

CONTINUITY OF MIDWIFERY CARE FOR MRS. F EXPERIENCING UMBILICAL CORD ENTANGLEMENT AT MANDREHE HEALTH CENTER, MANDREHE DISTRICT, WEST NIAS REGENCY, IN 2025

Wendi Idol Sryningsih Gulo¹, Siti Nurmawan Sinaga², Rumondang³, Ria Lolyta⁴, Mei Elizabeth Simatupang⁵, Rosalina Simbolon⁶, Nika Aklima⁷

^{1,2,3,4,5,6} STIKes Mitra Husada Medan,
wendigulo12345@gmail.com, sitinurmawan@mitrahusada.ac.id

ABSTRACT

Background: *Comprehensive midwifery care is a strategic effort to reduce Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) in line with the Sustainable Development Goals (SDGs). Umbilical cord entanglement is a labor complication that can cause asphyxia or even fetal death if not managed correctly.* **Objective:** *To provide comprehensive continuity of care to Mrs. F from the third trimester of pregnancy, childbirth with umbilical cord entanglement, postpartum, newborn care, to family planning services.* **Methods:** *A descriptive case study using Varney's 7-step midwifery management and SOAP documentation. The subject was Mrs. F (26 years old, G3P2A0) at Mandrehe Health Center, West Nias Regency.* **Results:** *During pregnancy, physiological complaints of frequent urination were managed through fluid intake education. During the second stage of labor, a single loop of umbilical cord entanglement was found around the baby's neck and successfully managed by loosening the cord. The baby was born spontaneously, healthy, male, weighing 3,500 grams, length 51 cm, with an APGAR score of 10. The postpartum period was normal across four visits, the newborn received complete basic immunizations, and the mother chose the Lactational Amenorrhea Method (LAM) for contraception.* **Conclusion:** *The implementation of comprehensive care proved effective in early detection and management of umbilical cord entanglement complications, ensuring the safety of both mother and baby.*

Keywords: *Comprehensive Care, Umbilical Cord Entanglement, Childbirth, Continuity of Care.*

Introduction

Future survival is the most important aspect of health. Health improvements aimed at reducing maternal and infant mortality rates are supported by a healthy environment, educated families, and a healthy mindset that believes in health. Comprehensive midwifery care, which includes examinations from pregnancy, childbirth, postpartum, and newborns, is expected to reduce maternal and infant mortality, which is a major problem. The Sustainable Health Development Goals (SDGs) emphasize that family health is a crucial condition in

creating a healthy and productive society, and one of its goals is to ensure that people's lives achieve access to health by 2023 (Ministry of Health of the Republic of Indonesia, 2022) .

According to data from the WHO (*World Health Organization, 2020*), the infant mortality rate (IMR) was 2.3 million deaths globally, with 20 children dying on the first day of life in 2022. Although the IMR in Indonesia remains relatively high, there was a significant decline in 2022, from 27,566 cases to 20,727 cases. Meanwhile, based on health profile data from the

province of North Sumatra, infant mortality reached 610 cases (WHO, 2022) .

The infant mortality rate (IMR) in West Nias Regency reached 34-24 cases per 1,000 live births. A report from the West Nias Regency Health Office noted that the number of infant deaths in 2020 was 7, increasing to 22 in 2021 and then decreasing to 17 in 2022. These deaths were caused by various factors, including asphyxia caused by umbilical cord entanglement. Meanwhile, *maternal and perinatal data The National Mortality Report* (MPDN) revealed that maternal deaths in 2021 and 2022 were caused by various factors such as preeclampsia and eclampsia (15%), bleeding (30%) and other factors (55%) including delayed treatment, home births without medical personnel, and limited access to health facilities (Kematian *et al.* , 2024) .

Umbilical cord entanglement is a condition where the umbilical cord wraps around the fetus's neck, either once or more times. Umbilical cord entanglement can have serious consequences, even leading to death, due to the tightness of the cord. If the cord is wrapped too tightly, especially if it wraps two or three times, it can disrupt the oxygen supply to the fetus (Sinaga and Aulia, 2022).

Research Method

To provide comprehensive care to Mrs. F, a descriptive research method was used to describe the current phenomenon. This type of research, known as a case study, aims to observe the context of life and unclear phenomena. The author applied midwifery care using the Helen Farney Soap method (Tersiana Andara, 2022).

From this population, one mother who had given birth and experienced umbilical cord entanglement was selected as a sample, namely Mrs. F. The sample selection was carried out purposively,

namely by considering that the condition of childbirth with umbilical cord entanglement experienced by Mrs. F was relevant to the research objectives so that the researcher could provide information regarding the case being studied.

Data were collected through interviews with respondents using unstructured and structured interview guidelines, such as a checklist. This process was conducted with Mrs. F from the third trimester, delivery, postpartum, newborn care, and family planning (Tesianan Andra, 2022) .

The research location is crucial because it can help researchers obtain the necessary data and information more efficiently. Based on the issues raised in this study, the chosen location is the Mandrehe Community Health Center, located in Fadoro Village, Mandrehe District, West Nias Regency.

The research was conducted from November 2024 to February 2025 with continuous midwifery care applied to Mrs. F, 26 years old, G3P2A0 at the Mandrehe Health Center, Mandrehe District, West Nias Regency.

Result

An assessment was conducted on Mrs. F, 26 years old, G3P2A0, who came to a health care facility with a chief complaint of increasingly severe and regular abdominal pain. She also complained of urgency and the need to strain.

The examination results showed that the mother's general condition was good , with compos mentis consciousness , blood pressure 120/80 mmHg , respiration 22x/minute , heart rate 87x/minute , body temperature 36.5°C , and DJJ 142x/minute . Signs of the second stage were found, namely the urge to push, pressure on the anus, protruding perineum, and open vulva. Internal examination (VT) showed cervical dilation of 10 cm , episim 100% , soft

cervical consistency , portio not palpable, and fetal head descent 0/5 hodge IV . The membranes had ruptured spontaneously. After explaining the examination results to the mother and family, initial steps include positioning the mother in the lithotomy position to facilitate labor. The mother is also guided in proper pushing technique: only when contractions begin, with the hands pulling the thighs toward the abdomen, the chin tucked to the chest, and resting between contractions. The mother is also given fluids between contractions to maintain stamina.

Then, normal delivery assistance was provided in the second stage according to the 58 steps of the APN , ensuring complete equipment, hand hygiene and the use of PPE, and administering oxytocin according to procedure. After the fetal head was visible in front of the vulva and moving back and forth about 5-6 cm, the mother was guided to push. When the baby's head was born, an examination of the umbilical cord was performed , and one loop was found around the baby's neck . Immediate

Discussion

Polyhydramnios is a condition in which the amount of amniotic fluid exceeds 2000 cc. In pregnancies under eight months, the fetal head has not yet descended into the upper pelvic cavity. At this stage, the fetus is still relatively small, so excess amniotic fluid can increase the risk of umbilical cord entanglement. An umbilical cord is considered long if it measures more than 50 cm, while if it's less than 30 cm, it's considered short. An umbilical cord that's too long can potentially cause the fetus to become entangled. The average umbilical cord length ranges from 30 to 50 cm, although each fetus can vary in size. Regular prenatal checkups using ultrasound can help identify the possibility of an umbilical cord wrapped around the fetus's

action was taken to loosen the umbilical cord , and the labor process continued.

After external rotation, the baby was successfully delivered at 7:30 PM WIB , alive and healthy. The baby was a boy , weighing 3,500 grams , measuring 51 cm in length , measuring 34 cm in head circumference , 32 cm in chest circumference, and 11 cm in upper arm circumference . The baby's APGAR score was 10 .

After the baby was born, the mother reported experiencing difficulty pushing and a feeling of something blocking the birthing process. This was consistent with the finding of an umbilical cord entanglement, which was causing obstruction during the pushing process.

The mother was educated about the condition and explained that the single umbilical cord knot had been successfully managed by loosening it , and the baby was born healthy. The delivery proceeded normally with appropriate care, and both mother and baby are in stable condition postpartum.

neck. However, this examination cannot always definitively confirm whether the cord is wrapped around the neck or assess its tightness. Using color Doppler or 3D ultrasound technology can improve the accuracy of detecting the position of the umbilical cord, including whether it is wrapped around the neck or other parts of the body, and how tightly it is wrapped.

During labor, especially in the second stage, monitoring the fetal heart rate (FHR) after contractions and while the mother is pushing becomes crucial. The appearance of signs of fetal distress indicates that delivery must be completed immediately to save the baby. If the umbilical cord is loosely wrapped around the fetus's neck, it can usually be loosened and slowly released over the baby's head.

However, if the cord is too tightly wrapped, it may need to be clamped at two points and cut between the clamps, then the baby is delivered immediately. In emergency situations, a midwife can cut the umbilical cord while assisting with the birth of the baby.

Conclusion

In conducting this case study, the author provided comprehensive midwifery care to the client from pregnancy through birth control. The care provided to the client included:

1. Midwifery care for pregnant women in the third trimester

During the third trimester, the author provided care to Mrs. F for the first 2 visits. Data was obtained that Mrs. F's complaint, namely frequent urination at night, was a physiological thing caused by increasing gestational age so that there was a week in the mother's bladder which caused the mother to urinate frequently. Prenatal care carried out to reduce the urination experienced by the mother was by increasing drinking during the day to stay hydrated and avoiding drinking water at night to avoid frequent urination at night and disturbing the mother's sleep. The treatment carried out on Mrs. F was using Helen Varney's 7 Steps and for ANC had been achieved. (Tuti Sukini, 2023)

2. Midwifery care for mothers in labor

During labor, the author conducted an assessment and provided labor assistance to Mrs. F at the Mandrehe Community Health Center. During the labor process, starting from the first stage of the active phase until normal labor with the condition of the mother and baby born complete with normal midwifery care. The problem found was the umbilical cord entanglement and was resolved by loosening the umbilical cord so that the baby was born and was resolved using Helen Varney's 7 steps with the 58-step APN standard.

3. Midwifery care for postpartum mothers
The postpartum period for Mrs. F consisted of 4 visits, namely 6 hours postpartum, 6 days postpartum, 14 days postpartum, 40 days postpartum, during the postpartum period the mother had no complaints.

4. Midwifery care for newborns

On December 30, 2024 at 19.30 WIB, weighing and weight measurement were carried out with the results BB: 3500 grams, PB: 51 cm, the first hour a Vit K injection was given to prevent bleeding in the umbilical cord of the newborn baby, in the 2nd hour a hepatitis injection was given to prevent hepatitis in the baby,

5. Family planning midwifery care

Conducting counseling to Mrs. F regarding the use of contraceptives and the mother decided to use MAL KB because the mother wanted to have another child and wanted to breastfeed actively.

Suggestion

In the context of midwifery education, educational institutions have a significant responsibility to develop materials that support lectures and field practice. By providing a relevant and up-to-date curriculum, it is hoped that students will be able to directly apply midwifery care. This not only strengthens their understanding but also prepares them to face challenges in the field.

Students, as future healthcare professionals, should utilize their existing experience to study various obstetric cases. They need to implement care within their jurisdiction and continuously improve their skills and knowledge. This way, they can provide comprehensive, high-quality midwifery care to clients, meeting expected professional standards.

On the other hand, the practice area plays a crucial role in maintaining the quality of midwifery care. Healthcare workers in the field are expected to pay increased attention to midwifery care, from pregnancy through

family planning programs. Early detection and management of complications can minimize potential risks during pregnancy and childbirth, thus ensuring the health of both mother and baby.

For respondents, namely patients receiving obstetric services, comprehensive care from pregnancy to contraception is expected to improve their knowledge. Improved knowledge about pregnancy, childbirth, postpartum, newborn care, and contraception provides patients with confidence and a deeper understanding of their reproductive health. This is crucial to ensuring they can make informed decisions for their own and their families' health.

References

- Amalia, R. (2022) 'basic needs of childbirth', 4(2), pp. 109–117.
- Baiq Ricca Afrida, NPA (2022) *Textbook of Midwifery Care for Neonates, Infants, Toddlers and Preschool Children* . NEM.
- Bima Melvian Girsang, D. (2023) *evidence based practice postpartum period* . deepublish.
- Dewi, VNL (2024) *Neonatal Care for Infants and Toddlers* . Selemba Medika.
- Fauziah, A. (no date) *No Title* .
- Julina Munte, Kismi Asia Adethia, Marlina L. Simbolon, LPUD (2022) *Continuity Of Care Midwifery Care Textbook* . Jakarta: Trans Info Media.
- Death, D. *et al.* (2024) 'WORKING AREA OF WEST NIAS DISTRICT COMMUNITY HEALTH CENTER IN 2023', pp. 36–49.
- Ministry of Health (2021) 'Balanced Nutrition Guidelines for Pregnant and Breastfeeding Mothers', *Ministry of Health of the Republic of Indonesia* , pp. 1–130.
- Ministry of Health of the Republic of Indonesia (2021) 'Ministry of Health Decree Number 28 of 2021', 2019(3), pp. 1–98.
- Ministry of Health of the Republic of Indonesia (2022) 'Strategic Plan (Renstra) of the Ministry of Health 2020-2024 (2022 revision)', *Ministry of Health of the Republic of Indonesia* [Preprint].
- Quratul A'yun, KQ (2023) *Textbook of postpartum midwifery care and complementary therapy breastfeeding for postpartum mothers* . PT Literasi Nusantara Abdi Grup.
- Rahayu, A., Km, S. and Ph, M. (no date) *Textbook* .
- Rika Widianita, D. (2023) 'understanding childbirth', *AT-TAWASSUTH: Journal of Islamic Economics* , VIII(I), pp. 1–19.
- Sinaga, EW and Aulia, TN (2022) 'Midwifery Care for Mothers Giving Birth with Umbilical Cord Entanglement', *Journal of Public Health Sciences* , 11(04), pp. 329–336. Available at: <https://doi.org/10.33221/jikm.v11i04.1502>.
- Republic of Indonesia Law (2019) 'Republic of Indonesia Law No. 4 of 2019 Concerning Midwifery', *Concerning Midwifery* , (10), pp. 2–4.
- Vivian Nanny Lia Dewi, TS (2023) *Midwifery Care for Postpartum Mothers* . Selemba Publisher.
- WHO (2022) *World health statistics 2022 (Monitoring health of the SDGs)* , *Monitoring health of the SDGs* . Available at: <http://apps.who.int/bookorders>.