# INTRA NATAL CARE FOR MRS. "R" G4P3A0 40 WEEKS GESTATION WITH PREMATURE RUPTURE OF MEMBRANES AT SORAWOLIO HEALTH CENTER

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**A B S T R A C T**

*Background: Premature rupture of membranes (KPD) is a condition in which the membranes break before labor begins or signs (inpartu), with cervical opening less than 3 cm in primipara and less than 5 cm in multipara. This KPD case was experienced by Mrs. "R" at Puskesmas Sorawolio. If not treated quickly, KPD can increase the risk of infection and other complications in the mother and baby. Objective: This report aims to provide intranatal midwifery care to Mrs. "R" who experienced KPD at Puskesmas Sorawolio, using Varney's 7-step approach and SOAP documentation. The purpose of this case study is to provide optimal obstetric care to prevent complications and ensure the safety of the mother and baby during labor. Methods: This study used a case study method with the Varney 7-step approach and SOAP documentation, conducted from January 11 to March 8, 2023 at the Sorawolio Health Center. The data used included primary and secondary data. Assessment and implementation of care were carried out in week 4, while evaluation was carried out in week 5. Results: KPD care for Mrs. "R" was carried out by installing Ringer Lactate infusion 28 drops per minute to replace lost body fluids, giving oxytocin 5 IU 20 drops per minute to strengthen contractions, and intensive monitoring from stage I to stage IV. All stages of labor proceeded without complications, with vital signs of mother and baby within normal limits. Conclusion: Midwifery care management with Varney's 7 steps and SOAP documentation showed good results, without complications in the mother or fetus. Midwives are expected to provide professional services regardless of the patient's social status.*

## INTRODUCTION

Premature rupture of membranes (KPD) is a condition in which the membranes rupture before signs of labor appear or before the start of labor. (Ministry of Health of the Republic of Indonesia, 2017). It generally occurs early in pregnancy, before 28 weeks of age, or in the third trimester (between 28 and 34 weeks). It can be caused by a closed or open cervix. Some factors that may influence CPD include parity, abnormalities in the amniotic membrane, maternal age, short cervix, infection, cervical laxity, trauma, multiple pregnancy, hydromnios, fetal position abnormalities, alcohol consumption, and smoking. (Nugrahini, A., & Yulianti, R., 2017)

Marriage is an important moment that unites two individuals, both men and women, who have different characters, sex, as well as educational and environmental influences that shape their respective mindsets. To ensure the health readiness of the bride and groom, a premarital check-up is an important step before the wedding. One important component of this check-up is a routine blood test, which includes tests for leukocytes, hematocrit, platelets, Hb, erythrocytes, blood sugar, and erythrocyte sedimentation rate. Especially for brides-to-be, the Hb level check serves to detect the risk of thalassemia, which can have an impact on the health of the mother and child in the future. (Syastriani Isna Putri Syarif, 2023)

At the global level, according to research (Boskabdi, H., 2019) the prevalence of KPD in different countries varies, such as in Brazil at 3.1%, in Manipur India at 2.2%, in China reaching 19.2%, in Egypt 5.3%, in Nigeria 3.3%, and in Uganda 7.5%. In Indonesia, the rate of KPD ranges from 4.5% to 7.6% of all pregnancies (Human Development Report, 2017). Based on the 2019 Indonesian Demographic and Health Survey (IDHS), the maternal mortality rate is still high, at 306 per 100,000 live births. The main

causes of maternal mortality in Indonesia in 2019 were bleeding, hypertension in pregnancy, infection, and metabolic disorders. (Indonesian Ministry of Health., 2019)

In Southeast Sulawesi, data from the Health Office shows an increase in the number of cases of COPD in pregnant women, from 36 cases in 2017 to 142 cases in 2018. Meanwhile, in Baubau City, the number of cases of COPD in laboring mothers decreased from 67 cases in 2017 to 52 cases in 2018. (Indonesian Ministry of Health., 2019) At the Baubau City Hospital, there were 16 cases of COPD in 2017 (11.28% of 142 delivery mothers) and 15 cases in 2018 (11.53% of 130 delivery mothers). Based on preliminary data collected at Puskesmas Sorawolio Baubau City in 2022, there was 1 case of birth with CPD, and in the period January to March 2023 there was also 1 case of birth with CPD.

Normal labor is a physiological process experienced by most pregnant women. Based on data from the Ministry of Health of the Republic of Indonesia, in 2017 there were 4,840,511 normal deliveries, with 170,128 of them coming from South Sulawesi. In Makassar City, the number of normal deliveries in 2018 reached 122,426 cases. This study aims to provide an overview of Intranatal Midwifery Care on Mrs. R with normal labor in the active phase I stage. This labor process lasted for 2 hours 30 minutes, until it reached complete opening (10 cm), and the baby was born healthy at 02.38 WITA. This research uses a case study method, where midwifery care is carried out in accordance with midwifery care management which includes assessment, diagnosis, immediate action, planning, evaluation, and documentation of the care provided. The results of this study indicate that midwives are able to apply all care steps according to the priority of the problem, so that the labor process runs normally and without complications. (Riana & Aisyah, 2022)

Premature rupture of membranes (KPD) is one of the complications in labor that occurs when the amniotic sac ruptures before the time of delivery, which is at the opening of the cervix less than 4 cm in the latent phase. This condition requires special handling because it can trigger various complications for the mother and fetus, such as intrauterine infection and the risk of premature birth. Based on data from Puskesmas Tawaeli, in 2018 there was 1 case of KPD out of 1,123 mothers (104.2%), while in 2019 the number increased to 2 cases out of 1,090 mothers (105.9%). This study aims to explore specific cases of KPD using a case study approach as a description of Intranatal Care Midwifery Pathology in pregnant women with KPD at the Tawaeli Health Center. The approach used followed Varney's 7 steps, which involved subjective and objective data assessment, as well as assessment and care planning according to operational standards at the Tawaeli Health Center. (Shafira Yuniarty et al., 2022)

Previous research by (Yulianti et al., 2023) highlighted the importance of diagnosis and management of premature rupture of membranes in the context of obstetric care. This study shows that COPD is one of the high-risk obstetric conditions that can increase perinatal morbidity and mortality, as well as the risk of maternal infection. Using the descriptive case study method, this study describes how midwifery care for Mrs. D, who experienced COPD, was successfully performed without SC (Sectio Caesarea), resulting in a normal birth with mother and baby in good health. However, there was a gap between theory and practice, where theory indicated the need for SC, but in this case the patient was given induction of labor.

Intra Natal Care midwifery care with a case of inertia uteri at Dewi Sartika General Hospital, Kendari City in 2022 by Arbiyah, Suhartati, and Esse Tendry Nelly from the Avicenna Institute of Technology and Health discusses the handling of inertia uteri which is a condition of uterine contractions (his) with a lower intensity than normal contractions. Although inertia uteri is not a direct cause of maternal death, it can be fatal if not treated properly. In 2019, out of 352 deliveries at Dewi Sartika General Hospital, Kendari City, 21 of them experienced inertia uteri. (Arbiyah et al., 2022)

Based on preliminary data collection at the Sorawolio puskesmas in Baubau city in 2022, there were 1 birth with premature rupture of the membranes (KPD) and in 2023 from January to March there was 1 birth with premature rupture of the membranes (KPD). Based on the above background, the authors are interested in taking a case with the title "Midwifery Care Management for Mothers with Early Rupture of Fertilizers at Sorowolio Health Center, Baubau City, 2023.

## METHODOLOGY

This final project report was prepared using a case study approach method, in which the researcher examined one subject, namely a mother with premature rupture of membranes (KPD) at Sorawolio Health Center. This approach was chosen to produce in-depth and comprehensive descriptive data on midwifery management. The case study method was used to analyze the problem through the application of scientific theory, research findings, and practical skills, which were arranged based on midwifery care management according to Helen Varney. This method includes seven steps starting from subjective and objective assessment, identification of problems and potential problems, identification of immediate needs, planning (intervention), implementation, and evaluation.

Data collection techniques in this study involved two main types of data, namely primary data and secondary data. Primary data was obtained directly from interviews with the research subjects (laboring mothers), their husbands and families, as well as observations of the mothers' clinical conditions. Interviews were structured to obtain information about the mother's medical history, complaints during pregnancy, and the condition of the mother's social environment. Secondary data were in the form of relevant medical documentation, such as the MCH book, mother's card, and cohort records of pregnant, delivery, and postpartum women, obtained from the Sorawolio Health Center.

The SOAP approach was used to manage the data obtained. Subjective data included information provided directly by the laboring mother through interviews about her complaints and medical history. Objective data was obtained from the results of the physical examination, including vital signs, abdominal condition, and evaluation of the condition of the uterus as well as diagnostic tests such as ultrasound and laboratory. Analysis is done by combining subjective and objective data to identify problem diagnoses as well as potential problems. Finally, management involves planning and implementing interventions tailored to the mother's current condition and future care plan, including regular monitoring of the mother's and fetus' condition.

## RESULTS & DISCUSSION

### Subjective Data

On January 31, 2023, Mrs. R, a 29-year-old woman, came to Puskesmas Sorawolio with complaints of premature rupture of membranes. The mother reported that amniotic fluid had been released since 23.00 WITA, accompanied by a little mucus, but had not felt significant contractions. Mrs. R expressed concern because she was worried about the condition of her fetus. Medical history showed that Mrs. R was a housewife with a primary school education. She has been married for 15 years and has three previous children. This was her fourth pregnancy with a normal history of previous pregnancies without any complications. During pregnancy, Mrs. R had regular antenatal check-ups and had received TT I and TT II immunizations. There is no history of serious health problems, and this pregnancy has been normal until now.

### Objective Data

The results of the physical examination on January 31, 2023 showed that Mrs. R was in good general condition with compos mentis consciousness. Vital signs showed a blood pressure of 110/80 mmHg, body temperature of 36.5°C, pulse rate of 80 beats per minute, and respiratory rate of 20 beats per minute, all of which were within normal limits. Abdominal examination showed that the fundus uteri height corresponded to 40 weeks' gestation, and fetal movement was detected actively on the right side of the mother's abdomen. Vaginal touché (VT) examination showed no bleeding, soft cervix, 10 cm opening, and clear amniotic fluid with no odor, indicating no signs of infection.

**Analysis**

Mrs. R, 29 years old, G4P3A0, 40 weeks pregnant with premature rupture of membranes (KPD).

**Management**

Mrs. R was given initial care for labor with premature rupture of membranes (KPD) at 40 weeks gestation, with the following steps: Emptying the bladder to avoid obstruction during labor, monitoring vital signs every 30 minutes, monitoring fetal heart rate (DJJ) every 30 minutes to ensure fetal well-being, and advising the mother to lie on her left side to facilitate blood flow to the fetus and reduce the risk of fetal hypoxia. Mothers are also encouraged to use relaxation and breath management techniques to reduce pain and maintain energy during labor. Vaginal touch (VT) checks were performed every 4 hours to evaluate the progress of cervical opening, while Ringer Lactate intravenous fluids were given to prevent dehydration and support the mother's metabolism.

Management of labor with COPD also involves administering 5 IU of oxytocin through a drip infusion at a rate of 20 drops per minute. This is done to stimulate stronger and more regular uterine contractions, speed up the labor process, and reduce the risk of infection that can occur in COPD conditions. In addition, if the cervical opening has reached 10 cm, proper pushing techniques utilizing contractions will be performed to facilitate spontaneous delivery of the baby.

Once the fetal head became visible at the vulva (crowning), an episiotomy was given to widen the birth canal and prevent further perineal tears. The medical team continues to monitor the progress of labor using active labor management principles to ensure there are no further complications. After the baby is born, the umbilical cord is cut and the baby is placed on the mother's abdomen for Early Initiation of Breastfeeding (IMD).

## DISCUSSION

### Subjective Data

Mrs. R, a pregnant woman with fourth pregnancy (G4P3A0) and 40 weeks gestation, came to Puskesmas Sorawolio Baubau City on January 31, 2023. came on January 31, 2023 at 13.35 wita, with complaints of pain in the lower abdomen that radiates to the waist, which is accompanied by the release of mucus mixed with blood and water discharge since February 30, 2023 at 23.00 wita and the pain felt by the mother disappeared and arose and became more frequent and stronger, the mother's pregnancy was the second pregnancy and had never miscarried before, the mother said her gestational age had now reached ± 9 months.

In the case of Mrs. R, subjective data collection has been carried out, namely Mrs. R said that there was a discharge of water from the birth canal little by little until the sarong was wet, objective data obtained by the mother's general condition is good, consciousness is composmentis, from the results of the internal examination at 13.45 WITA obtained normal vlva and vagina, thick portio, opening 3 cm, rupture of membranes, right latitudinal presentation, decline in Hodge 1 no molasses, no pounding, normal pelvic impression, release of mucus, blood and amniotic fluid. So based on the data obtained, the authors conclude that the diagnosis or actual problem formulated is KPD.

KPD is the rupture of the membranes before inpartu, namely when the opening of the cervix in primipara is less than 3 cm and in multipara less than 5 cm. (Heny Sepduwiana, 2013). In parity, the risk of KPD is high in multiparous and grandemultiparous due to excessive uterine motility, reduced flexibility of the uterine neck so that early opening of the cervix can occur. As for age, the increasing age of women is related to the decline in the function and ability of organs, thus increasing the risk of abnormalities. (Novirianthy et al., 2021)

Based on subjective data, HPHT was recorded on April 24, 2022. Mrs. R reported amniotic fluid discharge on January 30, 2023 at 23.00 WITA, accompanied by abdominal pain radiating to the back. This pain was stronger and more frequent, with active fetal movements on the right side. In addition, she also reported mucus mixed with blood from the birth canal, as well as strong urge to defecate and

pressure in the anus, indicating that the fetus began to move towards the birth canal. This condition indicates signs of active labor, where the mother has entered the labor phase.

**Objective Data**

On January 31, 2023, physical examination showed that Mrs. R was in good general condition, although she appeared to be in pain due to her contractions. Vital signs showed a blood pressure of 110/80 mmHg, pulse rate of 80 beats per minute, body temperature of 36.5°C, and respiratory rate of 20 beats per minute, all within normal limits. Physical examination using the Leopold technique showed that the fetal back was on the right side and the fetal head was already down (head presentation).

The fetal heartbeat (DJJ) was clearly heard with a frequency of 140 times per minute, indicating the fetus was in good condition. Internal examination at 1:35 pm showed cervical opening of 3 cm, amniotic fluid had broken with clear amniotic fluid seeping, and the fetal head was in Hodge I. There were no signs of molasses or dropping. No sign of molasses or pounding was found. Ringer Lactate infusion of 500 ml and oxytocin 5 IU at a rate of 20 drops per minute was done to stimulate contractions.

This is in line with previous research by (Yulianti, and Putri 2023) highlighted the importance of diagnosis and management of premature rupture of membranes (BPD) in the context of obstetric care. This study shows that KPD is one of the high-risk obstetric conditions that can increase perinatal morbidity and mortality, as well as the risk of maternal infection. Using the descriptive case study method, this study describes how midwifery care for Mrs. D, who experienced COPD, was successfully performed without SC (Sectio Caesarea), resulting in a normal birth with mother and baby in good health. However, there was a gap between theory and practice, where theory indicated the need for SC, but in this case the patient was given induction of labor.

**Analysis**

Mrs. R was diagnosed with premature rupture of membranes (KPD) at 40 weeks gestation. Rupture of membranes before full labor takes place increases the risk of infection to the mother and fetus if labor does not occur immediately. According to (Cunningham, F.G, 2014)Examination showed signs of active labor with a cervical opening of 3 cm and regular contractions. A DJJ that is within normal limits indicates that the fetus is not under stress, so labor can continue with intensive monitoring of the mother and fetus.

**Management**

Management in Mrs. R's case focused on accelerating labor to reduce the risk of complications due to premature rupture of membranes. According to (Varney, H., et al., 2015) oxytocin is used to stimulate stronger and more regular contractions to speed up the labor process. The first step is to empty the mother's bladder to prevent distension that can hinder the descent of the fetal head. After that, vital signs were monitored, including blood pressure, pulse, body temperature, and breathing frequency. The monitoring results showed that the mother's condition was stable during labor.

Monitoring of uterine contractions (HIS) and DJJ is done regularly. A normal DJJ (140 times per minute) indicates that the fetus remains in good condition. The recommended maternal position of left tilt aims to increase blood flow to the fetus by reducing pressure on the inferior vena cava, as well as accelerating cervical opening. This position is also effective in reducing pain during contractions, as explained by (Simkin, P., 2013) in Psychosocial Care in Maternity, that psychological support and proper breathing techniques can help mothers manage pain better.

Furthermore, monitoring the progress of labor is done using a partograph, which is an important tool to record the development of cervical opening, frequency of contractions, and fetal condition. (Wulandari & Wantini, 2021) The provision of fluids and nutrition is also an important concern, with the mother being given tea boxes to maintain hydration and energy during labor. The installation of Ringer Lactate infusion with 5 IU oxytocin was also carried out to stimulate stronger uterine contractions. With

all the management steps taken, including intensive monitoring, use of oxytocin, observation of vital signs and DJJ, and psychological support, Mrs. R's labor went smoothly and the baby was born in good health.

## CONCLUSION

Obstetric care during labor is a crucial phase that requires fast and appropriate treatment, especially in cases with complications such as premature rupture of membranes (KPD). In the case of Mrs. R who experienced COPD at 40 weeks gestation, immediate and collaborative action is essential to prevent further complications for both mother and fetus. The data obtained showed that Mrs. R was able to pass the labor process well thanks to the application of midwifery management that was structured and in accordance with standard procedures.

The collaborative actions taken, such as the installation of RL infusion and administration of oxytocin, as well as monitoring vital signs and fetal heart rate, have been effective and in accordance with Mrs. R's clinical condition. The importance of educating the mother to understand her condition and the steps taken during labor contributed to maintaining Mrs. R's psychological stability and health.

Overall, the midwifery care provided at Puskesmas Sorawolio has helped smooth delivery without significant complications. Starting from stage I to stage IV, all processes run normally, with satisfactory results for both mother and baby. Good midwifery management and support received by Mrs. R from the family also made an important contribution in maintaining the health of the mother and baby, which in turn is expected to reduce the risk of postpartum complications and improve maternal health after childbirth.

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