



CONTINUOUS OBSTETRIC CARE WITH UMBILICAL CORD WRAPPING IN MRS. J AT PMB Bd WANTI S. Keb MEDAN DELI DISTRICT MEDAN CITY NORTH SUMATRA

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ABSTRACT

The umbilical cord is the structure that may wrap around the baby's body, shoulders, arms, or neck. Umbilical cord wrapping can lead to asphyxia, which is a critical problem because it increases morbidity and mortality in newborns. This condition may interfere with blood and oxygen flow from the placenta to the fetus, potentially resulting in fetal distress, low Apgar scores, and long-term neurological complications if not detected and managed promptly. (Mustar, 2019; Rohmah et al., 2024) Repeated twisting of the umbilical cord in one direction can obstruct blood flow from the mother to the fetus, potentially causing fatal outcomes such as neonatal death. This obstruction may lead to reduced oxygen and nutrient delivery, resulting in intrauterine growth restriction, fetal distress, or even stillbirth if not promptly identified and managed. (Anggorowati & Widyawati, 2020; Shrestha & Karki, 2024) This study used a descriptive case study approach conducted at the Independent Practice of Midwife Wanti S. Keb in Medan Deli District, Medan City, in 2025. The findings highlight the importance of surveillance, timely intervention, and the application of Continuity of Care (COC) to improve maternal and neonatal outcomes (Hasanah & al., 2020); Organization, 2024)

Keyword: Obstetric Care, Umbilical Cord, Wrapping

Introduction

Umbilical cord wrapping can cause fetal asphyxia, which remains a major contributor to neonatal morbidity and mortality. Tight or multiple loops of the umbilical cord may compress blood vessels, resulting in reduced oxygen supply to the fetus. Early detection through careful antenatal monitoring and timely intrapartum management is therefore essential to prevent adverse perinatal

outcomes associated with umbilical cord complications. (Anggorowati & Widyawati, 2020). Umbilical cord wrapping is a common obstetric condition that often goes undetected until delivery. Although many cases are asymptomatic, tight or multiple cord loops can significantly compromise fetal circulation, leading to hypoxia and fetal distress. This condition underscores the importance of



vigilant antenatal and intrapartum surveillance to identify early signs of fetal compromise (Anggorowati & Widyawati, 2020).

Reducing maternal mortality rate (MMR) and infant mortality rate (IMR) is a priority in global and national health programs, particularly in developing countries such as Indonesia. The World Health Organization reported approximately 2.3 million neonatal deaths worldwide in 2022, while Indonesia recorded an infant mortality rate of 24 per 1,000 live births based on the Indonesian Demographic and Health Survey (Maternity, 2022) Indonesia continues to face challenges in reducing infant mortality despite improvements in healthcare coverage. Neonatal deaths remain a significant contributor to infant mortality, emphasizing the need for targeted interventions during pregnancy and childbirth. Enhanced monitoring of high-risk pregnancies, including those with suspected umbilical cord complications, is a key strategy in achieving national health targets ;(BKKBN et al., 2017) .In the context of maternal and child health, neonatal mortality continues to be a major public health concern, particularly in developing countries. High infant mortality rates often reflect inadequate access to quality antenatal and intrapartum care. Strengthening maternal health services is essential to address preventable causes of neonatal death, including complications related to umbilical cord abnormalities (BKKBN et al., 2017). Although many cases are asymptomatic, tight or multiple cord loops can significantly compromise fetal circulation, leading to hypoxia and fetal distress. This condition underscores the importance of vigilant antenatal and intrapartum surveillance to identify early signs of fetal compromise (Anggorowati & Widyawati, 2020).

Umbilical cord wrapping occurs in approximately 20% of normal deliveries and contributes significantly to neonatal complications, including asphyxia and increased risk of death. Therefore, comprehensive and continuous obstetric care covering pregnancy, childbirth, postpartum, and family planning is essential to reduce adverse outcomes (Andina & Fitriana, 2022).(Gultom et al., 2023)

Research Method

This study employed a descriptive design with a case study approach to provide an in-depth and systematic description of continuous midwifery care from pregnancy to family planning. The case study approach was chosen because it allows researchers to explore a phenomenon in its real-life context and to obtain a comprehensive understanding of complex health care processes through detailed and contextualized data. (Creswell & Creswell, 2018). Umbilical cord wrapping can cause fetal asphyxia, which remains a major contributor to neonatal morbidity and mortality. Tight or multiple loops of the umbilical cord may compress blood vessels, resulting in reduced oxygen supply to the fetus Early detection through careful antenatal monitoring and timely intrapartum management is therefore essential to prevent adverse perinatal outcomes associated with umbilical cord complications. (Anggorowati & Widyawati, 2020). Data were collected through interviews, observation, and documentation using standard midwifery care formats to ensure data validity and completeness The use of multiple data collection techniques enabled triangulation, thereby strengthening the credibility and trustworthiness of the findings in midwifery



care research. (Anggorowati & Widyawati, 2020).

Data Analysis

Qualitative analysis was applied to data obtained from interviews, observations, and documentation to evaluate the effectiveness of midwifery care and formulate recommendations for future practice. Qualitative analysis was systematically applied to data obtained from interviews, observations, and documentation to explore and evaluate the effectiveness of midwifery care and to formulate context-based recommendations for future practice, in accordance with qualitative research principles (Creswell & Creswell, 2018).

Results

Routine antenatal care was performed during pregnancy, and no significant complications were detected. Continuous monitoring during childbirth enabled early identification and management of umbilical cord wrapping, ensuring safe delivery outcomes. Routine antenatal care was performed during pregnancy with no significant complications detected, while continuous monitoring during childbirth enabled early identification and management of umbilical cord wrapping, thereby ensuring safe delivery outcomes (Hasanah & al., 2020).

Postpartum and newborn care followed standard guidelines, including monitoring, vitamin K administration, and hepatitis B immunization, which are essential to prevent neonatal complications (WHO, 2020; (Andina & Fitriana, 2022). In addition, comprehensive postpartum care emphasized maternal recovery and early detection of potential complications, while newborn care focused on maintaining thermal stability, initiating early

breastfeeding, and providing parental education. These interventions are crucial to support neonatal adaptation and reduce morbidity and mortality in the early postnatal period, in line with international and national recommendations (WHO, 2020; (Andina & Fitriana, 2022).

Discussion

Continuous and holistic obstetric care plays a crucial role in preventing complications and improving maternal and neonatal health outcomes. The application of the Continuity of Care model allows early detection and timely intervention throughout pregnancy, childbirth, and postpartum periods (Hasanah et al., 2020). Physiological complaints during the third trimester, such as frequent urination, are common due to fetal growth and pressure on the bladder. Appropriate education and counseling help improve maternal comfort and adaptation during pregnancy (Andina & Fitriana, 2022). (A. B. Ginting et al., 2021). Furthermore, the implementation of continuous and comprehensive midwifery care allowed early identification of intrapartum risk factors and timely clinical decision-making, thereby minimizing adverse outcomes.

The management of umbilical cord wrapping during childbirth demonstrated adherence to standard midwifery procedures, including Helen Varney's 7-step management and the 58-step Normal Delivery Care (APN) standard, contributing to favorable neonatal outcomes (Anggorowati & Widyawati, 2020).

Postpartum and newborn care, including hygiene, nutrition, immunization, and exclusive breastfeeding counseling, are essential components of comprehensive maternal and child health services (Andina & Fitriana, 2022). (S. S. T. Ginting, 2022



)In addition, appropriate postpartum care supports maternal physical recovery and psychological well-being, while structured newborn care promotes optimal growth and development. Counseling on hygiene practices, balanced nutrition, timely immunization, and exclusive breastfeeding empowers mothers to provide effective home care and prevent common postpartum and neonatal complications, thereby improving overall maternal and child health outcomes (S. S. T. Ginting, 2022).

Conclusion

Furthermore, the implementation of continuous and comprehensive midwifery care allowed early identification of intrapartum risk factors and timely clinical decision-making, thereby minimizing adverse outcomes. Midwives played a crucial role in providing individualized care, effective communication, and

evidence-based interventions that ensured maternal safety and optimal neonatal condition, particularly in cases involving umbilical cord complications (Anggorowati & Widyawati, 2020). The Continuity of Care approach proved effective in maintaining maternal and neonatal health and managing complications such as umbilical cord wrapping. Comprehensive midwifery care contributed to positive health outcomes for both mother and infant (Hasanah & al., 2020), (Anggorowati & Widyawati, 2020). Physiological complaints during the third trimester, such as frequent urination, are common due to fetal growth and pressure on the bladder. Appropriate education and counseling help improve maternal comfort and adaptation during pregnancy (Andina & Fitriana, 2022). (A. B. Ginting et al., 2021)

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