



THE EFFECT OF INHALATION OF CITRUS LEMON AROMATHERAPY ON THE DEGREE OF NAUSEA AND VOMITING IN PREGNANT WOMEN IN TRIMESTER I

PENGARUH INHALASI AROMATERAPI CITRUS LEMON TERHADAP DERAJAT MUAL MUNTAH PADA IBU HAMIL TRIMESTER I

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Abstract

Background: Pregnancy is a process of fertilization between spermatozoa and ovum, followed by implantation or nidation. During the first trimester of pregnancy, pregnant women usually experience discomfort such as nausea and vomiting. About 50-80% of pregnant women experience nausea and vomiting in early pregnancy, typically between 6-12 weeks of gestation, due to gastrointestinal and psychological distress. One therapy to reduce the discomfort of nausea and vomiting during pregnancy is the use of citrus lemon aromatherapy. **Purpose:** This study aims to determine the effect of inhaling citrus lemon aromatherapy on the degree of nausea and vomiting (emesis gravidarum) in pregnant women during the first trimester. **Methods:** This paper uses a type of qualitative research with a case study design. **Results:** The results of the nursing implementation stated that after the administration of citrus lemon aromatherapy inhalation, there was a decrease in the PUQE-24 score, namely from the category of moderate nausea and vomiting with a score of 12 to no nausea and vomiting with a score of 3. **Conclusion:** The effect of inhaling citrus lemon aromatherapy on the degree of nausea and vomiting (emesis gravidarum) in pregnant women during the first trimester is quite effective in helping to reduce nausea and vomiting in pregnant women.

Keywords : Citrus Lemon Aromatherapy, Emesis Gravidarum, First Trimester



Abstrak

Latar belakang: Kehamilan merupakan suatu proses penyatuan atau fertilisasi dari spermatozoa dan ovum yang diikuti dengan implantasi atau nidasi. Ibu hamil biasanya mengalami ketidaknyamanan selama trimester pertama kehamilan, seperti mual dan muntah. Mual muntah di awal kehamilan dialami sekitar 50-80% pada wanita hamil, diantara usia kehamilan 6-12 minggu disebabkan oleh distress gaastrointestinal dan psikologis. Terapi untuk mengurangi ketidaknyamanan berupa mual dan muntah pada kehamilan salah satunya yaitu memberikan aromaterapi citrus lemon. Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh inhalasi aromaterapi citrus lemon terhadap derajat mual muntah (emesis gravidarum) pada ibu hamil trimester I. Metode: Karya tulis ini menggunakan jenis penelitian kualitatif dengan rancangan studi kasus. Hasil: Hasil dari implementasi keperawatan menyatakan bahwa setelah dilakukan pemberian inhalasi aromaterapi citrus lemon, terjadi penurunan skor PUQE-24 yaitu dari kategori mual dan muntah sedang dengan skor 12 menjadi tidak mual muntah dengan skor 3. Kesimpulan: Pengaruh inhalasi aromaterapi citrus lemon terhadap derajat mual muntah (emesis gravidarum) pada ibu hamil trimester I cukup efektif dalam membantu menurunkan mual dan muntah pada ibu hamil.

Kata Kunci : Aromaterapi Citrus Lemon, Emesis Gravidarum, Trimester I

1. INTRODUCTION

Pregnancy is the process of union or fertilization between spermatozoa and ovum followed by implantation or nidation. The pregnancy phase is divided into 3, namely the first trimester lasts for 13 weeks, the second trimester lasts for 14 weeks, and the third trimester lasts for 13 weeks. During the pregnancy phase, women will experience physical, mental and social health changes (Ni'amah & Sulistyaningsih, 2022).

In the first trimester, pregnant women usually experience discomfort such as nausea and vomiting (Emesis Gravidarium) (Vitrianingsih, 2019). The cause of nausea in the morning or at a certain time is caused by an increase in the hormones estrogen and HCG (Human Chorionic Gonadotropin) in the serum at the same time as the development of the placenta. Nausea and vomiting in early pregnancy are experienced by about 50-80% of pregnant women, between 6 and 12 weeks of gestation due to physical (peptic ulcers, cholecystitis, gastroenteritis, appendicitis, hepatitis) and psychological (changes in family, social use, and work). This can last up to 20 weeks of pregnancy (Ayudia & Ramadhani, 2020).

Based on data from the World Health Organization (WHO) in 2019, pregnancies in the world with emesis gravidarum reached at least around 12.5% and increased in 2015. On a world scale, pregnant women with emesis gravidarum reach 70-80% (Ekawati et al., 2022).

Meanwhile, in Indonesia based on the Ministry of Health (2019), the incidence of emesis gravidarum in pregnancy reached an average of 67.9%. Primigravida pregnant women have a percentage of emesis gravidarum of 60% to 80%, in multigravida mothers it reaches 40% to 60%. The total number of primigravida and multigravida with emesis gravidarum in 2019 reached 543 people out of 2203 (Ekawati et al., 2022).

Nausea and vomiting in pregnancy affect the condition of pregnant women, including feeling weak, pale, and there is a decrease in the desire to urinate which has an impact on decreasing body fluids and blood thickening (hemoconcentration). This condition triggers a slowdown in blood circulation due to lack of food and tissues lack oxygen. So that this



condition endangers the mother and her child because the tissue is damaged (Rofi'ah et al., 2019).

The intensity of symptoms that occur in pregnant women greatly affects the management of nausea and vomiting. Management in pregnancy with nausea and vomiting includes pharmacological and non-pharmacological treatment. Some examples of pharmacological management include vitamins, antihistamines, anticholinergics, dopamine antagonists, phenothiazine, butyrophenone, serotine antagonists, and corticosteroids. As for non-pharmacological management, it includes diet management, emotional support, acupuncture, and aromatherapy (Wijayanti & Melasari, 2021).

Aromatherapy consists of 2 words, namely aroma with the meaning of fragrant and fragrant, then therapy refers to healing methods. Essential oils are used as aromatherapy that works to treat the body and cure diseases. Theophrastus argued that improvements in the health of the body, mind, and feelings can be obtained from the content of plant aromatic substances (Alita et al., 2021).

One of the essential oils that is safe and often used as aromatherapy during pregnancy is citrus lemon (Sudirman & Agustin, 2021). The content of lemons that are beneficial for the body and fetal development include flavonoids (flavonones) lomoene, folic acid, tannins, vitamins (AC, A, B1), and minerals (potassium and magnesium). Nausea and vomiting can be treated by using lemon aromatherapy. The content of citrus flavonoids found in lemons and lemons is useful for antioxidants and improves blood circulation. The flavonoid content is also responsible for producing the hormone estrogen (Juwita & Yulita, 2023).

The content of citrus bioflavonoids found in lemon or lime oranges is useful for antioxidants and improved blood circulation. The production of the hormone estrogen is influenced by the content of flavonoids. The content of flavonoids, citric acid, vitamin C and minerals such as potassium, phosphorus, sodium, iron, and zinc is found in lemons or citrus lemons. Research shows that lemon water contains 206,958 mg of flavonoids and 22,364 mg of vitamin C (Fajriah, 2021).

The use of essential oils by inhalation is the best way to get the benefits directly without having to take off the clothes first. When the vapor of this essential oil is inhaled immediately, it enters the olfactory system. So, in the use of this essential oil, you must pay attention to the necessary dosage rules. We can also use a handkerchief as a place to accommodate aromatherapy drops, which are as many as four to five drops, then bring the handkerchief closer to the nose and mouth area (Juwita & Yulita, 2023).

From the description of this background, the author is interested in compiling a scientific paper with the title "The Effect of Aromatherapy Inhalation of Citrus Lemon on the Degree of Nausea and Vomiting (Emesis Gravidarum) in Pregnant Women in the First Trimester in Pakuncen Village, Bobotsari, Purbalingga".

2. RESEARCH METHOD

The research uses a qualitative method with a case study design. Case study research is a type of research that studies nursing issues with specific limitations, conducts thorough data collection, and uses a variety of information sources. Case study research is limited by time and place, as well as the case studied in the form of events, activities or individuals (Achjar et al., 2023).



The strategy of this case study is to conduct complementary therapy using citrus lemon aromatherapy inhalation in 1 (one) patient who experiences nausea and vomiting (emesis gravidarum). The study was conducted on pregnant women by giving complementary therapy of citrus lemon inhalation which was included in the inclusion and exclusion criteria.

3. RESULTS AND DISCUSSION

Overview of the case study in Pakuncen Village is one of the villages located in Bobotsari District, Purbalingga. The author took 1 patient, namely with management for 6 days. Mrs. C entered the criteria that had been set, namely pregnant women in the first trimester who experienced nausea and/or vomiting. The author intervened in Mrs. C by giving citrus lemon aromatherapy inhalation to reduce the degree of nausea and vomiting in pregnant women in the first trimester.

The results of the case study showed that before the administration of citrus lemon aromatherapy inhalation, the PUQE-24 questionnaire score was 12 with the category of moderate nausea and vomiting. After the administration of citrus lemon aromatherapy inhalation, there was a decrease in the degree of nausea and vomiting with a PUQE-24 questionnaire score, which was 3 with the category of not nausea and vomiting.

Table 1. PUQE-24 Score Results

Day/date	Pre Time		Post Time	
	Value	Category	Value	Category
Monday, May 20, 2024	12	Moderate	11	Moderate
Tuesday, 21 May 2024	10	Moderate	9	Moderate
Wednesday, 22 May 2024	8	Moderate	7	Moderate
Thursday, 23 May 2024	6	Mild	5	Mild
Friday, 24 May 2024	4	Mild	3	Not nausea vomiting
Saturday, 25 May 2024	3	Not nausea vomiting	3	Not nausea vomiting

Before the application of citrus lemon aromatherapy inhalation on May 20, 2024, the PUQE questionnaire score obtained was 12 with the category of nausea and moderate vomiting, after the administration of citrus lemon aromatherapy inhalation, the PUQE questionnaire score was 11 with the category of moderate nausea and vomiting. On May 21, 2024, the PUQE questionnaire score before the administration of citrus lemon aromatherapy inhalation was 10 with the category of moderate nausea and vomiting, after the administration of citrus lemon aromatherapy, the PUQE questionnaire score obtained was 9 with the category of moderate nausea and vomiting. The next citrus lemon aromatherapy inhalation was carried out on May 22, 2024, before the PUQE questionnaire score was obtained, which was 8 with the category of moderate nausea and vomiting, after the administration of citrus lemon aromatherapy, the PUQE questionnaire score was 7 with the category of nausea and moderate vomiting. On May 23, 2024, the PUQE questionnaire score before the administration of citrus lemon aromatherapy inhalation was 6 with the category of mild nausea and vomiting, after the administration of citrus lemon aromatherapy, the PUQE questionnaire score obtained was 5 with the category of mild nausea and vomiting. The next sip of citrus lemon aromatherapy was carried out on May 24, 2024, before the PUQE questionnaire score was obtained, which was 4 with the category of mild nausea and vomiting, after the administration of citrus lemon aromatherapy, the PUQE questionnaire score was 3 with the category of not nausea and



vomiting. On May 25, 2024, the PUQE questionnaire score before the administration of citrus lemon aromatherapy inhalation was 3 with the category of not nausea and vomiting, after the administration of citrus lemon aromatherapy the PUQE questionnaire score obtained was 3 with the category of not nausea and vomiting.

After the implementation of inhalation of citrus lemon aromatherapy every time the respondents were nauseous, the authors conducted a comparison before and after being given citrus lemon aromatherapy inhalation with scores from the Pregnancy Unique of Emesis and Nausea (PUQE)-24 questionnaire, and the results showed a decrease in the frequency of nausea and vomiting.

The score of the Pregnancy Unique of Emesis and Nausea (PUQE)-24 questionnaire before the application of citrus lemon aromatherapy inhalation was 12 in the category of moderate nausea and vomiting. The main problem that arises in pregnant women in the first trimester (1-3 months) is nausea and vomiting, especially in the morning (morning sickness). About 50% of women will experience gastrointestinal distress to varying degrees at the beginning of pregnancy. Emesis gravidarum or morning sickness refers to nausea that typically occurs in the morning and subsides after a few hours. This state can also occur episodically during the day or in response to hunger (Yusnia et al., 2023).

The score of the Pregnancy Unique of Emesis and Nausea (PUQE)-24 questionnaire after the application of lemon aromatherapy for 6 days saw a decrease in the PUQE-24 score, namely in the category of not nausea and vomiting with a score of 3. Lemon aromatherapy is a method of using essential oils to respondents who experience emesis gravidarum (Yusnia et al., 2023).

When aromatherapy inhalation is carried out, there is a transfer of molecules due to evaporation (volatile) by the air currents "roof" of the nose where sensitive cells are able to give rise to cilia with a soft texture. There are electrochemical messages transmitted by the mucosal membranes when the molecules are attached to the hairs. After that, it is continued to the stomach. Then, there is a decrease in the hormone HCG (Human Chorionic Gonadotropin) in the stomach which is triggered by the presence of molecules found in lemons. Furthermore, these molecules lead to the intestines and have an effect on the hormone progesterone, normalization of intestinal motility and the slowing down of gastric emptying are affected by steroids until finally there is a decrease in nausea and vomiting (Yusuf et al., 2023).

4. CONCLUSION

Aromatherapy is the use of essential oils as medicine. Citrus lemon is one of the safe oils and is often used as aromatherapy during pregnancy. The use of essential oils by inhalation is the best way to get the benefits directly.

After an intervention was carried out on Mrs. C on May 20-25 with the aromatherapy inhalation of citrus lemon given for 6 days with a dose of 0.2 ml or approximately 4-5 drops, it was concluded that the inhalation of citrus lemon aromatherapy was effective in reducing the frequency of nausea and vomiting as evidenced by a decrease in the PUQE questionnaire score from 12 with the category of severe nausea and vomiting to 3 with the category of not nausea vomiting..

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