

Midwifery Care in Multiparas with Diabetes Mellitus

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Abstract: Comprehensive midwifery care is carried out to reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). The goal is to provide comprehensive care so that pregnancy, childbirth, newborn and postpartum usually run. The research method used is a case study with a qualitative approach. Case studies used midwifery care in SOAP format ranging from data assessment, data analysis, and management. The results of the care provided starting from pregnancy, namely 14 standards during pregnancy, can be carried out, so that discomfort in the third trimester of pregnancy runs smoothly and maternal complaints can be resolved. All delivery care for multiparous mothers with diabetes mellitus was no different from standard delivery care during delivery. Newborns have average weight and are given the care to prevent hypoglycemia by initiating early breastfeeding in the first 1 hour after birth and rooming in the baby with the mother. HB-0 and vitamin K administration were continued, and the baby was healthy. The standard during the puerperium can all be done and given the care to reduce perineal pain and accelerate the healing of perineal wounds. The conclusion is that all means of midwifery care from pregnancy to the completion of the puerperium can be performed on multiparous mothers with diabetes mellitus, and there are no complications for the mother or baby.

Keywords: *Childbirth, Postpartum, Hypoglycemia, Pregnancy.*

1. Introduction

The incidence of Diabetes Mellitus (D.M.) in the world from year to year continues to increase. The latest data from the World Health Organization (WHO) shows that in 2020 as many as 150 million people in the world will suffer from D.M., and this figure will be doubled in 2025 (Angullo-Martínez et.al.2021). The number of sufferers of this disease will occur in developing countries due to population growth, aging, unhealthy diets, obesity, and lack of physical activity (Bolla et.al. 2020). In Indonesia, the proportion of the incidence of Diabetes Mellitus is 6.9% in the population aged 15 years, and around 1.9-3.6% of pregnant women in Indonesia have Diabetes Mellitus. Screening examination can be done by checking blood glucose during and 2 hours postprandial (pp) (Bonora et.al., 2021a). If the results cannot confirm the diagnosis of Diabetes Mellitus, it can be followed by an oral glucose tolerance test. Diabetes Mellitus is established when blood glucose

levels exceed 200 mg%. If the value is below 100 mg%, it means that it is not Diabetes Mellitus, and if the value is between 100-200 mg%, it is not sure that it is Diabetes Mellitus. Until now, the best examination in pregnant women is the glucose challenge test, namely by loading 50 grams of glucose and measuring blood glucose levels 1 hour later. If the blood glucose level after 1 hour of loading exceeds 140 mg%, it is continued with an oral glucose tolerance test. Diabetes mellitus disorder occurs in 2% of all pregnant women. The incidence increases with gestational age but does not represent a tendency for people with impaired glucose tolerance. 25% are likely to develop diabetes mellitus (Bonora et.al., 2021b)

The maternal mortality rate is still relatively high. The cause of death was influenced by a lack of understanding for pregnant women checking their health. A woman tends to experience glucose tolerance during pregnancy because of the placenta's anti-insulin hormones and enzymes. One to six percent of all women in the United States experiences a tolerance to glucose during pregnancy (Carrasco-Sánchez et.al., 2021). Gestational Diabetes Mellitus (GDM) is defined as a glucose tolerance disorder of various levels recognized for the first time during pregnancy, regardless of whether the patient needs insulin. In the first trimester of pregnancy, glucose levels will fall between 55-65%, which is a response to glucose transport from mother to fetus. Sometimes pregnant women have previously had Diabetes Mellitus but only found out during a pregnancy check (Chan et.al., 2021). Some have been detected as having Diabetes Mellitus even though pregnant women have never had Diabetes. Namely, light carbohydrate tolerance or glucose tolerance in the body is disturbed. Pregnant women who have Diabetes are only between 1.9-6%. Of course, this detection needs to be considered, especially the history of previous pregnancies and deliveries. For example, is there a history of giving birth to a baby weighing more than 4 kg, pregnant women are obese, or urinary tract infections during pregnancy (Cheng et.al., 2021).

Pregnant women should examine early and repeat at 26-28 weeks of gestation. Pregnant women who can experience Diabetes Mellitus should monitor their blood glucose levels at least twice a week. Or, you can recheck every 2-4 weeks, then check again more often when delivery approaches so that blood glucose levels can decrease to 200mg/dl. It's already in the category of Diabetes Mellitus. If the results are between 140-200 mg/dl, they can still be tolerated but must be under the supervision of a doctor (Denyer et.al., 2021).

2. Materials dan Metode

2.1 Material

Pregnant mother, Mrs. R.N, 27 years old, G2P1A0. High school education, work as a housewife. 36-37 weeks gestation, HPHT July 2, 2020, HPL April 9, 2021, first menstruation (menarche) at 12 years. In the current pregnancy history, the mother said that in the first trimester, she felt complaints such as nausea and vomiting; in the second trimester, she said she felt pain in her back, and in the third trimester, she said she still felt pain in the back, often urinated and had difficulty sleeping. The fetal movement was first felt at 20 weeks of gestation, and the mother felt active fetal movement in the last 24

hours. Mother was given TT1 immunization on March 17, 2021. Mother has no history of the disease, either systemic illness or family history. The authors observed the mother's emotional state and general state at data collection with interview techniques. The mother was in a stable emotional state, compliments consciousness, and the general condition was good. According to gestational age, there was no edema and enlargement of the abdomen from the inspection results. The mother gave birth to her first child at Aloei Saboe Hospital on August 7, 2017, with standard delivery, weight 2700 grams, body length 47 cm, and breast milk for two years.

2.2 Metode

The method used in comprehensive care for pregnant, maternity, and postpartum women is a case study (Sri Wahyuni 2016). The instrument used is a midwifery care format (observation sheet) starting from pregnancy, childbirth, newborn and postpartum with seven steps of Varney and SOAP for progress notes (Sri Wahyuni 2016). This case study data collection method uses techniques; (1) interviews, (2) observations, and (3) documentation studies (documentation data comes from medical records or patient status, family cards, and MCH books). The data analysis used in this case study is the descriptive analysis presented in a textual/narrative way.

3. Results

3.1 Pregnancy

The results of the history of Mrs. R.N, aged 26, said that the First Day of Last Menstruation (HPHT) was July 02, 2020, estimated delivery was April 09, 2021. The complaints felt by the mother were low back pain, frequent urination at night and difficulty sleeping, swelling in the legs (edema). Complaints experienced by the mother are discomfort in the third trimester. The mother's menstrual cycle is regular, the first fetal movement is felt at 16 weeks of gestation, and the fetal movement is > 10 times in 24 hours. On examination of vital signs, namely blood pressure 110/80 mmHg, pulse 85 times/minute, respiration 24 times/minute, body temperature 36.2°C, anthropometry, current weight 60 kilograms, weight before pregnancy 48 kilograms, height 149 cm, LILA 28 cm. In addition, the authors also performed a midwifery physical examination by inspection, palpation, auscultation, percussion. All problems were found within normal limits. Leopold's palpation revealed that Leopold I palpated the buttocks with a TFU of 29 cm, Leopold II left-back, Leopold III felt the head, and Leopold IV, the lowest part of the fetus, had entered the pelvic inlet. The fetal heart rate was 145 beats/minute, and the estimated fetal weight was 2,790 grams. There were 90 iron tablets consumed by the mother during pregnancy, and the mother had received TT1 immunization on March 17, 2021. During pregnancy, the mother carried out routine laboratory examinations, namely Hb, and special laboratory tests, namely syphilis, Human Immunodeficiency Virus (HIV), malaria, and HBsAg, in January 2021. The investigation results were negative. The author gives IEC to mothers about the Birth Planning and Complications Prevention (P4K) Program. The result is that Mrs. RN wants to be helped by the midwife, Mrs. RN intends

to give birth at Toto Kabila Hospital and wants to be accompanied by her biological mother, the vehicle that Mrs. RN will use to the hospital is bentor and the donor is a sibling who has blood type O same as Mrs. RN.

Data analysis, namely Mrs. R.N G2P1A0 26 years old, 39-40 weeks gestation, intrauterine fetus, single living, head presentation, left-back, has entered PAP with normal pregnancy. Information and Educational Counseling Needs (KIE). The problems found were low back pain, frequent urination at night, difficulty sleeping, and leg edema. Based on these complaints, Mrs. RN needs counseling about discomfort in the third trimester, which can be overcome by endorphin massage, drinking 1-2 glasses of water about 1-2 hours before going to bed and urinating before going to bed, soaking the feet in warm water for 15-20 minutes and doing this for 15-20 minutes. Seven days in a row. Mother has understood the care that has been given.

3.2 Labor

The mother underwent a normal delivery process with 41-42 weeks gestational age at Toto Kabila Hospital. The first period of the mother lasted for 7 hours, starting at 15.00 WITA until 22.30 WITA. The patient complained of increasing abdominal pain, and the family took the mother to the hospital at 19.40 WITA. The results of the midwife's examination at Toto Kabila Hospital on internal investigation revealed an opening of 4-5 cm, intact membranes, thin portion, head presentation. From the results of laboratory tests, high blood glucose results were obtained.

The second stage for Mrs. RN lasted for 15 minutes, starting at 22.30 WITA until 22.45 WITA. The complaint felt by Mrs. RN that the abdominal pain coiled to the waist was getting worse then the author did an internal examination, and the results were 10 cm opening, thin portion, IV Hodge head drop, five contractions in 10 minutes duration 55-60 seconds, FHR 137 times/minute, amniotic fluid apparent, no infiltration. In addition, the author also checked blood pressure 130/90 mmHg, pulse 99 times/minute, respiration 28 times/minute, body temperature 36.5°C, FHR 137 times/minute, and there were signs of second stage symptoms, namely pushing, pressure in the chest. The anus, perineum protrudes, and the vulva open. The author carries out the management of the second stage by presenting a birth attendant, teaching the mother the pushing position, recommending the mother to press during contractions, performing catheterization, giving praise to the mother that the mother can push well, fulfilling the mother's nutritional intake, checking the completeness of the parturition set that has been sterilized, performing prevention of infection, assisting childbirth according to APN, namely giving birth to the head, shoulders, body to the feet. The mother's management chose the lithotomy position during labor, and the mother gave birth at 22:45 WITA. The baby was born spontaneously. The sex was female with 3,100 grams, body length 51, chest circumference 32 cm, head circumference 31 cm. There was no difference between standard delivery assistance for diabetic mothers and normal delivery mothers during delivery. However, in assisting childbirth, apply the principles of infection prevention and use complete personal protective equipment to avoid transmission from mother to health workers.

Stage III Mrs. RN lasted 5 minutes starting at 22.45 WITA until 22.50 WITA. The mother said merasakan contractions in the abdomen, then the author examined and found signs of placental separation, namely the presence of blood spurts, the umbilical cord grew longer, and the uterus was globular. After that, the authors carried out the management of Active Management of Stage III (MAK III), namely moving the clamp 5-10 cm in front of the vulva, doing controlled umbilical cord tension while the other hand was doing the cranial dorso, when the placenta was visible at the vaginal introitus, hold the placenta and then rotate it slowly in a clockwise direction. Hours until the placenta is separated from the birth canal, check the completeness of the cotyledons and placental membranes, check for lacerations in the birth canal, perform a grade II heating of the perineum using the basting technique as many as five sutures, namely two on the inside and three on the outside. The placenta was born at 22:50 WITA.

Mrs. RN was monitored for 2 hours in the fourth stage, starting at 00.05 WITA until 01.50 WITA. The authors monitored vital signs, contractions, TFU, bleeding, and bladder in the first hour every 15 minutes and in the second hour every 30 minutes. Furthermore, the authors document the results of observations on the partograph sheet. Data analysis is G2P1A0 26 years old with the second stage of labor. There is no problem, the need for IEC in a pressing position, relaxation techniques, nutritional fulfillment, and massage the uterus after the baby and placenta are born. The care is given to Mrs. R.N., namely the transfer of pain to provide encouragement and support that the mother can smoothly go through the labor process, family support, and pushing techniques. The mother said she understood the care given.

3.3 Newborn Baby

Baby Mrs. R.N was born at term with 41-42 weeks gestation, normal birth on April 16, 2021, at 22:45 WITA at Toto Kabila Hospital with normal delivery type and female gender, born spontaneously with the back of the head. Furthermore, the authors conducted a cursory assessment of newborns, namely the baby cried immediately, the skin color was reddish, and the muscle tone was good, then the baby was dried while doing tactile stimulation using a clean towel and wrapped except for the abdomen, palms, soles of the feet. The umbilical cord is clamped with Kocher clamps approximately 3 cm from the first Kocher clamp while the rescuer's hand protects the baby's body. The umbilical cord is cut between the two clamps. Replace a wet baby towel with a new, clean, dry towel. Furthermore, the authors examined vital signs, heart rate 140 times/minute, respiration 45 times/minute, body temperature 36.9°C; physical examination showed that the umbilical cord had no signs of infection, the labia majora had covered the labia minora, the baby's reflexes positive, the baby has not voided and has not defecated, has been given vitamin K, eye ointment and Hb-0.

The baby is still undergoing Early Initiation of Breastfeeding (IMD to prevent hypoglycemia, and the baby has not yet been tested for blood glucose. After that, the authors give HB-0 2 hours after the baby is born at 01.00 WITA. The following management of the baby is immediately given to the mother for breastfeeding. The mother is recommended you do breastfeeding if the mother's nipples and baby's mouth are not injured. If there are wounds, the mother is advised to express breast milk and

bottle it. The author made a first neonatal visit on April 17, 2021, at 10.30 WITA. During the visit, the mother said the baby was crying loudly, and After that, the author conducted a general examination of vital signs and anthropometry. The results were good general condition, pulse 140 times/minute, respiration 40 times/minute, body temperature 36.8°C, weight 3100 grams, body length 51 cm, head circumference 31 cm, chest circumference 32 cm. Physical examination from head to anus was normal. The cell he continued, the authors provide KIE to mothers about exclusive breastfeeding, daily baby care, umbilical cord care, and danger signs for newborns. Then the baby was transferred to the Neonatal Intensive Care Unit (NICU) room at 10.50 WITA. While in the NICU, the author did not take any action because the midwife carried out the authority to take action at Toto Kabila Hospital.

Data analysis that is Baby Mrs. R.N female gender with normal newborn 2 hours. IEC needs and counseling in newborn care, umbilical cord care, exclusive breastfeeding, and newborn danger signs. The mother said she understood the care provided. The author made a second neonatal visit on the 6th day, on April 22, 2021, at 15.40 WITA. The results of the examination carried out by the author, the baby is in good health, has been given breast milk, the baby's movements are active, and the baby's umbilical cord has been lost. The author conducted an examination. The results were good general condition, composmentis awareness, good muscle tone, reddish skin color, and newborns' danger signs. After that, the author provides IEC about daily baby care, danger signs for newborns, informs the benefits of breastfeeding and exclusive breastfeeding every 2 hours, and includes breastfeeding if the mother's nipples are cracked.

The author made a third-day neonatal visit on April 30, 2021, at 18:50 WITA. The results of the examination carried out by the author, the baby is in good health, the mother continues to give breast milk, and the baby is breastfeeding well. After that, the authors examined and obtained the results of good general condition, composmentis awareness, active muscle tone, and no danger signs for newborns. Then, the author provides counseling on a good breastfeeding position so that the mother and baby feel comfortable. The results of data analysis from newborns to 14-day neonatal visits found that Mrs. RN's baby was in normal condition, had no complaints, and had been given IEC as needed.

3.4 Postpartum

The author made the first postpartum visit on April 17, 2021, in the postpartum room at the Toto Kabila Hospital at 10.00 WITA. The results of the subjective examination, Mrs. RN felt pain in the perineum, the mother was able to tilt left and right, sit and walk to the bathroom. The author checked vital signs and found blood pressure 130/80 mmHg, pulse 88 times/minute, respiration 25 times/minute, the body temperature of 36.2°C. In addition, the author also did a physical examination, the results of the conjunctiva examination were not pink; there was milk expulsion, TFU 2 fingers below the center, good uterine contractions, empty bladder, fresh red lochia Rubra, perineal suture wounds were in good condition, and there was no redness and swelling. Edema of the extremities. During the postpartum visit, the author told the mother to give

breast milk to her baby every 2 hours or when the baby wanted it. However, if there are sores on the mother's nipples and the baby's mouth, it is recommended to stop breastfeeding, or the mother can express breast milk and give it through a bottle. Based on the needs of Mrs. RN, the author carried out the management of perineal wound care and IEC nutritional patterns, personal hygiene, and vulvar hygiene to accelerate the healing of perineal wounds. In addition, the authors provide counseling on how to do uterine massage to prevent uterine atony, strengthen the relationship between mother and baby by giving exclusive breastfeeding, breast care, rest and sleep patterns, signs of danger during the postpartum period, and postpartum visits. The mother said that she understood the care provided.

The second visit, six days postpartum, the author conducted on April 23, 2021, at 15.00 WITA at Mrs. RN's house. From the results of interviews conducted by the author to Mrs. RN, she said that she had breastfed her baby and breast milk had come out smoothly, the mother had fulfilled the nutritional needs as recommended, in caring for the baby and doing housework was assisted by her biological mother. The perineal wound had started to dry out and was not painful. Based on the objective examination results, vital signs were obtained: blood pressure 110/80 mmHg, respiration 22 times/minute, pulse 82 times/minute, and body temperature of 36.7°C. In addition, the authors also did a physical examination, the results showed that the mid-central uterine fundus and symphysis were found, the perineal wound had started to dry up, uterine contractions were good, and the discharge of lochea sanguinolenta was yellowish red. And breastfeeding provided no sores on the mother's nipple and baby's mouth.

The author made the third visit, namely 14 days postpartum on April 30, 2021, at 18.30 WITA at Mrs. RN's house; from the interview, Mrs. RN said that she had breastfed her baby and the milk came out smoothly, the mother had fulfilled her nutritional needs as recommended, the mother was assisted by her husband and family doing housework and caring for the baby, and the mother said the perineal wound had dried up. The examination of vital signs, blood pressure 110/70 mmHg, pulse 82 times/minute, respiration 22 times/minute, body temperature 36.7°C. The physical examination results found that the perineal wound was dry, the height of the uterine fundus was not palpable, and the discharge of lochea serosa was brownish-red.

The author made the fourth visit, 42 days postpartum, on May 28, 2021, at 10.00 WITA at Mrs. RN's house. From the results of interviews conducted by the author on Mrs. RN, she said that breastfeeding her baby and breast milk came out smoothly, and the mother had fulfilled her nutritional needs; the mother took care of the baby and did housework assisted by her husband biological mother. The examination of vital signs was blood pressure 110/70 mmHg, pulse 82 times/minute, respiration 22 times/minute, and body temperature of 36.7°C. In addition, the results of the physical examination showed that the perineal wound was dry, white lochia alba was released. The author provides KIE about nutrition patterns, rest, personal hygiene, breastfeeding, noting that there are no sores on the mother's nipples and baby's mouth, and contraceptive counseling to space or delay pregnancy mothers can use with diabetes mellitus. Mother has understood the counseling and chose the mini pill. The results of the analysis of postpartum women's

data from the I postpartum visit to the IV postpartum visit found Mrs. RN in normal condition, the complaints have been resolved, and KIE has been given as needed.

4. Discussion

4.1 Pregnancy

During pregnancy, the mother gained 13 kilograms of weight. Based on the Body Mass Index (BMI), the mother's weight was in the normal category, namely 20, and maternal weight was recommended. The results of the examination carried out by the author obtained blood pressure (110/80 mmHg), LILA (28 cm), TFU (29 cm), FHR (145 times/minute), TT1 on March 17, 2021, the F.E. tablets consumed by the mother were following the theory. According to theory, as many as 90 pills during pregnancy, laboratory tests have been carried out starting from routine laboratory examinations, namely Hb examination, and special laboratory examinations, namely syphilis, HIV, malaria, and HBsAg.

For the management of the case of Mrs. RN with complaints of low back pain, frequent urination, difficulty sleeping at night, and edema in the legs, management has been carried out as needed (Jin et.al., 2021). The cause of Mrs. RN's low back pain was due to changes in body posture to adjust to the increasingly heavy uterus. According to Safitri's research (2021), endorphin massage is carried out to overcome this (Klaprat et.al., 2021). For complaints of frequent urination, Mrs. RN is caused by the growing uterus pressing against the bladder. To overcome this, it is recommended that mothers drink 1-2 hours before going to bed and urinate first before going to bed (Komorita et.al., 2021). Complaints of difficulty sleeping at night are caused by frequent urination and the mother's uncomfortable sleeping position. To overcome this, it is recommended that mothers urinate before going to bed and choose a left-side sleeping position so that there is no emphasis on the anterior vena cava (McGumaghan et.al., 2021). For complaints of edema in the legs caused by fluid buildup. To overcome this, while sleeping, the leg position is elevated, and soaking the feet in warm water mixed with five spoons of salt for 15-20 minutes is carried out for seven consecutive days (Monami et.al., 2021).

During pregnancy, Mrs. R.N conducted seven checks to health facilities, consisting of 2 times in the first trimester, two times in the second trimester, and three times in the third trimester. Meanwhile, the author visited Mrs. R.N's house ten times in the third trimester, starting from 29 weeks of pregnancy to 41 weeks of gestation. This is following the theory that the frequency of antenatal care visits is at least six visits, namely two times in the 1st trimester, one time in the second trimester, and three times in the third trimester (Murphy et.al., 2021)

4.2 Labor

Based on Mrs. R.N's anamnesis results, there were signs of childbirth, namely abdominal pain coiling up to the waist, mucus mixed with blood. Symptoms of labor include mucus mixed with blood and heartburn. As well as regular hisses, more mucus, and blood because of small tears in the cervix, sometimes the membranes burst by themselves. So that there is no gap between theory and practice (Pals et.al., 2021). When I gave birth to Mrs. R.N lasted ± 7 hours, calculated from feeling regular contractions or HIS at 15.00 WITA, and an examination was carried out at 19.40 WITA with an opening

of 4-5 cm until complete beginning at 22.20 WITA. This follows the theory, namely stage 1 in primiparous mothers ± 13 hours and multiparous mothers ± 7 hours (Polfus et.al., 2021)

During the first stage of labor, Mrs. RN complained of abdominal pain coiling up to the lower waist due to the decreased fetal head. These complaints were overcome by massage, aromatherapy music, warm compresses, and deep breathing exercises. (17) In addition, birth attendants are also very influential because they can provide support so that mothers feel comfortable during the delivery process (Saeedi et.al., 2019)

Stage II on Mrs. R.N lasted ± 25 minutes from complete opening at 22:20 WITA, and the baby was born spontaneously at 22:45 WITA. This follows the theory that the duration of the second stage of labor for primiparous mothers is ± 1 hour and multiparous women ± 30 minutes. The delivery procedure for mothers with diabetes mellitus remains the same: applying the principles of infection prevention and using complete personal protective equipment (Saravanan et.al., 2020)

The third stage of Mrs. R.N lasted ± 5 minutes. The complete placenta was born at 22:50 WITA. This follows the theory that the third stage of labor occurs after the baby's birth and ends with the delivery of the placenta and its membranes within 5-30 minutes after the baby is born. After the placenta is delivered, uterine massage is carried out to maintain contractions. Thus, there are no complications during the third stage of labor, so there is no gap between theory and practice (Scott et.al., 2021)

The fourth stage of examination results on Mrs. R.N. There was a spontaneous second-degree tear in the birth canal, the height of the uterine fundus was three fingers below the center, the discharge of lochia rubra, the bladder was empty. Postpartum supervision was carried out for 2 hours postpartum, namely to monitor bleeding, TTV, contractions, TFU, and bladder. In the first 1 hour, monitoring is done every 15 minutes, then continued for the next 1 hour every 30 minutes. There were no complications from the fourth stage of observation (Sharma et.al., 2022)

The fourth stage observations on Mrs. RN were TTV within normal limits of 110/80 mmHg, temperature 36.9°C, uterine fundal height after the placenta was born three fingers below the center, good contractions, stiff consistency, empty bladder, lochia rubra, bleeding during the process. Delivery is ± 150 ccs. The estimated normal blood loss is <500 ccs based on the theory. If blood loss is > 500 cc, it includes abnormal blood loss. Bleeding on Mrs. R.N is still within normal limits. There is no gap with the theory. Thus, the delivery of Mrs. R.N for the first stage, second stage, third stage, and the fourth stage had no complications (Sun et.al., 2021)

4.3 Newborn Baby

Baby Mrs. RN was born at term on April 16, 2021, at 22:45 WITA with a spontaneous birth, 41-42 weeks gestation, no problems found, strong crying, good muscle tone, reddish skin color, female gender, perforated anus, no congenital disabilities, and all positive reflexes. Infants were not initiated early because when the mother was in the first stage, the results of the HBsAg laboratory examination were positive. After 2 hours, the baby was given H.B. 0 and given to the mother for breastfeeding. This action is taken to avoid transmission from mother to baby during the puerperium. This follows the

theory that newborns naturally have immunoglobulin from the placenta and will decrease immediately after the baby is born, but they can get it back through breastfeeding. Breast milk contains immune substances that protect babies from viral, bacterial, parasitic, and fungal infections. Hepatitis B virus in the breast milk of mothers with positive HBsAg is present but in small amounts (Sun et.al., 2021)

Breast milk can still be given to infants of mothers with HBsAg provided that the hepatitis B vaccine has been shown in the first 24 hours after the baby is born then followed by three doses of the next HBV (Hepatitis B Virus) vaccine in the first year of life to prevent transmission during the puerperium from mother to baby. After completing the vaccine series, HBsAg and anti-HBS tests were performed on infants aged 9 to 18 months. There is no gap between theory and reality (Tong et.al., 2021)

Newborns of HBsAg positive mothers received 0.5 ml of HBIg and five mcg (0.5 ml) of the recombinant vaccine in different lower extremities within 12 hours after birth, the second dose was given at 1-2 months of age, and the third dose was given at six years of age. Month. Even if the virus is found in breast milk, as long as the nipples are not sore or bleeding and the baby is vaccinated immediately after birth, breastfeeding is continued. Transmission of HBV infection can occur in 2 ways, namely vertically and horizontally. Vertical information or Mother-To-Child-Transmission (MTCT) transmission from mother to fetus in the womb or during childbirth, in-utero HBV transmission, perinatal transmission, and postnatal transmission. Horizontal transmission through percutaneous mucous membranes or mucosa. The mechanism of in-utero HBV transmission is unknown because one of the functions of the placenta is bacteria or viruses (Tornese et.al., 2021)

Based on research results, all body fluids can be transmitted, but only blood, vaginal fluids, and semen are infectious. In addition, transmission can occur through percutaneous and permucous contagious body fluids. The risk of hepatitis will increase in certain groups, including health workers, sex workers, narcotics users, babies with mothers suffering from hepatitis B. The first treatment performed on newborns is the principle of infection prevention, assessment immediately after birth, preventing heat loss through a 6-hour delay in bathing, cutting and caring for the umbilical cord, prevention of bleeding through a single dose of vitamin K1 in the left thigh, administration of hepatitis B immunization. H.B. 0) single dose on the right thigh and prevention of eye infection by administering a single amount of antibiotic eye pointment (Angullo-Martínez et.al., 2021)

The results of anthropometric measurements in infants weighing 3,100 grams, body length 51 cm, head circumference 32 cm, and chest circumference 33 cm. head to toe examination results were within normal limits, and there were no abnormalities. Visits were made three times to assess the effectiveness of the care plan provided and ensure no problems and danger signs in the baby. Providing care to Mrs. R.N from the examination immediately after the newborn until the 3rd neonatal visit, there is no gap between practice and theory (Bolla et.al., 2020)

4.4 Postpartum

First contact 12 hours postpartum to Mrs. R.N is in good condition, vital signs are within normal limits, the bladder is empty. The bleeding was 80 cc, and the monitoring results showed no abnormalities or complications, but the mother said she still felt pain in the perineum. To overcome Mrs. RN's complaint, the author provides counseling to accelerate the healing of perineal wounds, consuming high-protein foods such as tofu, tempeh, eggs, meat, snakehead fish, and nuts (Bonora et.al., 2021b). In addition, they are maintaining personal hygiene and mobilization to facilitate blood circulation to prevent infection in perineal sutures (Bonora et.al., 2021a). Vulva hygiene is also very influential in healing perineal wounds, so the authors recommend that mothers keep the perineal wound dry, not wash with warm water, and not use traditional medicine on the damage (Carrasco-Sánchez et.al., 2021)

After 12 hours postpartum, the mother begins to breastfeed her baby. To minimize the transmission of the hepatitis B virus from mother to baby, give the HBIG immunization for less than 12 hours. In addition, mothers are encouraged to continue breastfeeding their babies as long as there are no wounds on the breasts and baby's mouth. If there are sores on the mother's breast or baby's mouth, the mother is recommended to express breast milk and give breast milk through a milk bottle (Cheng et.al.,2021)

The second visit, which was six days postpartum, assessed that there were no signs of postpartum danger and the mother continued to breastfeed her baby. The perineal wound has started to dry up. At a 2-week visit, the examination results were within normal limits, no signs of danger were found, the mother no longer felt pain in the perineum, the wound had started to dry up, and the mother continued to breastfeed. The fourth visit was 14 days postpartum to assess whether there were signs of danger during the puerperium. And mothers continue to breastfeed their babies. The perineal wound has dried up. The examination results were within normal limits. There were no danger signs, the perineal wound had dried up, and the mother was still breastfeeding (Cheng et.al., 2021).

Post-SC visit on the 42nd day or six weeks, contraceptive counseling has been given to space or delay pregnancy to create a small, prosperous family. The mother has been assisted in deciding to use family planning, and her subsequent decision will be to use a family planning method that is safe to use for people with diabetes mellitus. The choice of family planning that the mother will use is in the form of mini-pills containing progestin, from the results of postpartum monitoring on Mrs.R.N. There is no theoretical gap, the postpartum period usually proceeds without any problems and danger signs during the postpartum period, and there is no gap between theory and practice (Denyer et.al., 2021).

5. Conclusions

Comprehensive midwifery care was performed on Mrs. R.N. There were no complications from pregnancy to puerperium. Pregnancy care for Mrs. R.N has been carried out according to the 10 T standard, and there is no gap between theory and

practice. Childbirth care for Mrs.. According to norms, R.N has been carried out, namely monitoring stage 1 using a front sheet partograph, stage II using APN 60 steps, stage III using MAK III, and stage IV observation using a back sheet partograph, Midwifery care for newborns By. Mrs. R.N has been carried out according to standards, namely newborn care, KN I, KN II, and KN III have been carried out according to schedule, Midwifery care for the puerperium period on Mrs. R.N has been carried out starting from KF I, KF II, KF III, and KF IV according to the schedule, and the results are that Mrs. R.N chose to use a three-month injection of K.B. as a contraceptive.

Conflict of Interest

No declare

Author Contribution

All authors contribute equally to this paper

References

- Angullo-Martínez E, Carretero-Anibarro E, Sánchez Barrancos IM, Cos Claramunt X, Orozco Beltrán D, Torres Baile JL, et al. Checklist for patients with type 2 diabetes mellitus for remote consultation. *Aten Primaria*. 2021;53(4).
- Bolla AM, Dozio N, Scavini M, Succurro E, Tumminia A, Torlone E, et al. Awareness about diabetes and pregnancy among diabetes specialists and fellows: The YoSID diabetes and pregnancy project. *Nutr Metab Cardiovasc Dis*. 2020;30(9):1520–4.
- Bonora E, Cataudella S, Marchesini G, Miccoli R, Vaccaro O, Fadini GP, et al. Initial treatment of diabetes in Italy. A nationwide population-based study from of the ARNO Diabetes Observatory. *Nutr Metab Cardiovasc Dis* [Internet]. 2021a;31(9):2661–8. Available from: <https://doi.org/10.1016/j.numecd.2021.06.006>
- Bonora E, Cataudella S, Marchesini G, Miccoli R, Vaccaro O, Fadini GP, et al. Incidence of diabetes mellitus in Italy in year 2018. A nationwide population-based study of the ARNO Diabetes Observatory. *Nutr Metab Cardiovasc Dis* [Internet]. 2021b;31(8):2338–44. Available from: <https://doi.org/10.1016/j.numecd.2021.04.017>
- Carrasco-Sánchez FJ, Fernández-Rodríguez JM, Ena J, Gómez-Huelgas R, Carretero-Gómez J. Medical treatment of type 2 diabetes mellitus: Recommendations of the Diabetes, Obesity and Nutrition Group of the Spanish Society of Internal Medicine. *Rev Clínica Española (English Ed)* [Internet]. 2021;221(2):101–8. Available from: <https://doi.org/10.1016/j.rceng.2020.06.009>
- Chan JCN, Lim LL, Shaw JE, Aguilar-Salinas CA, Gregg EW. Data on diabetes-specific distress are needed to improve the quality of diabetes care – Authors’ reply. *Lancet* [Internet]. 2021;397(10290):2150. Available from: [http://dx.doi.org/10.1016/S0140-6736\(21\)00664-4](http://dx.doi.org/10.1016/S0140-6736(21)00664-4)
- Cheng AYY, Feig DS, Ho J, Siemens R, Bajaj H, Gilbert J, et al. Blood Glucose Monitoring in Adults and Children with Diabetes: Update 2021. *Can J Diabetes* [Internet]. 2021;45(7):580–7. Available from: <http://dx.doi.org/10.1016/j.cjcd.2021.07.003>

- Denyer AL, Catchpole B, Davison LJ. Genetics of canine diabetes mellitus part 2: Current understanding and future directions. *Vet J*. 2021;270.
- Jin Q, Lau ESH, Luk AOY, Ozaki R, Chow EYK, Cheng F, et al. Skin autofluorescence is associated with higher risk of cardiovascular events in Chinese adults with type 2 diabetes: A prospective cohort study from the Hong Kong Diabetes Biobank. *J Diabetes Complications*. 2021;35(10).
- Klaprat N, Benjamin C, Brandt J, Gregoire N, Merrill K, Mackay D, et al. Restructuring Clinical Trials in Type 1 Diabetes and Exercise in the Context of Adult Patient-Oriented Research: An Intervention Codevelopment Protocol. *Can J Diabetes [Internet]*. 2020;44(8):734–9. Available from: <http://dx.doi.org/10.1016/j.cjcd.2020.10.019>
- Komorita Y, Ohkuma T, Iwase M, Fujii H, Oku Y, Higashi T, et al. Polypharmacy and bone fracture risk in patients with type 2 diabetes: The Fukuoka Diabetes Registry. *Diabetes Res Clin Pract [Internet]*. 2021;181:109097. Available from: <https://doi.org/10.1016/j.diabres.2021.109097>
- McGurnaghan SJ, Weir A, Bishop J, Kennedy S, Blackburn LAK, McAllister DA, et al. Risks of and risk factors for COVID-19 disease in people with diabetes: a cohort study of the total population of Scotland. *Lancet Diabetes Endocrinol*. 2021;9(2):82–93.
- Monami M, Candido R, Pintaudi B, Targher G, Mannucci E. Improvement of glycemic control in type 2 diabetes: A systematic review and meta-analysis of randomized controlled trials. *Nutr Metab Cardiovasc Dis*. 2021;31(9):2539–46.
- Murphy HR, Howgate C, O’Keefe J, Myers J, Morgan M, Coleman MA, et al. Characteristics and outcomes of pregnant women with type 1 or type 2 diabetes: a 5-year national population-based cohort study. *Lancet Diabetes Endocrinol*. 2021;9(3):153–64.
- Pals RAS, Hviid P, Cleal B, Grabowski D. Demanding devices – Living with diabetes devices as a pre-teen. *Soc Sci Med [Internet]*. 2021;286(June):114279. Available from: <https://doi.org/10.1016/j.socscimed.2021.114279>
- Polfus LM, Darst BF, Highland H, Sheng X, Ng MCY, Below JE, et al. Genetic discovery and risk characterization in type 2 diabetes across diverse populations. *Hum Genet Genomics Adv*. 2021;2(2):1–10.
- Pujante Alarcón P, Menéndez Torre EL, Morales Sánchez P, Rodríguez Escobedo R, Conde Barreiro S, Rojo Martínez G, et al. Cardiovascular diseases in people with diabetes mellitus in Spain according to the Primary Care Clinical Database (BDCAP) in 2017. *Med Clin (Barc)*. 2021;(xxxx).
- Saeedi P, Petersohn I, Salpea P, Malanda B, Karuranga S, Unwin N, et al. Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas, 9th edition. *Diabetes Res Clin Pract [Internet]*. 2019;157:107843. Available from: <https://doi.org/10.1016/j.diabres.2019.107843>

- Saravanan P, Magee LA, Banerjee A, Coleman MA, Von Dadelszen P, Denison F, et al. Gestational diabetes: opportunities for improving maternal and child health. *Lancet Diabetes Endocrinol*. 2020;8(9):793–800.
- Scott SN, Fontana FY, Cocks M, Morton JP, Jeukendrup A, Dragulin R, et al. Post-exercise recovery for the endurance athlete with type 1 diabetes: a consensus statement. *Lancet Diabetes Endocrinol* [Internet]. 2021;9(5):304–17. Available from: [http://dx.doi.org/10.1016/S2213-8587\(21\)00054-1](http://dx.doi.org/10.1016/S2213-8587(21)00054-1)
- Sharma P, Hajam YA, Kumar R, Rai S. Complementary and alternative medicine for the treatment of diabetes and associated complications: A review on therapeutic role of polyphenols. *Phytomedicine Plus* [Internet]. 2022;2(1):100188. Available from: <https://doi.org/10.1016/j.phyplu.2021.100188>
- Sun H, Saeedi P, Karuranga S, Pinkepank M, Ogurtsova K, Duncan BB, et al. IDF diabetes Atlas: Global, regional and country-level diabetes prevalence estimates for 2021 and projections for 2045. *Diabetes Res Clin Pract* [Internet]. 2021;(xxxx):109119. Available from: <https://doi.org/10.1016/j.diabres.2021.109119>
- Sun J, Ren J, Hu X, Hou Y, Yang Y. Therapeutic effects of Chinese herbal medicines and their extracts on diabetes. *Biomed Pharmacother* [Internet]. 2021;142(April):111977. Available from: <https://doi.org/10.1016/j.biopha.2021.111977>
- Tong CV, Yow HY, Mohd Noor N, Hussein Z. Diabetes emergencies around Ramadan study (DEARS) – A multi-center study of diabetes emergencies admitted before, during and after Ramadan in Malaysia. *Diabetes Res Clin Pract* [Internet]. 2021;175:108854. Available from: <https://doi.org/10.1016/j.diabres.2021.108854>
- Tornese G, Schiaffini R, Mozzillo E, Franceschi R, Frongia AP, Scaramuzza A. The effect of the COVID-19 pandemic on telemedicine in pediatric diabetes centers in Italy: Results from a longitudinal survey. *Diabetes Res Clin Pract* [Internet]. 2021;179:109030. Available from: <https://doi.org/10.1016/j.diabres.2021.109030>