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MATERNITY CARE FOR PRIMIGRAVIDA WOMEN WITH OBESITY IN THE THIRD TRIMESTER OF PREGNANCY: A CASE STUDY

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ABSTRAK

Obesitas pada kehamilan merupakan salah satu kondisi berisiko yang dapat meningkatkan kejadian komplikasi maternal dan perinatal, terutama pada trimester ketiga. Kondisi ini dipengaruhi oleh perubahan gaya hidup, pola makan tidak seimbang, serta kurangnya aktivitas fisik selama kehamilan. Studi kasus ini bertujuan untuk memberikan asuhan kebidanan pada ibu hamil trimester III dengan obesitas. Metode yang digunakan adalah studi kasus dengan pendekatan *Continuity of Care* (COC) pada Ny. R, usia 30 tahun, primigravida, usia kehamilan 31 minggu, dengan indeks massa tubuh ≥30 kg/m². Pengumpulan data dilakukan melalui wawancara, observasi, pemeriksaan fisik, pengukuran antropometri, serta telaah dokumentasi kebidanan. Hasil pengkajian menunjukkan ibu mengalami obesitas tanpa disertai komplikasi kehamilan. Asuhan kebidanan dilakukan melalui beberapa kali kunjungan yang meliputi pemantauan kehamilan rutin, pengendalian kenaikan berat badan, edukasi gizi seimbang, anjuran aktivitas fisik yang aman, serta pendampingan kelas ibu hamil. Selama pendampingan, kondisi ibu dan janin terpantau dalam batas normal tanpa tanda komplikasi. Kesimpulan studi ini menunjukkan bahwa asuhan kebidanan berkelanjutan melalui pendekatan COC berperan penting dalam pemantauan kehamilan dan pencegahan komplikasi pada ibu hamil dengan obesitas serta meningkatkan kesadaran ibu terhadap pentingnya gaya hidup sehat selama kehamilan.

Kata Kunci : Obesitas; Kehamilan; Primigravida; Antenatal care; Gizi

ABSTRACT

Obesity during pregnancy is one of the risk factors that can increase the incidence of maternal and perinatal complications, especially in the third trimester. This condition is influenced by lifestyle changes, an unbalanced diet, and a lack of physical activity during pregnancy. This case study aims to provide midwifery care for pregnant women in their third trimester who are obese. The method used was a case study with a Continuity of Care (COC) approach on Mrs. R, aged 30 years, primigravida, 31 weeks pregnant, with a body mass index ≥30 kg/m². Data collection was carried out through interviews, observations, physical examinations, anthropometric measurements, and review of midwifery documentation. The results of the assessment showed that the mother was obese without any pregnancy complications. Midwifery care was provided through several visits, which included routine pregnancy monitoring, weight gain control, balanced nutrition education, recommendations for safe physical activity, and antenatal classes. During the support period, the condition of the mother and fetus was monitored within normal limits without signs of complications. The conclusion of this study shows that continuous midwifery care through the COC approach plays an important role in pregnancy monitoring and prevention of complications in pregnant women with obesity, as well as increasing mothers' awareness of the importance of a healthy lifestyle during pregnancy.

Keywords : *Obesity; Pregnancy; Primigravida; Antenatal care; Nutrition*

INTRODUCTION

Obesity in pregnant women is a public health issue whose prevalence continues to increase in line with changes in lifestyle and unhealthy eating patterns. One condition that can complicate the physiological adaptation of pregnancy is obesity, which is characterized by excess fat accumulation and metabolic imbalance (Abdi et al., 2025). Globally, the prevalence of maternal obesity is estimated to be increasing and currently stands at around 20.9% of all pregnancies, with an annual upward trend projected to continue over the coming decade in the absence of effective health interventions (Kent et al., 2024).

Obesity in pregnant women is a growing global health problem and an important risk factor for pregnancy complications. The World Health Organization states that obesity contributes to an increased risk of maternal and perinatal morbidity and mortality, especially in developing countries that still face limitations in maternal health services. Globally, the prevalence of obesity in women of reproductive age shows a significant upward trend, and it is estimated that around 20–25% of pregnancies worldwide occur in mothers who are overweight or obese (World Health Organization, 2025). According to the latest Indonesian Health Survey (SKI) 2023 data, the prevalence of obesity in Indonesia among adults aged ≥18 years reached approximately 23,4% of the total adult population. This figure shows an increase compared to the previous survey and places obesity as one of the growing health problems in Indonesia (Survey Kesehatan Indonesia, 2023).

Obesity in pregnant women is associated with various pregnancy complications, both for the mother and the fetus. The effects that can arise in pregnant women with obesity include fatigue, shortness of breath, back pain, mobility issues, and an increased risk of hypertension in pregnancy, preeclampsia, gestational diabetes mellitus, prolonged labor, labor induction, and cesarean section. These conditions are related to metabolic and inflammatory changes due to excess fat tissue during pregnancy. (Aji et al., 2022).

Effects on the fetus include macrosomia, shoulder dystocia, neonatal asphyxia, and risk of metabolic diseases in childhood and adulthood. Mothers carrying macrosomic fetuses are at risk of cesarean delivery. In vaginal delivery (normal delivery), mothers who give birth to macrosomic babies may experience complications such as birth canal lacerations, postpartum endometritis, and postpartum hemorrhage (Suherman & Farizi, 2024). Efforts to prevent and combat obesity in pregnant women are carried out through controlled weight management,

balanced nutrition education, increased safe physical activity during pregnancy, and regular monitoring of the health of the mother and fetus. (Yanti et al., 2025).

Non-pharmacological measures that pregnant women can take to combat obesity include maintaining a balanced diet and increasing safe physical activity during pregnancy. Proper nutrition is achieved by limiting excess energy intake, saturated fats, and simple sugars, and increasing consumption of vegetables, fruits, lean protein, and fiber (Retnaningtyas et al., 2022). A balanced diet plays a role in controlling weight gain during pregnancy, thereby reducing the risk of maternal and perinatal complications in pregnant women with obesity (Den Harink et al., 2022).

Continuity of Care midwifery services are essential in preventing complications in obese pregnant women through regular monitoring, appropriate BMI and weight gain assessment, early risk detection, and continuous health education (Endah Purwani et al., 2024).

The implementation of comprehensive and continuous antenatal care within the framework of Continuity of Care midwifery, especially in the third trimester, is an important effort in reducing the risk of maternal and perinatal complications in pregnant women with obesity.

The objective of this case study is to implement Continuity of Care midwifery care as a preventive measure against complications in pregnant women with obesity through the provision of comprehensive and continuous midwifery care. Based on the results of a preliminary study conducted in the service area of the Ngadiluwih Community Health Center in Kediri Regency, among the pregnant women who underwent antenatal checkups, there were approximately 108 pregnant women with a body mass index (BMI) of ≥30 kg/m² who fell into the obesity category. Furthermore, the researchers' interest in managing obesity cases is based on the important role of midwives in early detection and risk management since pregnancy. Midwifery Care is provided through several antenatal visits to monitor maternal and fetal conditions, detect risks early, and implement initial interventions to help control obesity during pregnancy.

METHODS

This research method uses a case study design with a Continuity of Care approach for pregnant women with obesity. The research subject was Mrs. R is 30 years old with a gestational age starting at 31 weeks, which was carried out from November 2025 to February 2026. Assistance was provided through regular antenatal visits 3 times. Data collection techniques include interviews, observation, and physical examination. Midwifery care is provided comprehensively through ANC

examinations which include monitoring the condition of the mother and fetus, measuring BMI, weight gain, vital signs, and early detection of risk factors. Apart from that, communication, information and education was provided and participation in classes for pregnant women with material on balanced nutrition, physical activity, preparation for childbirth, care of newborns, and postpartum family planning, using posters, e-booklets, and KIA books.

RESULTS

Continuity of Care (COC) for Mrs. R's pregnancy was provided through three visits, beginning in the third trimester, with obesity as the condition. During the first visit, the author assessed the condition of the mother and fetus. Based on subjective data, the mother complained of occasional dizziness and leg cramps. Objective examination results showed that the mother was in good general condition with compos mentis consciousness. The mother's height was 150 cm, her pre-pregnancy weight was 65 kg, and her current weight was 73 kg, resulting in a body mass index (BMI) of 32.4 kg/m², which is classified as obese. The mother's weight gain during pregnancy was 8 kg, which is still within the recommended weight gain range for obese pregnant women, which is 5–9 kg (Kemenkes, 2024).

The results of vital sign checks during the first visit showed blood pressure of 110/80 mmHg, pulse rate of 88 beats per minute, respiratory rate of 20 breaths per minute, body temperature of 36.7°C, and mean arterial pressure (MAP) of 90 mmHg, which was within normal limits. The mother's upper arm circumference (UAC) was 31 cm. Based on these findings, the author provided counseling on the importance of weight control, balanced nutrition, and recommendations for safe, light physical activity during pregnancy, such as prenatal exercise, to prevent complications due to obesity (Ris Natalia, 2020). The evaluation showed that the Mrs. R was able to understand and explain the information provided, was willing to engage in physical activity, showed no signs of complications, and that both the mother and the fetus conditions were within normal limits.

During the second visit, the author re-evaluated the mother's condition. The mother complained of heartburn, which she felt mainly after eating and when lying down, but there were no signs of pregnancy complications. The results of the physical examination and vital signs are weight = 72,6 kg BP= 118/70 mmHg, pulse 80 times/minute, breathing 20 times/minute, temperature 36.5°C. The mother's condition is within normal limits. Based on the evaluation results, the author provided education on healthy eating patterns by regulating small but frequent meals,

avoiding fatty and spicy foods, and increasing consumption of vegetables and fruits. In addition, the author recommended that the mother attend prenatal classes as an effort to increase her knowledge and readiness for childbirth, and recommended that she undergo regular antenatal care examinations according to schedule. The evaluation obtained by the mother understands the education provided, complaints are reduced, weight loss is controlled, and the condition of the mother and fetus is within normal limits without signs of complications.

During the third visit, the mother's general condition was good, with complaints of coughing after consuming cold drinks or ice. These complaints were not accompanied by shortness of breath, fever, or other signs of pregnancy complications. Physical examination and vital signs are weight = 72,5 kg BP= 113/70 mmHg, pulse 88 times/minute, breathing 20 times/minute, temperature 36.6°C, the mother's condition is within normal limits and there were no signs of pregnancy complications related to obesity, such as hypertension or metabolic disorders. Based on the complaints experienced, the author provided communication, information, and education (KIE) to the mother regarding the importance of maintaining a pattern of consumption by avoiding cold drinks or ice, increasing consumption of warm water, and maintaining a balanced nutritional intake to support immunity during pregnancy. The author also recommended that the mother get adequate rest, maintain a clean environment, and immediately seek medical attention if her cough did not improve or was accompanied by other symptoms indicative of infection. Results of the evaluation the mother is in good condition, with mild and manageable symptoms, a stable weight, and no signs of pregnancy complications.

The author emphasizes the importance of routine prenatal checkups, monitoring weight gain, and the mother's adherence to a healthy lifestyle. Continuity of care is essential for the early detection and prevention of complications, ensuring that the health of both the mother and the fetus remains optimal.

DISCUSSION

Obesity during pregnancy is a risky condition that can affect the mother's physiological and metabolic adaptation, especially in the third trimester. In the case of Mrs. R, a primigravida pregnant woman in her third trimester with a body mass index (BMI) of 32.4 kg/m², which is classified as obese. This condition is in line with research findings stating that maternal obesity is associated with increased insulin resistance, chronic inflammation, and cardiovascular adaptation disorders during pregnancy, thereby increasing the risk of

pregnancy and delivery complications (Dewi et al., 2025)

Mrs. R subjective complaints of dizziness and leg cramps are common complaints among pregnant women with obesity. Dizziness can occur due to hemodynamic changes during pregnancy, while leg cramps are related to weight gain, uterine pressure on the blood vessels of the lower extremities, and peripheral circulation disorders. This is in line with international studies reporting that pregnant women with obesity experience musculoskeletal complaints and circulation disorders more frequently than women of normal weight (Barbouni et al., 2025). Qualitative studies on pregnant women with obesity also show that physical complications such as back pain, shortness of breath, and fatigue are common symptoms experienced by mothers with a history of obesity during pregnancy (Fakhriantono et al., 2025). However, obesity remains a major risk factor for preeclampsia, gestational diabetes mellitus, and operative delivery, requiring close and continuous monitoring of pregnancy (Permata Sari & Ariyanti, 2024). Obesity during pregnancy is closely related to metabolic and hormonal dysfunction, particularly insulin resistance and increased levels of proinflammatory cytokines. These changes affect glucose and lipid regulation during pregnancy, thereby increasing the risk of gestational diabetes mellitus, preeclampsia, and fetal growth disorders. Additionally, the intrauterine environment in obese pregnant women can influence fetal metabolic programming, which impacts the risk of obesity and metabolic diseases later in life. Lifestyle interventions during the antenatal period, including safe dietary and physical activity management, play a crucial role in improving insulin sensitivity and reducing inflammatory responses. Therefore, obesity management during pregnancy requires a multidisciplinary approach and continuous monitoring to optimize maternal and fetal health (Lin et al., 2022). In addition to physical complications, there are psychological effects on pregnant women with obesity, such as increased anxiety and low self-confidence during pregnancy. This can affect the mother's compliance with health recommendations, including diet and physical activity. These findings support the importance of a holistic approach in midwifery care, where midwives not only focus on clinical aspects but also provide ongoing emotional support and counseling to pregnant women (Langley-Evans et al., 2022).

As part of ongoing midwifery care, prenatal exercise is provided as a safe and beneficial non-pharmacological intervention for pregnant women with obesity. Structured physical activities such as prenatal exercise

have been shown to help control weight gain, improve blood circulation, reduce leg cramps and back pain, and improve the physical fitness of mothers. Research shows that physical activity during pregnancy can reduce the risk of metabolic complications in obese mothers (Kuang et al., 2023). Research results in Indonesia also support the benefits of pregnancy exercises, which have been proven effective in reducing back pain and improving mothers' physical and mental readiness for childbirth. Regular pregnancy exercises can increase pelvic muscle strength, body flexibility, and mothers' relaxation and breathing abilities (Al Umamanir et al., 2023). In addition, prenatal exercise classes contribute to improving mothers' knowledge and compliance with healthy lifestyles during pregnancy (Amir & Mila, 2025).

Midwifery care for Mrs. R was provided continuously through the Continuity of Care (COC) approach, which enabled comprehensive monitoring of the mother's condition, including weight control, evaluation of pregnancy complaints, and provision of education and assistance with pregnancy exercises. This approach is in line with the concept of continuous midwifery care, which has been proven to improve the quality of care and prevent complications in pregnant women with obesity. However, the success of care is also influenced by the mother's compliance and family support in adopting a healthy lifestyle during pregnancy and childbirth.

CONCLUSION

Continuity of Care (COC) midwifery care is comprehensive midwifery care provided by the author to Mrs. R, a primigravida with obesity, through three pregnancy visits in the third trimester. During the first visit, the assessment results showed that the mother's body mass index (BMI) was 32.4 kg/m², which falls into the obesity category, with subjective complaints of dizziness and leg cramps. Physical examination and vital signs were within normal limits. The author provided education on weight gain control according to recommendations, balanced nutrition, and recommendations for safe light physical activity during pregnancy. The author also reemphasized the importance of monitoring weight gain and daily physical activity patterns and adherence to balanced diet recommendations in implementing a healthy lifestyle until delivery. The results of the support program show that the mothers actively followed the health workers' recommendations, including attending prenatal classes, and were able to adopt a healthy diet with regular portions and choose more balanced food options. The mothers also began engaging in light physical activity on a regular basis as

recommended, and were more consistent in attending regular prenatal care visits.

It is hoped that health workers, especially midwives, can improve the monitoring of pregnant women with obesity through comprehensive and continuous antenatal care examinations, provide more intensive nutrition and physical activity counseling, and involve families in the care process. In addition, collaboration with other health workers is needed to support the prevention of pregnancy complications in pregnant women with obesity in an optimal and comprehensive manner.

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