the form of adrenaline and cortisol. The immune system is an important component and an adaptive response to physiological stress. Stress uses adrenaline in the body to increase sensitivity, performance and energy. The increase in adrenaline will reduce the contraction of the biliary muscles, constrict the peripheral blood vessels, expand the

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cholesterol and low-density protein fats. constricts primary blood vessels, widens coronary blood vessels, increases blood pressure and increases blood volume to the heart and the number of heartbeats. Adrenaline also increases the formation of cholesterol and low-density protein fats. constricts primary blood vessels, widens coronary blood vessels, increases blood pressure and increases blood volume to the heart and the number of heartbeats. Adrenaline also increases the formation of cholesterol and low-density protein fats. Complaints of nausea accompanied or not accompanied by vomiting are often complained of by pregnant women, but very few studies have examined risk factors and their development. Ginger can prevent nausea and vomiting because ginger is able to block serotonin, a chemical compound that can cause the stomach to contract, causing nausea. In addition, ginger is also effective in reducing nausea and vomiting during the first trimester of pregnancy. This is proven based on research results that are able to reduce the intensity of nausea/vomiting. Parwitasari (2014), showed that there was a significant difference between the average intensity of the degree of nausea and vomiting before and after being given ginger decoction.[5]. The development of science and technology, especially in increasing the use of local food both in prevention and treatment, is increasingly being carried out[6]. One of them is ginger which is an ingredient of more than 50% of traditional medicines to treat various sick conditions such as nausea, stomach cramps, motion sickness, fever, indigestion and infections. Ginger has high iron and calcium content. As an ingredient of traditional medicine, ginger can be used singly or combined with other herbal medicinal ingredients that have mutually reinforcing and complementary functions[7]. Peppermint (Mint Leaves) contains many substances that can be used in reducing the incidence of nausea, including the content of essential oil, namely menthol which can

function in facilitating the digestive system and relieve stomach spasms or cramps. This has an impact on a mild anesthetic effect and contains carminative and antispasmodic effects that work in the small intestine in the gastrointestinal tract so that it can overcome or eliminate nausea and vomiting.[8].

The antispasmodic content in mint leaves is efficacious to relax or treat pain in the muscles of the body. Mint leaves contain Menthol, which has a direct antispasmodic effect on the smooth muscles of the digestive tract. Mint leaves also help the muscles around the intestines to relax and prevent gas production. Its ability to soothe abdominal muscle cramps makes it a wonderful treatment for the symptoms of indigestion. Mint leaves help in reducing nausea and morning sickness during pregnancy [9].

CONCLUSION

There is a difference in the intensity of nausea/ vomiting before and after the intervention Ginger booked water in pregnant women in trimester I at Dahlia Public Health Center with p value 0.00

There was a change in nausea and vomiting after being given Ginger Boiled Water where before and after treatment the average value was before 9.47 and the average value was 3.80.

There is a difference in the intensity of nausea/ vomiting before and after the intervention peppermint booked water in pregnant women in trimester I at Dahlia Public Health Center with p value 0.00

There was a change in nausea and vomiting after being given peppermint booked water where before and after treatment the average value was before 9.00 and the average value after was 5.73.

Suggestion

The development of local food potential is needed to prevent and reduce the intensity of nausea/vomiting in pregnant women

Conflict of Interest: None

Ethical Approval: Approved

REFERENCES

1. I. A. Ibrahim, S. Syahrir, and T. Anggriati, "Faktor-Faktor Yang Berhubungan Dengan Hyperemesis Gravidarum Pada Ibu Hamil Di RSUD Syekh Yusuf Tahun 2019," *Al Gizzai Public Heal. Nutr. J.*, vol. 1, no. 2, pp. 59–70, 2021.
2. S. Mariyah, E. Hernawati, and Liawati, "Hiperemesis Gravidarum Perbedaan Tingkat Mual dan Muntah pada Ibu Hamil Trimester I dengan Hiperemesis Gravidarum Sebelum dan Sesudah Diberikan Rebusan Jahe di Klinik Sehat Medika Tahun 2021," *J. Kesehat. Rajawali*, vol. 12, no. 1, pp. 12–15, 2022, doi: 10.54350/jkr.v12i1.121.
3. H. Kurnia, "Pengaruh Pemberian Aromatherapi Jahe Terhadap Mual Muntah Pada Ibu Hamil Trimester I," *J. Ris. Kesehat. Poltekkes Depkes Bandung*, vol. 11, no. 1, pp. 44–51, 2019, doi: 10.34011/juriskesbdg.v11i1.617.
4. D. W. Deny Eka Widyastuti, Ani Rumiati, "Terapi Komplementer Akupresur Untuk Mengatasi Emesis Gravidarum Pada Ibu Hamil Trimester I (Deny Eka Widyastuti, Ani Rumiati, Desy Widyastutik) 96," *INi Nyoman Yeyen Abriyani, 2Marsela Renasari Presty dan 3Ayu Kurniati*, vol. 10, no. 1, pp. 96–104, 2020.
5. A. D. P. Rusman, D. Andiani, and U. Fakultas Ilmu Kesehatan, "Prosiding Seminar Nasional IKAKESMADA 'Peran Tenaga Kesehatan dalam Pelaksanaan SDGs' Efektifitas Pemberian Jahe Hangat Dalam Mengurangi Frekuensi Mual Muntah Pada Ibu Hamil Trimester I," *Pros. Semin. Nas.*, pp. 978–979, 2017.
6. R. Saeni and E. Arief, "The Effect of Level of Dryness of Papaya (Carica papaya L .) Seeds as Anthelmintic in Primary School-Age Children," vol. 4, no. December, pp. 16–20, 2019.
7. I. W. Redi Aryanta, "Manfaat Jahe Untuk Kesehatan," *Widya Kesehat.*, vol. 1, no. 2, pp. 39–43, 2019, doi: 10.32795/widyakesehatan.v1i2.463.
8. R. A. Ursula Orcena Mau Soa and D. A. O. 3, "Perbandingan Efektivitas Pemberian Rebusan Jahe Merah Dan Daun Mint Dengan Jeruk Nipis Dan Madu Terhadap

- Mual Muntah,” *J. Kebidanan*, no. October 2018, 2020.
9. Anita, Aprina, and Aryani, “Perbedaan Mual dan Muntah Ibu Hamil Trimester I yang Diberikan Ekstrak Jahe dan Ekstrak Daun Mint,” *J. Kesehat.*, vol. 9, no. 2, p. 253, 2018, doi: 10.26630/jk.v9i2.986.

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