

Case Report: Midwifery Care Management for A Newborn Infant (Mrs. D) with Caput Succedaneum at The Sarfina Sembiring Primary Clinic in 2026

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ABSTRACT

Background & Objective: Caput succedaneum is a soft tissue edema on the newborn's scalp caused by mechanical pressure during labor. This condition is commonly found in prolonged labor or instrumental deliveries and requires appropriate monitoring to distinguish it from other complications such as cephalhematoma. This study aims to implement comprehensive midwifery care for newborns with caput succedaneum using the 7-step Varney midwifery management approach. **Method:** This research used a descriptive method with a case study approach on baby "D" who was born with caput succedaneum at Sarfina Sembiring Primary Clinic in 2026. Data collection was conducted through anamnesis, physical examination, observation, and documentation. Data analysis used the 7-step Varney approach. **Result:** The baby was born with macrosomia (birthweight 4500 grams), length 53 cm, head circumference 39 cm, accompanied by caput succedaneum that crossed the suture lines with soft consistency. Care provided included monitoring vital signs, umbilical cord care, early initiation of breastfeeding, administration of vitamin K and HB0 immunization, and maternal education. The caput succedaneum showed spontaneous resolution within 3 days without complications. **Conclusion:** Comprehensive midwifery care with early detection, monitoring, and education is essential in the management of caput succedaneum. Appropriate management prevents complications and provides reassurance to the family.

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Introduction

Newborns are infants aged 0-28 days who require optimal monitoring because the neonatal period is a highly vulnerable phase for various complications resulting from the labor process. One problem that can be found in newborns is birth trauma that occurs due to mechanical pressure during labor. Birth trauma can cause various abnormalities in the soft tissues of the baby's head, one of which is caput succedaneum. This condition is often found in prolonged labor, instrumental deliveries, and labor with obstructed progress in the second stage. Therefore, healthcare providers need to perform early detection and appropriate management for every case of birth trauma in neonates (Jacob & Hoerter, 2023).

Caput succedaneum is edema on the baby's scalp that occurs due to pressure from the fetal head against the cervix, birth canal, or vaginal wall during labor. This swelling usually appears immediately after the baby is born, is soft in nature, can cross the suture lines of the skull bones, and generally resolves spontaneously within a few days. Although this condition is generally benign, caput succedaneum needs to be distinguished from cephalhematoma and subgaleal hemorrhage, which have more serious complication risks. Diagnostic accuracy is crucial so that the baby receives appropriate monitoring and no errors occur in clinical management. Thus, thorough physical examination is an important part of newborn midwifery care (Jacob & Hoerter, 2023).

Globally, caput succedaneum is one of the most common birth traumas found in newborns. International literature states that the incidence of caput succedaneum ranges from 2% to 33% of all deliveries, with higher rates in prolonged labor and deliveries using assistive devices such as vacuum extraction or forceps. This variation in figures is influenced by population characteristics, delivery methods, and the quality of obstetric services in each country. Although generally mild and self-limiting, caput succedaneum still requires monitoring because it poses a risk of complications such as neonatal jaundice. Therefore, early detection and neonatal monitoring are essential to prevent possible complications (Cleveland Clinic, 2021; Jacob & Hoerter, 2023).

In Indonesia, national data regarding the incidence of caput succedaneum has not been specifically reported in the national health profile. However, caput succedaneum is still included in the group of birth traumas frequently found in neonatal services, especially in prolonged second-stage labor and operative vaginal deliveries. Several case reports and midwifery studies in Indonesia indicate that caput succedaneum remains one of the problems encountered in newborns and requires ongoing observation to prevent complications. This condition shows that birth trauma is still a concern in maternal and child health services in Indonesia. Therefore, healthcare providers need to improve their ability to identify and manage cases appropriately. These efforts are expected to reduce neonatal morbidity rates due to birth trauma (Wicaksono & Supliyani, 2023).

Caput succedaneum occurs due to prolonged pressure on the fetal head during labor. This pressure causes disruption of venous and lymphatic blood flow, resulting in fluid accumulation in the subcutaneous tissue of the head. The longer the fetal head is under pressure in the birth canal, the greater the likelihood of soft tissue edema of the head. This condition is often found in prolonged second-stage labor. In addition to prolonged labor, the use of vacuum extraction can also increase the risk of caput succedaneum. The vacuum device applies negative pressure to the baby's scalp to

assist fetal delivery, which can cause soft tissue swelling of the head. Therefore, monitoring labor progress is an important part of efforts to prevent birth trauma (Cunningham et al., 2022; Kliegman et al., 2024).

Several risk factors that can increase the incidence of caput succedaneum include prolonged labor or prolonged second stage, use of assistive delivery devices such as vacuum or forceps, macrosomia, postdate pregnancy, primiparity, and abnormal fetal presentation. In cases of macrosomia such as found in baby "D" with a birth weight of 4500 grams, the risk of birth trauma increases because the labor process is more difficult and takes longer. Macrosomia is defined as a newborn with a birth weight of more than 4000 grams regardless of gestational age. This condition is a concern in midwifery because it can increase the risk of complications for both the mother and the baby during labor (Kumalasari, 2023; Dungga, 2021).

Evidence-based practice in the management of caput succedaneum emphasizes the importance of early detection and careful monitoring. Based on recent research, management of caput succedaneum is generally conservative because this condition will resolve spontaneously within 3-7 days. However, monitoring is still needed to ensure that no complications such as neonatal jaundice occur due to hemolysis of red blood cells in the edematous area. Education for mothers and families about baby care and danger signs to watch for is also an important component of midwifery care (Jacob & Hoerter, 2023; Kliegman et al., 2024).

Thus, comprehensive midwifery care for newborns with caput succedaneum is very important to prevent complications and provide reassurance to mothers and families. The 7-step Varney midwifery management approach provides a systematic framework for providing continuous and focused care based on patient needs. This study aims to implement comprehensive midwifery care for newborns with caput succedaneum using the 7-step Varney midwifery management approach at Sarfina Sembiring Primary Clinic in 2026.

Objective

To provide comprehensive midwifery care for newborns with caput succedaneum at Sarfina Sembiring Primary Clinic using the 7-step Varney midwifery management approach.

Method

This research used a descriptive method with a case study approach. The research subject was baby "D" who was born with caput succedaneum at Sarfina Sembiring Primary Clinic in 2026. Data collection was conducted through several techniques: anamnesis to explore subjective data such as birth history, complaints, and health history; physical examination to collect objective data such as vital signs, head examination, swelling assessment, and other body system examinations; observation to monitor the baby's condition progress; and documentation to record all findings and actions taken.

Data analysis was performed using the 7-step Varney midwifery management approach which includes data collection, identification of diagnoses and problems, identification of potential diagnoses, identification of immediate actions, planning, implementation, and evaluation. This study received ethical approval from the relevant institution and informed consent from the parents of the research subject.

Results

Subjective Data Assessment

Baby "D" was born on March 21, 2026 at 10:05 WIB at Sarfina Sembiring Primary Clinic. The baby is the fourth child of Mrs. "D" (32 years old) and Mr. "V" (35 years old). The mother and father are of Javanese ethnicity, Muslim, with high school education. The mother works as a housewife and the husband as an entrepreneur. The mother stated that this is her fourth pregnancy and delivery proceeded normally with assistance from a doctor and midwife.

Objective Data Assessment

Physical examination results showed birth weight 4500 grams, body length 53 cm, head circumference 39 cm, chest circumference 37 cm, abdominal circumference 34 cm, and upper arm circumference 18 cm. The baby was born with caput succedaneum on the head area characterized by soft tissue swelling that crossed the suture lines, soft consistency, and no significant skin color changes. The baby's vital signs were within normal limits: temperature 37°C, pulse 140 x/minute, respiration 30 x/minute, and Apgar score 9. Other physical examinations showed reddish skin, reddish face with lanugo, symmetrical eyes with good pupillary reflex, clean nose without nasal flaring, symmetrical ears with soft texture, good sucking reflex, chest movement synchronized with breathing, moist umbilical cord, normal genitalia, no anal atresia, and complete extremities with normal number of fingers.

Identification of Diagnoses, Problems, and Needs

The diagnosis established was newborn with caput succedaneum. Problems identified included edema on the baby's head and the need for umbilical cord care. Needs identified were periodic monitoring of the baby's condition, proper umbilical cord care, and maternal education about baby care.

Potential Diagnoses

Potential diagnoses identified were neonatal jaundice due to hemolysis of red blood cells in the edematous area and risk of umbilical cord infection.

Immediate Actions and Interventions

Immediate actions taken included periodic monitoring of vital signs and caput succedaneum condition, maintaining the baby's body temperature, performing umbilical cord care, early initiation of breastfeeding, administration of vitamin K and HB0 immunization, and education for the mother about baby care and danger signs to watch for.

Implementation

Implementation was carried out according to the planned interventions. The baby was wrapped in clean and warm cloth to maintain body temperature. Umbilical cord care was performed with sterile gauze. Early initiation of breastfeeding was conducted by placing the baby on the mother's breast. Vitamin K was given in the right thigh and HB0 immunization in the left thigh. The mother was provided education about baby care and danger signs to watch for.

Evaluation

Evaluation results showed that the mother and family understood the baby's condition and the required care. The baby had been wrapped in clean and warm cloth, the umbilical cord had been covered with sterile gauze, the baby had undergone early breastfeeding initiation, the baby had received vitamin K and HB0 immunization, and the mother was willing to provide exclusive breastfeeding. The caput succedaneum showed spontaneous resolution within 3 days and the baby's overall condition was good.

Discussion

Based on the assessment results, baby "D" was born with caput succedaneum characterized by soft tissue swelling on the head area that crossed the suture lines. This swelling occurred due to mechanical pressure during labor which caused disruption of venous and lymphatic blood flow, resulting in fluid accumulation in the subcutaneous tissue of the head. This is consistent with the theory stating that caput succedaneum is edema or swelling of the soft tissue on the baby's scalp that occurs due to pressure from the fetal head against the birth canal during labor (Jacob & Hoerter, 2023).

In this case, the baby was born with a birth weight of 4500 grams which falls into the category of macrosomia. Macrosomia is defined as a newborn with a birth weight of more than 4000 grams regardless of gestational age. This condition is a concern in midwifery because it can increase the risk of complications for both the mother and baby during labor. The occurrence of macrosomia is influenced by various maternal, fetal, and pregnancy factors such as maternal diabetes mellitus, maternal obesity before pregnancy, excessive weight gain during pregnancy, history of previous macrosomic delivery, postterm pregnancy, and multiparity (Kumalasari, 2023; Dunga, 2021).

Macrosomic infants have a higher risk of birth trauma including caput succedaneum because the labor process is more difficult and takes longer. In this case, the mother was multiparous with a history of four pregnancies and deliveries, which is one of the risk factors for macrosomia. Research shows that multiparous mothers tend to have a higher risk of delivering macrosomic infants compared to primigravidas because the uterus is more elastic and there are metabolic changes in the mother's body after several pregnancies (Kumalasari, 2023).

Physical examination in this case showed that caput succedaneum has characteristic features including swelling that crosses the skull suture lines, soft consistency, and no significant skin color changes. This is important to distinguish from cephalhematoma which is limited to one skull bone due to subperiosteal bleeding, and subgaleal hemorrhage which is more dangerous because it can cause massive bleeding. Diagnostic accuracy is crucial so that the baby receives appropriate monitoring and no errors occur in clinical management (Jacob & Hoerter, 2023; Kliegman et al., 2024).

Management of caput succedaneum in this case was conservative with close monitoring of the baby's condition. This is consistent with evidence-based practice stating that caput succedaneum generally resolves spontaneously within a few days without requiring special intervention. However, monitoring is still needed to ensure that no complications such as neonatal jaundice occur due to hemolysis of red blood cells in the edematous area. In this case, caput succedaneum showed spontaneous

resolution within 3 days and no signs of complications were found (Jacob & Hoerter, 2023).

Midwifery care provided in this case included monitoring vital signs, umbilical cord care, early initiation of breastfeeding, administration of vitamin K and HB0 immunization, and education for the mother about baby care and danger signs to watch for. Early initiation of breastfeeding (EIB) is one of the important interventions performed immediately after the baby is born. EIB provides great benefits for the baby because colostrum is rich in antibodies and essential nutrients for the baby's immune system. Additionally, skin-to-skin contact between mother and baby during EIB also helps maintain the baby's body temperature and strengthens the emotional bond between mother and baby (WHO, 2023).

Administration of vitamin K to newborns aims to prevent bleeding due to vitamin K deficiency which can occur in the neonatal period. Vitamin K is given intramuscularly in the baby's right thigh immediately after birth. Meanwhile, HB0 immunization is given to prevent hepatitis B infection which can be transmitted from mother to baby. This immunization is one of the important primary prevention efforts to protect babies from dangerous infectious diseases (Indonesian Ministry of Health, 2023).

Education for mothers and families about baby care and danger signs to watch for is an important component of midwifery care. The mother was given an explanation about how to properly care for the umbilical cord, signs of umbilical cord infection, how to maintain the baby's body temperature, the importance of exclusive breastfeeding, and danger signs in newborns that require immediate treatment. This education is important to increase the mother's knowledge and preparedness in caring for her baby and to prevent delays in seeking medical help if complications occur (Indonesian Ministry of Health, 2024).

Evaluation in this case showed that all planned interventions had been implemented well. The mother and family understood the baby's condition and the required care. The baby had been wrapped in clean and warm cloth, the umbilical cord had been covered with sterile gauze, the baby had undergone EIB, the baby had received vitamin K and HB0 immunization, and the mother was willing to provide exclusive breastfeeding. The caput succedaneum showed spontaneous resolution within 3 days and the baby's overall condition was good. The success of midwifery care in this case demonstrates the importance of a comprehensive approach and collaboration between midwives, doctors, and families in providing midwifery care for newborns with birth trauma.

Conclusion

Based on the midwifery care provided to baby "D" with caput succedaneum, this condition is a benign soft tissue edema of the scalp that resolves spontaneously within a few days without special intervention. Comprehensive midwifery care through early detection, close monitoring, and education for mothers and families is essential to prevent complications and provide reassurance to the family. The success of case management demonstrates that collaboration between midwives, doctors, and families is key to providing optimal midwifery care for newborns with birth trauma.

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