

ANTENATAL CARE MIDWIFERY CARE FOR NY. "L" G1P0A0 GRAVID 10 WEEKS WITH HYPEREMESIS GRAVIDARUM AT HEALTH CENTER BUNGI

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A B S T R A C T

Background: Hyperemesis gravidarum is a condition characterized by excessive nausea and vomiting during the first trimester of pregnancy. Although symptoms of nausea and vomiting are common in pregnancy, in excess they can have a serious impact on maternal health, resulting in a lack of energy and essential nutrients. Proper management is necessary to prevent further complications and ensure maternal and fetal health is maintained. **Objectives:** This paper aims to carry out antenatal midwifery care for Mrs. "L", a 10-week pregnant woman experiencing hyperemesis gravidarum, at Puskesmas Bungi, Baubau City in 2023. Management using Varney's seven-step approach and SOAP documentation. **Methods:** This research is a descriptive case study that took place at Puskesmas Bungi, Baubau City, for three consecutive days in 2023. The subject was Mrs. "L", a 10-week pregnant woman who experienced hyperemesis gravidarum. Data collection was done through physical examination, interview, observation, and medical record documents. **Results:** Midwifery care for Mrs. "L" included a psychological approach with emotional support, observation of vital signs (blood pressure, pulse, respiration, temperature), and advice to eat in small portions but often. Other suggestions were to get enough rest and maintain personal hygiene. This treatment also involved collaboration with doctors to administer appropriate antiemetics. After three days, Mrs. "L"'s condition improved with reduced frequency of nausea and vomiting, stable vital signs, and stable maternal condition. **Conclusion:** Based on Varney's seven steps and SOAP, the management of hyperemesis gravidarum in Mrs. "L" was successful. There was no gap between theory and practice, indicating that the intervention was effective.

INTRODUCTION

In pregnancy, nausea and vomiting are normal symptoms and often occur in the first trimester of pregnancy, however, if excessive, it can interfere with daily work and the general condition becomes poor, causing the mother to lack energy and nutrients, which is called hyperemesis gravidarum. (Dayanti, Nurrochmah, and Alma 2023a)

Hyperemesis gravidarum can affect the health status of the mother as well as the growth and development of the fetus, in the first 16 weeks of pregnancy 70-80% of women experience nausea and vomiting, 60% of women experience vomiting, while 33% of women only experience nausea. If all the food eaten is vomited in pregnant women, the body weight will decrease, the skin turgor is reduced and acetonuria occurs. Hyperemesis also has a negative impact, such as anemia, while anemia itself can lead to shock due to lack of nutritional intake that is eaten and drunk all regurgitated. (Bakay, Nurbaya, and Sumi 2023)

The cause of hyperemesis gravidarum is still unknown, although elevated levels of Human Chorionic Gonadotropin (HCG) seem to play a major role. Other causes include increased levels of the hormone progesterone as well as increased estrogen. Psychological factors also play a role in the occurrence of hyperemesis gravidarum such as work pressure, a fractured household and can cause mental conflict so as to exacerbate nausea and vomiting. (Susanti, Firdayanti, and Haruna 2019)

Previous research on obstetric care management in pregnant women with grade III hyperemesis gravidarum highlighted the significant impact of this condition on maternal health and fetal development. Hyperemesis gravidarum, characterized by excessive nausea and vomiting, can result in serious complications such as decreased consciousness, small and rapid pulse, and decreased blood pressure, which has the potential to cause disorders of the central nervous system and liver. Research conducted on Mrs. N at RSUD Syekh Yusuf Gowa used a midwifery management approach based on Varney's 7 steps and SOAP, which included assessment, immediate action, and collaboration

for maternal recovery. The results showed that the mother's condition returned to normal without any complications in the mother or fetus. The documentation of this process indicates that the treatment provided is in accordance with existing theory. (Kadir, Saleha, and Nadyah 2019)

The impact that occurs in hyperemesis gravidarum is dehydration which can cause decreased O₂ consumption, impaired liver function and jaundice, bleeding in the liver parenchyma so that it can cause general function disorders in vital organs so that it can cause death. Hyperemesis gravidarum also has an impact on increasing the risk for low birth weight, premature birth, small for gestational age, and perinatal death. (Sundari Rizky Yusniar, 2020).

Previous research on antenatal midwifery care for pregnant women with emesis gravidarum shows the important role of Antenatal Care (ANC) as a preventive effort to detect early high risks in pregnancy and reduce maternal and fetal mortality. The condition of emesis gravidarum, which is often experienced by pregnant women in the first trimester, is caused by an imbalance of estrogen and progesterone hormones, resulting in nausea and vomiting with a frequency of less than five times a day. The case study conducted on Mrs. S with a gestational age of 16-18 weeks showed that the pregnancy was normal, the condition of the mother and fetus was good, and the worry about the symptoms of nausea was reduced. An appropriate midwifery management approach in accordance with the authority of midwives has proven effective in managing this condition. (Meyer, Suryanti S, and Nurlina Akbar 2023)

Based on data obtained from the Puskesmas Bungi in January-June 2023, there were 20 pregnant women (14.8%) who experienced hyperemesis gravidarum out of 135 pregnant women who visited for examination (Data Puskesmas Bungi, Baubau 2023).

Based on the above background, one of the things done is to provide midwifery care to achieve competence. One of the requirements in completing the final project report (LTA) is to compile one of the care in midwifery services, so the author chose to perform midwifery care services on Mrs. "L" with Hyperemesis gravidarum as one of the final assignments in completing the diploma three midwifery study program. This service was carried out at the Baubau City Bungi Health Center in 2023.

METHODOLOGY

In this study, midwifery care was provided to Mrs. L, a 10-week pregnant woman who experienced hyperemesis gravidarum. Varney's 7-step midwifery management method was used to understand health conditions in depth, identify emerging problems, and provide evidence-based interventions. Data collection was carried out comprehensively through interviews to explore Mrs. L's medical history and psychological condition, physical examination including inspection, palpation, auscultation, and percussion, as well as direct observation of the symptoms of nausea and vomiting experienced. In addition, secondary data were obtained from the patient's medical record documents and relevant literature supporting the handling of this case. (Dayanti, Nurrochmah, and Alma 2023b).. The collected data were analyzed using the SOAP approach (Subjective, Objective, Analysis, Management) with the aim of providing effective interventions and documenting the entire midwifery care process performed.

RESULTS AND DISCUSSION

Subjective Data

Mrs. "L", a 23-year-old woman of Balinese ethnicity, Hindu religion, high school education, has been married for 10 months to Mr. "A" who is also 23 years old, has a high school education, and works as a farmer. "A" who is also 23 years old, has a high school education, and works as a farmer. They live in Ngkari-kari. The main complaint reported on February 14, 2023 at 09.30 WITA is often feeling tired, weak, dizzy, and experiencing nausea and vomiting when eating since \pm 1 week ago. The mother said this was her first pregnancy and she had never had a miscarriage before. The gestational age of Mrs. "L" was estimated to be 10 weeks, based on HPHT (First Day of Last Menstruation) on December 08, 2022 and estimated delivery (TP) on September 15, 2023. In addition to complaints of nausea and vomiting, Mrs. "L" also reported excessive fatigue when doing daily activities such as cooking and cleaning the house. Although she tried to eat three meals a day with foods such as rice, porridge, spinach vegetables, and eggs, she felt nauseous every time she ate, leading to decreased appetite and a weight loss of 2 kg since the beginning of pregnancy. She also reported drinking water and milk 6-7 times a day with no additional complaints. Mrs. "L" really wanted this pregnancy, but she felt anxious because of her hyperemesis gravidarum condition. This anxiety could have an impact

on her health, and her emotional feelings required additional attention during the treatment process. Medical history showed no systemic diseases such as hypertension, diabetes mellitus (DM), or heart disease. There was no family history of serious illness, and no history of twins.

Objective Data

The examination showed that Mrs. "L"'s general condition was weak, with *compos mentis* consciousness. Her pre-pregnancy weight was 52 kg, but currently her weight had decreased to 50 kg. Her height was 160 cm, with BMI before pregnancy was 20.3, and currently BMI was 19. Blood pressure was recorded as 96/70 mmHg, pulse 82 times/minute, respiration 22 times/minute, and body temperature 36.5°C. Physical examination also showed typical signs of pregnancy such as *striae gravidarum* and *linea nigra*, with Leopold I showing ballotement.

Analysis

Mrs. "L" was diagnosed with hyperemesis gravidarum at 10 weeks gestation. This condition was consistent with the reported symptoms, including continuous nausea and vomiting, lack of appetite, and clinical signs such as weight loss and sunken eyes. Hyperemesis gravidarum is a common condition in the first trimester of pregnancy that requires special attention to prevent dehydration and electrolyte imbalance. A weight loss of 2 kg indicates a lack of nutritional intake, which can adversely affect maternal health and fetal development.

Management

On February 14, 2023, several steps were taken to manage Mrs. "L". First, vital signs were observed, which included blood pressure, pulse, respiration, and temperature. Counseling was given to Mrs. "L" about the importance of maintaining an appropriate diet, by recommending eating small but frequent meals, and avoiding oily and spicy foods that can stimulate nausea. Mrs. "L" was also advised to get enough rest, both during the day and at night.

In addition, collaboration with the doctor was done for the administration of drug therapy, including ranitidine to reduce gastric acid production, ondansetron for nausea and vomiting, and D5% infusion to maintain fluid and electrolyte balance. This infusion aims to prevent dehydration caused by excessive vomiting. Furthermore, psychological support was given to Mrs. "L" to reassure her that nausea and vomiting are physiological conditions that are common in young pregnancy and will usually decrease after the pregnancy enters four months of age.

Management also included advice to increase intake of more easily digestible foods, such as white bread or biscuits, which do not have strong odors, as odors can trigger stronger nausea. Mrs. "L" was advised to avoid fried foods and caffeinated drinks to prevent worsening of nausea. Support from the family, especially from the husband, was very important in helping Mrs. "L" deal with hyperemesis gravidarum. The family was encouraged to be involved in the treatment, help prepare appropriate meals, and provide the emotional support needed. Psychological counseling was done to help Mrs. "L" understand that this condition is common in early pregnancy and with proper management, the symptoms will gradually improve as the pregnancy progresses. With proper management and support from the family, it is hoped that Mrs. "L" can go through this pregnancy better and her symptoms of hyperemesis gravidarum can be significantly reduced.

DISCUSSION

Subjective Data

In this case, Mrs. "L" complained of nausea, lethargy, and decreased appetite. Research by (Fejzo, M. S. et al. 2019) states that hyperemesis gravidarum is a condition that affects about 0.3-2% of pregnancies and can cause complications in the form of dehydration and electrolyte disturbances due to excessive nausea and vomiting in the first trimester. These symptoms are common early signs of this condition, where nausea and vomiting are caused by an increase in the human chorionic gonadotropin (hCG) hormone which tends to be higher in early pregnancy. However, as reported by Mrs. "L," efforts to eat small portions of food can help reduce symptoms of nausea, which is in accordance with dietary recommendations in this condition according to the Indonesian Association of Obstetrics and Gynecology (ACOG 2020)

Objective Data

Initial Examination At the initial examination on February 15, 2023, Mrs. "L"'s objective condition showed stable vital signs, but there was significant weight loss, dry lips, and pallor. According to the study (Goodwin, T. M., et al. 2020) weight loss of 5% of initial body weight in the first trimester is often associated with hyperemesis gravidarum, which is a condition of excessive nausea and vomiting in early pregnancy. Hyperemesis gravidarum can seriously impact the health status of pregnant women, especially if accompanied by dehydration, malnutrition and electrolyte imbalance. This weight loss reflects the impact of indigestion due to persistent nausea and vomiting, depriving the mother's body of essential nutrients needed for fetal growth. The condition of dry and pale lips indicates the possibility of dehydration, according to (World Health Organization (WHO). 2021) can disrupt the mother's fluid balance and risk causing further complications, such as orthostatic hypotension, or even kidney failure in extreme cases. Mild to moderate dehydration is often one of the first signs of hyperemesis gravidarum, which requires immediate intervention through fluid and electrolyte administration.

According to (Norwitz, et al. 2019), hyperemesis gravidarum is also influenced by several factors, including the hormones estrogen and progesterone, which experience a significant increase during pregnancy. This increase in hormones not only triggers nausea and vomiting, but also affects other physiological changes, such as the appearance of linea nigra and striae gravidarum, which are signs of the body's adaptation to pregnancy. Linea nigra is a black line on the abdomen that appears due to an increase in melanin, while striae gravidarum or stretch marks are the result of skin stretching due to fetal development. Haris and Ibrahim, 2021 explained that these changes are the body's adaptive response to accommodate fetal development and metabolic changes during pregnancy, which are also accompanied by an increase in blood volume as well as cardiovascular and renal activity.

Analysis

The diagnosis of G1P0A0, gravid 10 weeks with hyperemesis gravidarum in Mrs. "L", was based on the clinical symptoms of significant nausea and vomiting, accompanied by weight loss and mild dehydration. Hyperemesis gravidarum is known as a condition triggered by high hCG hormone levels in the first trimester, which according to a study by (London, et al. 2018) usually peaks in the 9th to 13th week of pregnancy. This condition causes a vomiting response in the emetic center in the brain so that the mother experiences a decrease in food and fluid intake, and is vulnerable to the risk of dehydration. The improvement in Mrs. "L"'s condition on February 16, 2023, such as a reduction in nausea and an increase in appetite, is in line with research showing that hyperemesis gravidarum usually subsides as hCG levels decrease in the second trimester.

The World Health Organization (WHO, 2021) emphasizes the importance of proper management of hyperemesis gravidarum, including hydration, correction of electrolyte imbalances, and nutritional support to prevent maternal malnutrition. Hyperemesis gravidarum care protocols also include monitoring of the patient's physical and psychological condition, as well as education that helps the patient and her family understand this condition. Psychological support is important as hyperemesis gravidarum impacts not only physically but also emotionally, especially when the symptoms last for a long time. Family and environmental support can help speed up the recovery of mothers with hyperemesis gravidarum, as this condition can affect mental health such as increasing the risk of anxiety and depression.

Management

Nausea and vomiting in pregnant women are common symptoms, with a prevalence of 60-80% in primigravida and 40-60% in multigravida. (Altahira, 2023). This condition, if not treated immediately, can lead to weakness, pale face, reduced urination frequency, and the risk of hemoconcentration due to dehydration. In a study conducted at the Waara Health Center, a combination of lemon aromatherapy and acupressure at point P6 (Nei Guan) was shown to be effective in reducing emesis gravidarum, based on a Pretest-Posttest with Control Design that showed significant differences between the intervention and control groups with $p = 0.001$ ($\alpha > 0.05$). On February 15, 2023, to manage Mrs. "L"'s emesis gravidarum, intravenous ondansetron and ranitidine were administered as well as intravenous fluids to maintain hydration and electrolyte balance. Study (Viljoen, J., et al. 2019) supports the use of ondansetron as an effective treatment for severe nausea and vomiting in pregnant women, while ranitidine helps reduce acid-induced gastric irritation. Recommendations from the American College of Obstetricians and Gynecologists (ACOG 2020)

emphasize the importance of infusion to prevent dehydration and complications. After Mrs. "L"'s condition stabilized on February 16, 2023, treatment was changed to oral administration of ondansetron and ranitidine, in accordance with Niebyl's (2018) recommendation to switch to oral medication when the patient's condition improved. In addition, Mrs. "L" was counseled on small but frequent meals to reduce symptoms of nausea, as suggested in obstetric practice by Moore et al. (2021). Psychological support is also an important part of management, given the impact of hyperemesis gravidarum on mental health, as described in the study (Munch, S. 2019) With comprehensive and sustainable management, it is expected that Mrs. "L" can continue to experience gradual improvement. This holistic approach has been shown to improve the quality of life and health of pregnant women who experience hyperemesis gravidarum, as shown in a study by the Indonesian Obstetrics and Gynecology Association. (AOGI 2020)

CONCLUSION

After providing midwifery care to Mrs. "L" G1P0A0 with a gestational age of 10 weeks who experienced hyperemesis gravidarum at Puskesmas Bungi Bau-Bau City for three consecutive days, the author discusses and compares between theoretical studies and the application of midwifery care based on Varney's 7-step midwifery management. From the observations made during the care, there was no gap between theory and practice in the field in handling the case of hyperemesis gravidarum experienced by Mrs. "L".

Based on theory, hyperemesis gravidarum is caused by several factors, including hormonal, organic, and psychological factors, all of which were found in the case of Mrs. "L". The treatment given included collaboration with the doctor to administer parenteral fluid therapy and drugs such as ondansetron and ranitidine, in accordance with the theory that emphasizes the importance of improving the mother's general condition, especially in terms of fluids and electrolytes. The care provided also included small but frequent meals, adequate rest, and psychological support, which proved effective in reducing symptoms of nausea and vomiting. From the observation, there was harmony between the theory and the results obtained in the field. Mrs. "L"'s condition showed improvement after midwifery care was given, with reduced symptoms of nausea and vomiting, and increased appetite. These results show that the application of theory in midwifery practice can have a positive impact on the condition of pregnant women who experience hyperemesis gravidarum. Social support from the family and collaboration with the medical team also proved to play an important role in accelerating the mother's recovery. Overall, midwifery care applied to Mrs. "L" with hyperemesis gravidarum was in accordance with the existing theory, and there were no gaps between theory and cases in the field. The evaluation showed that the care provided was quite successful in managing the symptoms of hyperemesis gravidarum experienced by Mrs. "L". This shows the importance of implementing proper midwifery management in ensuring maternal and fetal health is maintained during pregnancy.

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