

TREATMENT OF EMESIS GRAVIDARUM IN PREGNANT WOMEN WITH LEMON AROMATHERAPY (CITRUS)

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ABSTRACT

Emesis gravidarum is a symptom of nausea and vomiting that occurs during pregnancy, usually in the first trimester. This symptom is common in 50-80% of pregnant women and begins around the 6th week of pregnancy. If emesis gravidarum is not treated immediately, it will progress to hyperemesis and can result in impaired fetal growth, the fetus dies in the womb and the fetus can experience congenital abnormalities. Non-pharmacological treatment of emesis gravidarum or complementary therapy has the advantage of being cheaper and having no pharmacological effects. One safe therapy is by giving lemon (citrus) aromatherapy. Objective: This study aims to determine the effectiveness of lemon (citrus) aromatherapy in reducing emesis gravidarum in pregnant women. Method: The research design uses an experimental method with a one group pretest-posttest design. The independent variable is lemon aromatherapy, the dependent variable is emesis gravidarum. The sampling technique used purposive sampling technique, a sample of 10 pregnant women in the 1st trimester. The research instrument used lemon aromatherapy media and Pregnancy Unique Quantification of Emesis (PUQE-24). The data analysis used was the t-test. Results: The research results showed that the average incidence of emesis gravidarum before therapy was given was 9.3 (moderate degree category), the average incidence of emesis gravidarum after therapy was given was 5.5 (mild degree category). The results of the analysis using the t-test were $p\text{-value} < \alpha$, namely $0.000 < 0.05$, which means that there was an effect of giving lemon (citrus) aromatherapy therapy on reducing emesis gravidarum. Conclusion: Giving lemon (citrus) aromatherapy therapy is effective in reducing emesis gravidarum in pregnant women in the first trimester.

Keywords: emesis gravidarum; lemon aromatherapy; pregnant women

INTRODUCTION

Emesis gravidarum is a symptom of nausea and vomiting that occurs during pregnancy, usually in the first trimester. This symptom is common in 50-80% of pregnant women and begins around the 6th week of pregnancy. The exact cause of emesis gravidarum is not yet known, but it is believed to be related to hormonal changes, especially increased levels of the hormones estrogen and progesterone. The main symptoms are nausea and vomiting which often occur in the morning, but can also occur in the afternoon and evening. Nausea, vomiting can cause fluid and nutritional deficiencies, which if not treated can cause dehydration, ketosis and nutritional deficiencies (Novita & Rosmadewi, 2019). Around 70-80% of pregnant women experience emesis gravidarum. This incidence rate varies in various countries, but generally occurs in 50-90% of pregnant women in the first trimester. In some cases, emesis gravidarum can continue into the second and third trimesters, but usually these symptoms will improve by 12-16 weeks of gestation. If symptoms persist and get worse, it can cause hyperemesis gravidarum, which is a more severe pathological condition. If left untreated, emesis gravidarum can cause complications such as Wernicke encephalopathy, esophageal rupture, and even abortion and stunted fetal growth (Carolin et al, 2020).

Nausea and vomiting during pregnancy, especially in the form of emesis gravidarum or hyperemesis gravidarum, can affect the health of the fetus, but not directly. In some cases, untreated nausea and vomiting can increase the risk of miscarriage. Research shows that pregnant women who do not experience nausea and vomiting have a higher risk of miscarriage, especially if they are less than 25 years old or more than 35 years old. It is important for pregnant women to monitor symptoms of nausea and vomiting and immediately consult a health worker if these symptoms persist or get worse, as well as to undergo regular pregnancy checks to monitor the health of the fetus (Fauziah et al, 2022). Overcoming severe nausea and vomiting during pregnancy can be done in several ways, including eating small amounts but often, eating foods high in carbohydrates and protein, drinking ginger concoction, breathing relaxation techniques, avoiding foods that trigger nausea, and inhaling lemon or spearmint oil. By following these methods, pregnant women can reduce the symptoms of severe nausea and vomiting and maintain the health of the fetus (Assa et al, 2022).

Lemon oil (lemon aroma) has been shown to be effective in reducing nausea and vomiting in pregnant women. A study showed that 40% of women have used lemon aroma to relieve nausea and vomiting, and 26.5% of them have reported it as an effective way to control nausea and vomiting symptoms. Another study found that lemon aromatherapy can reduce the frequency of nausea and vomiting in first trimester pregnant women, with significant results. Lemon oil works by sending electrochemical messages to the central nervous system through the circulatory system, which then activates the emotional and memory centers. This causes feelings of pleasure, relaxation, and calm, which can reduce symptoms of nausea and vomiting. Lemon contains compounds such as limonene, citral, linalyl, and linalool which can stabilize the central nervous system and increase appetite. This compound can also improve blood circulation and function as a sedative (Sofiani & Pratiwi, 2017). Lemon oil can be used to treat nausea and vomiting by inhalation. This helps calm and relieve nausea and vomiting. Make sure to use quality lemon oil that is free from unwanted additives. Pure lemon oil will give better results. Lemon oil works by delivering electrochemical messages to the central nervous system through the circulatory system. This causes feelings of joy, relaxation and calm, which can reduce symptoms of nausea and vomiting (Vitrianiingsih & Khadijah, 2019). This study aims to determine the effectiveness of lemon (citrus) aromatherapy in reducing emesis gravidarum in pregnant women.

METHOD

The research design uses an experimental method with one group pretest-posttest design. The independent variable is lemon aromatherapy, the dependent variable is emesis gravidarum. The sampling technique used in the research was purposive sampling technique, a sample of 10 pregnant women in the first trimester was obtained. The instruments in this research used lemon aromatherapy media, and Pregnancy Unique Quantification of Emesis (PUQE-24). PUQE-24 is a scoring system to measure the severity of nausea and vomiting of pregnancy within 24 hours. The PUQE score for each patient was calculated using three criteria to assess the severity of nausea and vomiting during pregnancy (number of hours of nausea, number of vomiting episodes, and number of episodes of dry vomiting in the last 24 hours). The research stages consisted of 3 stages, namely stage I, pretest before the intervention was given, stage II was the provision of lemon aromatherapy intervention with a frequency of 1 time a day for 10 minutes every morning for 7 days, stage III was the posttest after giving the intervention. The data analysis used was the t-test.

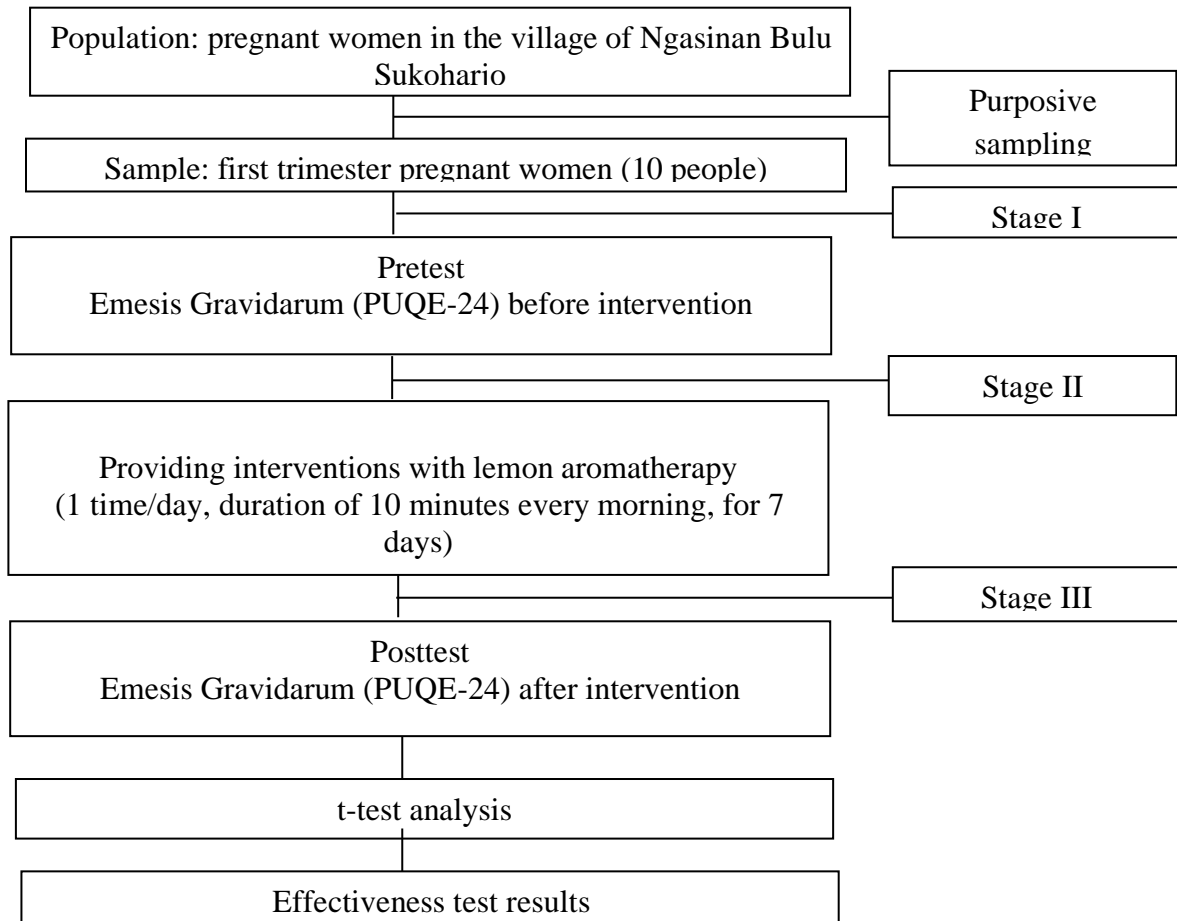


Figure 1. Flowchart of the research method

RESULT AND DISCUSSION

Table 1.
 Frequency of Emesis Gravidarum Based on Assessment of PUQE-24 Score in First Trimester Pregnant Women

Emesis Gravidarum	f	%
Mild degree	3	30
Moderate degree	7	70
Severe degree	0	0
Amount	10	100

Based on table 1, it is known that out of 10 pregnant women in the 1st trimester, 7 pregnant women had moderate emesis gravidarum, 3 pregnant women had mild emesis gravidarum and no pregnant women had severe emesis gravidarum.

Table 2.
 Average Frequency of Emesis Gravidarum Before and After Giving Lemon (Citrus) Aromatherapy

Emesis Gravidarum	Mean	standard deviation	Min	Max
Before treatment	9.3	1.3	7	12
After treatment	5.5	1.2	3	11

Based on table 2, it is known that the average incidence of Emesis Gravidarum before being given therapy is 9.3 with a minimum value of 7 and a maximum value of 12, the average incidence of Emesis Gavidarum after being given therapy is 5.5 with a minimum value of 3 and a maximum value of 11.

Table 3.

The Effectiveness of Giving Lemon (Citrus) Aromatherapy on Reducing Emesis Gravidarum in First Trimester Pregnant Women

Emesis Gravidarum	f	Mean difference	SD	t-test	p-value
Before and after being given treatment	10	3.750	1.030	16.558	0,000

Based on table 3 it is known that the results of the analysis with the t-test value of p-value $< \alpha$, namely $0.000 < 0.05$, it can be interpreted that there is an effect of giving lemon aromatherapy (Citrus) therapy to reducing emesis gravidarum in first trimester pregnant women.

The results of the study revealed that out of 10 first trimester pregnant women who had emesis gravidarum, most of them had moderate degrees of emesis gravidarum. The incidence of Emesis Gravidarum is said to be of moderate degree if the Pregnancy Unique Quantification of Emesis (PUQE-24) assessment obtains a value of 7-12. PUQE-24 is a scoring system to measure the severity of nausea and vomiting of pregnancy in 24 hours. The PUQE-24 score for each patient was calculated using three criteria to assess the severity of nausea and vomiting during pregnancy (number of hours of nausea, number of episodes of vomiting, and number of episodes of dry vomiting in the last 24 hours). The interpretation of the PUQE-24 score for assessing nausea and vomiting during pregnancy is mild (score 3-6), moderate (score 7-12) and severe (score > 13). If the value is > 13 , it means that the pregnant woman has experienced hyperemesis gravidarum and requires treatment (Hada et al, 2021).

Emesis gravidarum or nausea and vomiting which is often experienced by pregnant women, is influenced by several factors. Emesis gravidarum is influenced by a combination of hormonal, psychological, environmental, nutritional, age and parity factors. Increased levels of the hormone chorionic gonadotropin (HCG) and progesterone during pregnancy can cause the smooth muscles in the gastrointestinal system to relax, so that gastric motility decreases and gastric emptying slows down. Psychological problems such as fear of pregnancy and childbirth, changes in the household, or fear of responsibilities as a mother can aggravate the symptoms of nausea and vomiting. Environmental conditions can also influence nausea and vomiting. However, details about these environmental factors are not very clear in the sources provided. Lack of fluids and nutrition can worsen symptoms of nausea and vomiting. The age of the pregnant woman can also influence nausea and vomiting. Pregnant women under 20 years or over 35 years have a higher risk of experiencing emesis gravidarum. Parity (number of births) can also influence, with pregnant women who have high parity having a higher risk of experiencing emesis gravidarum (Rofi'ah, 2019).

This study compared the incidence of emesis gravidarum before and after giving lemon (citrus) aromatherapy. The results showed that the average incidence of emesis gravidarum before being given therapy was 9.3 with a minimum score of 7 and a maximum score of 12, the average incidence of emesis gravidarum after being given therapy was 5.5 with a minimum score of 3 and a maximum score of 11. PUQE-24 assessment before administration of therapy the average incidence of emesis gravidarum was in the category of moderate degrees, after administration of

therapy the average incidence of emesis gravidarum was in the category of mild degrees. This shows that giving lemon (citrus) aromatherapy can reduce the frequency of nausea and vomiting (emesis gravidarum).

Aromatherapy is an effective and safe therapy for reducing symptoms of nausea and vomiting in pregnant women. Research by Derliana et al (2024) shows that lemon aromatherapy can effectively reduce the intensity of nausea and vomiting. Research shows that after using lemon aromatherapy, the average Emesis Gravidarum score can decrease from 9.57 to 6.40, which is a decrease of 3.17 points. Lemon aromatherapy has an antifungal effect and effectively neutralizes unpleasant odors, and can reduce anxiety, depression and stress. This can increase calm and reduce symptoms of nausea and vomiting. Lemon essential oil contains chemical compounds such as geranyl acetate, nerol, linalyl acetate, and terpineol. These compounds have antidepressant, antiseptic and mild sedative effects, which can help reduce symptoms of nausea and vomiting (Fitria et al, 2021).

The results of the study using the t-test analysis show that the $p\text{-value} < \alpha$ is $0.000 < 0.05$, so it can be interpreted that there is an effect of giving lemon (citrus) aromatherapy to reduce emesis gravidarum in first trimester pregnant women. Lemon aromatherapy is considered safe to use during pregnancy. Lemon essential oil does not have dangerous side effects and can be used as an alternative treatment for pregnant women to reduce the intensity of nausea and vomiting (Sari & Yulia, 2018). Lemon aromatherapy can be used in various ways, such as inhaling the aroma through a tissue smeared with lemon essential oil, burning lemon essential on an aromatherapy stove, or using aromatherapy candles. Effective doses have been studied in several studies, such as 0.1 ml, 0.2 ml, and 0.3 ml. Lemon aromatherapy works by sending biomolecules to the brain and releasing hormones that can neutralize and cause feelings of calm. This can help reduce symptoms of nausea and vomiting (Nurulicha, 2020). Research conducted by Risci (2022) shows that lemon aromatherapy is more effective in reducing emesis gravidarum compared to lavender aromatherapy. The mean difference between the pre-test and post-test for lemon aromatherapy was 3.8, while for lavender aromatherapy it was 3.1. Lemon aromatherapy can be used as an effective alternative non-pharmacological treatment to reduce symptoms of nausea and vomiting in pregnant women. The advice given is to use lemon aromatherapy regularly, such as every morning for 4 days, to increase its effectiveness (Pratiwi et al, 2020).

CONCLUSION

Lemon (citrus) aromatherapy is effective in reducing emesis gravidarum in pregnant women in the first trimester.

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