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Case Study

Case study of comprehensive midwifery care for Mrs. R, 28 years old, G2P1A0 with anemia at Ketapang I Community Health Center, Ketapang Subdistrict, Kotawaringin Timur

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Abstract:
On February 17, during the second antenatal visit, it was found that Mrs. R was experiencing anemia. Anemia, one of the indirect causes of maternal mortality, remains a significant global health problem, particularly in developing countries. This condition frequently occurs due to an increase in blood volume of up to 50% during pregnancy, which gradually returns to normal as gestational age advances, provided the mother maintains a healthy lifestyle and adequate nutritional intake. However, if left untreated, anemia in pregnancy may lead to serious complications. The aim of this case study was to provide comprehensive midwifery care for Mrs. R, a 28-year-old pregnant woman with anemia, at Ketapang I Community Health Center, Ketapang Subdistrict, East Kotawaringin. This case study was conducted at the same facility from February to April 2025. The research subject was Mrs. R, aged 28 years, at 35 weeks of gestation with a live, singleton intrauterine fetus in cephalic presentation. The instruments used in this study included the comprehensive midwifery care format, observation sheets, screening forms, and partograph. Data collection techniques consisted of both primary and secondary data sources. The results indicated that the provision of comprehensive midwifery care proceeded smoothly. All clinical assessments were within normal limits. Based on the findings, no discrepancies were observed between theory and actual practice because the researcher implemented comprehensive midwifery care according to established service standards. All examination results were documented thoroughly using the seven-step Varney management approach and SOAP documentation. The comprehensive midwifery care provided to Mrs. R, a 28-year-old pregnant woman at Ketapang I Community Health Center, East Kotawaringin, was successfully implemented. All examination findings were within normal physiological limits, no complications were identified, and the care delivered adhered to professional midwifery standards.

Keywords:
comprehensive midwifery care, anemia, Community Health Center

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INTRODUCTION

Anemia is a global health problem, particularly among pregnant women. It is defined as a condition in which an individual experiences a decrease in the number of red blood cells, or when

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red blood cell levels fall below normal limits, resulting in an inadequate capacity to transport oxygen throughout the body. A pregnant woman is considered anemic when her hemoglobin (Hb) level is less than 11 g/dL during the first and third trimesters and less than 10.5 g/dL during the second trimester (Widoyoko & Septianto, 2020; Norwahidah et al., 2023). Anemia frequently occurs due to an increase in blood volume of up to 50% during pregnancy, which typically stabilizes as gestational age advances, especially when accompanied by healthy lifestyle behaviors and adequate nutritional intake. However, if left untreated, anemia can lead to serious consequences. Anemia during pregnancy has been associated with adverse maternal and fetal outcomes and is closely linked to increased morbidity and mortality.

Common maternal manifestations of anemia include shortness of breath, fatigue, difficulty resting, palpitations, and even fainting. During the perinatal period, anemia increases the risk of perinatal infections, preeclampsia, intrapartum and postpartum hemorrhage due to reduced blood reserves, increased need for blood transfusion, placental abruption, heart failure, and maternal death. Fetal and neonatal complications include intrauterine growth restriction, preterm birth, and low birth weight.

Anemia is one of the leading indirect causes of maternal mortality and remains a major public health issue worldwide, particularly in developing countries. According to the World Health Organization (WHO), the prevalence of anemia in pregnant women decreased from 40% in 2022 to 37% in 2023. In Indonesia, the national health profile reported that 48.9% of pregnant women were anemic in 2022, with a decline to 27.7% in 2023. The Central Kalimantan provincial health profile reported that the prevalence of anemia among pregnant women in East Kotawaringin Regency, particularly in Sampit, increased from 30.9% in 2022 to 40.2% in 2023. Data from Ketapang I Community Health Center in East Kotawaringin indicated that in 2023, 58 pregnant women in their third trimester were diagnosed with anemia. This number decreased to 42 cases in 2024. From January to March 2025, among 105 pregnant women in their third trimester, 10 were identified as anemic.

The primary cause of anemia during pregnancy is reduced hemoglobin concentration. Iron, vitamin C (as an iron enhancer), and calcium (an iron absorption inhibitor) are key nutritional factors affecting hemoglobin levels. Other contributing factors include educational level, cultural or traditional beliefs, dietary patterns, maternal age, socioeconomic status, family or spousal support, and deficiencies in iron and folic acid. Additionally, hematologic disorders, pulmonary diseases, malaria, and intestinal inflammation are common etiologies of anemia in pregnancy and are strongly associated with maternal mortality.

The consequences of untreated anemia during the third trimester pose significant risks for both mother and fetus. Maternal complications include uterine inertia, miscarriage, preterm labor, prolonged labor, uterine atony, hemorrhage, and shock (Agarwal et al., 2021). Fetal consequences include increased risk of low birth weight and impaired early childhood growth and development (Alem et al., 2020). Severe anemia is also associated with maternal death, fetal malnutrition, and neonatal mortality (Singal, 2018).

Interventions to reduce anemia in pregnancy include routine supplementation with iron tablets during antenatal care to decrease the prevalence of maternal anemia (Central Kalimantan Provincial Health Profile, 2022). The Ministry of Health of the Republic of Indonesia recommends a minimum of 90 iron tablets throughout pregnancy (Kemenkes RI, 2023). In addition to these national

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guidelines, the author undertook comprehensive midwifery care during the third trimester through family planning services aimed at reducing the risk and incidence of anemia among pregnant women.

Based on these considerations, the author conducted a case study titled “Comprehensive Midwifery Care for Mrs. R, a 28-Year-Old Pregnant Woman with Anemia at Ketapang I Community Health Center, Ketapang District, East Kotawaringin Regency.”

METHOD

This study employed a case study design to describe the comprehensive midwifery care provided to Mrs. R, a 28-year-old woman, at the Ketapang I Community Health Center in Ketapang District, East Kotawaringin Regency. The study utilized an independent variable and was conducted at Ketapang I Community Health Center from February 2025 to April 2025. Data analysis was conducted using the seven-step Varney midwifery management approach, and documentation adhered to the SOAP (Subjective, Objective, Assessment, Plan) format.

RESULTS

Mrs. R attended seven antenatal care (ANC) visits throughout her pregnancy, consisting of one visit in the first trimester, two visits in the second trimester, and four visits in the third trimester. During the third trimester, at 35 weeks of gestation, she experienced mild anemia with a hemoglobin level of 10.2 g/dL. She received appropriate management, including counseling and reminders to take iron (Fe) tablets twice daily and to increase her intake of iron-rich foods. At 39 weeks of gestation, prior to labor, Mrs. R underwent a repeat laboratory examination, which showed that her hemoglobin level had increased to 12.2 g/dL.

Mrs. R’s labor progressed normally without any bleeding or complications, despite her history of mild anemia during pregnancy. The duration of the first stage of labor was 5 hours, the second stage lasted 25 minutes, the third stage lasted 6 minutes, and the fourth stage proceeded without complications or postpartum hemorrhage. The total duration of labor was 5 hours and 31 minutes.

Her baby was delivered on March 5, 2025, at 23:25 WIB in good condition. The newborn weighed 3,100 grams, measured 48 cm in length, had a head circumference of 32 cm, a chest circumference of 34 cm, a temperature of 36.5°C, and a respiratory rate of 40 breaths per minute. The baby was male, demonstrated positive reflexes, had a patent anus, exhibited a healthy reddish skin tone, moved actively, had no congenital abnormalities, and cried vigorously at birth.

Neonatal care consisted of three visits: KN1 on March 6, 2025; KN2 on March 8, 2025; and KN3 on March 15, 2025. Postpartum care for the mother was conducted in four visits: KF1 on March 6, 2025; KF2 on March 12, 2025; KF3 on March 19, 2025; and KF4 on April 4, 2025. During the comprehensive midwifery care period, the only abnormal laboratory finding was the previously noted hemoglobin level of 10.2 g/dL.

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Family planning counseling for Mrs. R was carried out appropriately, and she chose the three-month injectable contraceptive method.

DISCUSSION

Comprehensive midwifery care encompasses a holistic continuum of services, spanning from pregnancy through childbirth, the postpartum period, and newborn care. The primary aim of this approach is to identify conditions and changes experienced by women throughout pregnancy and childbirth, to strengthen the midwife's competency in conducting thorough assessments, formulating accurate diagnoses, anticipating potential complications, determining immediate and appropriate interventions, planning care based on maternal and neonatal needs, and evaluating the outcomes of the care provided (Ministry of Health of the Republic of Indonesia, 2020).

The integrated antenatal care (ANC) standard requires a minimum of six visits during pregnancy, consisting of two visits in the first trimester (0–12 weeks), one visit in the second trimester (>12–24 weeks), and three visits in the third trimester (>24 weeks until birth). Of these visits, pregnant women must have at least two contacts with a physician—one during the first trimester and one during the third trimester (Ministry of Health of the Republic of Indonesia, 2020). According to the Ministry of Health cited in Wasdinar and Tarwoto (2007), hemoglobin levels of 8–<11 g% in pregnant women fall into the category of mild anemia. Anemia is a condition in which the body lacks adequate red blood cells (erythrocytes), resulting in an insufficient oxygen supply to body tissues.

The first stage of labor in multigravida women typically lasts approximately six hours, with cervical dilation progressing at an average rate of 2 cm per hour (Manuaba, 2018). Normal childbirth care (Asuhan Persalinan Normal/APN) comprises 60 standardized steps performed by midwives to ensure a safe delivery. The second stage of labor in multiparous women generally lasts 15–30 minutes (Prawirohardjo, 2014). The third stage, from the birth of the baby until the expulsion of the placenta, should not exceed 30 minutes. Ekayanthi (2019) similarly noted that this stage typically lasts between 5 and 15 minutes. During the fourth stage, monitoring includes vital signs, uterine fundal height (UFH), uterine contraction quality, bladder status, and the status of lochia. Monitoring is performed every 15 minutes during the first hour and every 30 minutes during the second hour postpartum (Prawirohardjo, 2014).

A newborn is classified as normal when born at 37–42 weeks of gestation with a birth weight of 2,500–4,000 grams, body length of 48–52 cm, chest circumference of 30–38 cm, Apgar score of 7–10, and without congenital abnormalities. Newborn assessments include evaluation of respiration, skin color, heart rate, temperature, movement, muscle tone, level of alertness, extremities, skin integrity, umbilical cord care, weight, head, face, eyes, ears, nose, mouth, neck, thorax, abdomen, genitalia, limbs, anus, back, and skin examination (Ribek et al., 2018).

Neonatal visits are conducted three times, consisting of the first neonatal visit (KN I) at 6–48 hours after birth, the second visit (KN II) on days 3–7, and the third visit (KN III) on days 8–28. These services are provided by healthcare workers either at health facilities or through home visits (Raskita & Octa, 2022).

Volume 01 Number 01 (December 2025)
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Postpartum visits (KF) follow established schedules: KF 1 at 6 hours to 2 days postpartum, KF 2 at days 3–7, KF 3 at days 8–28, and KF 4 at days 29–42 (Ministry of Health of the Republic of Indonesia, 2020). According to Kusnan and Afrini (2019), the three-month injectable contraceptive contains 150 mg of Depot Medroxyprogesterone Acetate (DMPA) or Norethindrone Enanthate (NET-EN), both of which are progestin-only formulations. Studies have indicated no adverse effects on breastfed infants whose mothers use this contraceptive method, making it a recommended option for breastfeeding women. This is consistent with findings reported by Putri (2022), who emphasized that contraceptive choices for breastfeeding mothers must consider their potential impact on breast milk production, with the three-month hormonal injection being one appropriate method.

CONCLUSION

The intrapartum care provided to Mrs. R met the standards of normal labor management. All stages of labor progressed physiologically: the first stage lasted 5 hours, the second stage 25 minutes, the third stage 6 minutes, and the fourth stage 2 hours. No complications or hemorrhage occurred during labor, and the mother's hemoglobin level was 12.2 g/dL. The care provided followed a respectful maternity care approach, involving the husband's support, and complied with service standards. Newborn care for Mrs. R's infant proceeded smoothly. The baby was delivered spontaneously in occipital presentation on March 5, 2025, at 23:25 WIB, with examination findings within normal limits. Newborn care included drying the infant, administering a vitamin K injection, applying prophylactic eye ointment, maintaining newborn warmth, and providing umbilical cord care. The implementation of newborn care was documented using Varney's seven-step approach. Neonatal care was conducted over three visits: the first visit (KN1) at 1 day of age, the second (KN2) at 3 days, and the third (KN3) at 10 days. No problems or complications were identified during these visits. The author provided health education on newborn danger signs, daily newborn care, exclusive breastfeeding, and complete basic immunizations. Neonatal care was documented using Varney's seven-step framework and the SOAP format. Postpartum care for Mrs. R did not fully meet the postpartum service standards and national guidelines because the first postpartum visit (KF1) was conducted outside the recommended schedule. However, the postpartum period progressed physiologically without complications. Family planning services for Mrs. R were provided in accordance with government program standards, with counseling and initiation occurring 40 days postpartum. Mrs. R agreed to use contraception and chose the three-month injectable method, which is safe for breastfeeding mothers. Comprehensive midwifery care was provided to Mrs. R, a 28-year-old woman, from the third trimester of her pregnancy through family planning services at Ketapang 1 Community Health Center in East Kotawaringin Regency. The care process proceeded smoothly and effectively.

Volume 01 Number 01 (December 2025)
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CONFLICT OF INTEREST

The author recognizes a limitation of this study, namely, the insufficient availability of supporting diagnostic data.

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Volume 01 Number 01 (December 2025)
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