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NURSING CARE FOR PREGNANT WOMEN WITH HYPOVELEMIA DUE TO HYPEREMESIS GRAVIDARUM USING ZINGIBER OFFICINALE HERBAL THERAPY

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ABSTRACT

Hyperemesis gravidarum is a condition characterized by excessive vomiting, which may lead to dehydration, electrolyte imbalance, acid-base disturbances, and significant weight loss in pregnant women. Management of hyperemesis gravidarum requires controlling nausea and vomiting to prevent active fluid loss. One potential complementary intervention is the use of Zingiber officinale (ginger) herbal therapy.This study aims to describe complementary nursing care focused on managing hypovolemia in a patient with hyperemesis gravidarum through the use of Zingiber officinale herbal therapy. The research employed a descriptive case study design to identify nursing care problems in a patient diagnosed with hyperemesis gravidarum. The subject was Mrs. S, a G1P0A0H0 patient at 9 weeks of gestation. The identified nursing diagnosis was hypovolemia related to active fluid loss, evidenced by nausea and vomiting more than five times per day, weakness, dizziness, dry lip mucosa, capillary refill time (CRT) > 2 seconds, urine ketones 3+, and decreased blood pressure (100/60 mmHg). The nursing intervention focused on managing hypovolemia and reducing nausea and vomiting through the administration of Zingiber officinale herbal therapy twice daily. After 72 hours (3×24 hours) of nursing care, the evaluation showed improvement in the patient's condition: no more vomiting or dizziness, CRT < 2 seconds, moist mucous membranes, negative urine ketones, improved fluid intake, and stable blood pressure (110/70 mmHg). This study concludes that Zingiber officinale herbal therapy is effective in reducing nausea and vomiting and may help prevent potential complications during pregnancy.

Keywords : Hyperemesis gravidarum, Hypovolemia, Zingiber Officinale

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INTRODUCTION

Pregnancy is a natural process that lasts approximately 40 weeks from conception to delivery, divided into three trimesters (Fajriati, 2023). During pregnancy, physical, hormonal, and psychological changes occur, often causing various complaints, including nausea and vomiting. These symptoms affect about 50–90% of pregnant women and are generally considered normal (Indriyani and Yuliaswati, 2024). However, if left untreated, nausea and vomiting can progress to emesis gravidarum, which affects approximately 80% of pregnant women and significantly impacts their quality of life (Hernawati et al., 2025). In more severe cases, this condition may develop into hyperemesis gravidarum, characterized by excessive vomiting leading to dehydration, electrolyte imbalance, and risks to fetal health (Marlina et al., 2023).

According to the World Health Organization (WHO), hyperemesis gravidarum occurs in 12.5% of all pregnancies worldwide. In Indonesia, the prevalence is reported to be higher, reaching 14.8% of total pregnancies (Haryanti et al., 2022). Nausea and vomiting complaints commonly occur in 60%–80% of primigravida and 40%–60% of multigravida women. However, in one out of every thousand pregnancies, these symptoms can become severe. Data from the Bali Provincial Health Office in 2021 showed 21,965 cases of emesis gravidarum, accounting for 8.5% of all pregnant women in Bali (Bali Provincial Health Office, 2021).

The causes of hyperemesis gravidarum include both biological and psychological factors. Dietary intake low in protein and high in fat during early pregnancy can worsen symptoms, as can poor nutritional status (Febrien, 2023). Psychologically, stress, anxiety, and depression also contribute to the condition. Symptoms of hyperemesis gravidarum are classified into three stages: the first stage involves persistent nausea with mild dehydration; the second stage presents more severe symptoms such as apathy, oliguria, and hypotension; and the third stage is marked by decreased consciousness, elevated temperature, weak pulse, and sudden cessation of nausea and vomiting, indicating serious systemic complications (Endarwati and Wardani, 2025).

Non-pharmacological treatments for nausea and vomiting during pregnancy include dietary modifications, herbal therapies, and alternative techniques such as acupressure, acupuncture, reflexology, osteopathy, homeopathy, hypnotherapy, and aromatherapy. Traditional remedies also play a significant role, particularly the use of ginger in the form of herbal drinks, candies, or decoctions (Hernawati et al., 2025).

Ginger (Zingiber officinale) contains active compounds such as essential oils (zingiberene, zingiberol, bisabolene), curcumin, gingerol, flavonoids, vitamin A, and bitter resins. These compounds inhibit serotonin, a neurotransmitter produced in the central nervous system and digestive tract, thus providing a soothing effect on the stomach and alleviating nausea and vomiting (Ayu Puspita et al., 2022).

Several studies support the efficacy of ginger in reducing nausea and vomiting in pregnant women. (Hasan et al., 2023) reported that among 30 first-trimester pregnant women, ginger consumption reduced nausea and vomiting intensity from moderate (60%) to mild (83.3%), with a p-value of 0.00. (Marlina et al., 2023) found that ginger decoction administration decreased the emesis gravidarum score from 10.80 to 3.73, with a p-value of 0.001. Meanwhile, a case study by (Amalia et al., 2024) demonstrated that consuming warm ginger water three times a week reduced the frequency of nausea and vomiting to 2–3 times per day. These findings reinforce that ginger is an effective non-pharmacological alternative for managing nausea and vomiting in first-trimester pregnant women.

METHOD

This study employed a descriptive design with a case study approach to describe nursing care for Mrs. S, a patient diagnosed with hyperemesis gravidarum accompanied by hypovolemia. The research was conducted at Negara General Hospital, Jembrana Regency, Bali. The research process included assessment, nursing diagnosis, intervention planning, implementation, and evaluation. The main focus of the intervention was the administration of Zingiber officinale (ginger) herbal therapy to reduce nausea and vomiting and to manage active fluid loss. The therapy was administered in the form of warm ginger infusion (250 ml) twice daily for three consecutive days. Fresh ginger (approximately 1 gram) was sliced, boiled, strained, and consumed warm. Patient monitoring included the frequency of nausea and vomiting, vital signs, capillary refill time (CRT), skin turgor, mucosal membrane moisture, fluid balance (intake-output), and urine laboratory results (ketonuria). This study obtained ethical approval from the hospital and written informed consent from the patient. The researcher ensured data confidentiality and upheld patient rights in accordance with research ethical principles

RESULTS

At the initial assessment, Mrs. S, was diagnosed with hypovolemia, indicated by vomiting more than five times a day, blood pressure of 100/60 mmHg, capillary refill time (CRT) > 2 seconds, dry lip mucosa, and a urinalysis showing 3+ ketones. Other symptoms included weakness, dizziness, and low fluid intake.

Zingiber officinale herbal therapy was administered in the form of warm ginger infusion, 250 ml twice daily (morning and evening) for three consecutive days. After 3X24 hours of intervention, the frequency of vomiting decreased from more than five times per day to 1–2 times per day, and by the third day, vomiting had ceased. The patient's appetite improved, and fluid intake increased to approximately. CRT returned to normal (<2 seconds), the mucous membranes appeared moist, and her overall physical condition showed improvement. Urinalysis on the third day showed negative ketones, and blood pressure stabilized at 110/70 mmHg.

These measurable outcomes indicate that Zingiber officinale therapy was effective in improving fluid balance and reducing nausea and vomiting in a patient with hyperemesis gravidarum.

DISCUSSION

Mrs. S, is a pregnant woman experiencing hyperemesis gravidarum, a condition characterized by severe nausea and vomiting. Prior to the intervention, the patient underwent a thorough examination, and the management focused on addressing hypovolemia through oral and intravenous fluid therapy, along with additional treatment using Zingiber officinale (warm ginger water) administered twice daily.

After receiving nursing care for 3x24 hours, Mrs. S, showed significant improvement, indicated by a decreased frequency of nausea and vomiting, increased mucosal moisture, and increased fluid intake and blood pressure. These findings suggest the potential of Zingiber officinale as an effective non-pharmacological therapy to reduce symptoms of hyperemesis gravidarum and prevent the risk of hypovolemia.

These results align with previous studies, such as those reported by (Haryanti et al., 2022), who found a significant reduction in the frequency of nausea and vomiting in pregnant women after ginger water therapy, from 8–10 times to 2–5 times per day ($p < 0.05$). Furthermore,

(Rosmawati, 2024) reported that administering ginger drink during the first trimester significantly decreased the incidence of hyperemesis gravidarum (p = 0.02). These findings strengthen the evidence that ginger has potential as a herbal intervention for treating nausea and vomiting in pregnant women.

However, this study has limitations that need to be acknowledged. It involved only a single respondent, so the results cannot be generalized broadly. Additionally, factors such as the patient's individual condition, environmental influences, and possible placebo effects may have affected the intervention outcomes. Therefore, further research with larger samples and stronger study designs is required to confirm the effectiveness of Zingiber officinale herbal therapy.

Hyperemesis gravidarum is a serious condition that can be life-threatening to both mother and fetus if not promptly managed. Possible complications include dehydration, ketonuria, electrolyte imbalances, arrhythmias, and severe complications such as Wernicke's encephalopathy, stroke, organ failure, and pulmonary embolism (Shaikh et al., 2024). Moreover, a maternal weight loss of more than 15% can increase the risk of psychological disorders, gastrointestinal bleeding, as well as impaired growth and neurological development in the fetus (Tejada et al., 2025).

CONCLUSION

Nursing care for Mrs. S, focused on managing hypovolemia caused by hyperemesis gravidarum. Interventions consisting of isotonic fluid administration and ginger herbal therapy given twice daily for three days showed improvements, such as a decrease in nausea and vomiting, increased moisture of the lip mucosa, as well as improved blood pressure and fluid intake. These preliminary findings suggest that this combined approach has the potential to help reduce nausea and vomiting and prevent further fluid loss associated with hypovolemia.

RECOMMENDATION

Although this case study demonstrates the potential of Zingiber officinale as an adjunct therapy for managing nausea, vomiting, and hypovolemia in cases of hyperemesis gravidarum, its widespread application in clinical practice should be approached with caution. Further research with a stronger study design and a larger sample size is needed to confirm the effectiveness and safety of this herbal therapy.

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