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Kangaroo Method for Low Birth Weight Infants: Case Study

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Abstract: Low Birth Weight (LBW) is a birth weight of less than 2500 grams, which increases the risk of neonatal morbidity and mortality. Babies with low birth weight are more susceptible to complications. Babies with low birth weight increase the risk of health complications such as infection, hypothermia and growth disorders. The kangaroo method for babies with low birth weight is an appropriate alternative method that is simple and cheap. This case study aims to analyze midwifery care for low birth weight patients. The author uses a descriptive analytical method in the form of a case study approach to midwifery care for patients which includes assessment, midwifery diagnosis, midwifery planning, midwifery implementation, midwifery evaluation and use of Evidence Based Practice (EBP) interventions. The results of the evaluation can be resolved, this is indicated by the patient's weight gain and stable body temperature. This shows that the kangaroo method is an effective method and has been proven to increase body weight in patients who experience low birth weight.

Keywords: effective treatment, kangaroo method, low birth weight, neonatal complications

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Introduction

The Infant Mortality Rate is one indicator to measure the level of maternal and child health. Newborn deaths (75%) occur in the first week of life, with 2.4 million newborn babies dying in the first 24 hours in 2020. The global neonatal mortality rate is 17 out of 1000 live births (WHO, 2022). Sub-Saharan Africa has the highest neonatal mortality rate in the world (27 deaths per 1000 live births) with 43% of global newborn deaths, followed by Central and South Asia (23 deaths per 1000 live births), with 36% of newborn deaths globally (WHO, 2022). In Indonesia, there were 25,652 or 5.40 deaths per 1000 live births (Indonesian Health Profile, 2021). The risk of infant death in West Java in 2020 is 3.18/1000 live births or 2760 cases. The causes of neonatal death are still dominated by low birth weight (LBW), Asphyxia, congenital abnormalities and other causes (West Java Health Office, 2021). Based on data from the Garut District Health Service, in 2019 the infant mortality rate was 2055 cases (Garut District Health Office, 2020). The causes of neonatal death are still dominated by LBW (38.4%), asphyxia (28.11). Neonatal tetanus (0.13%), sepsis (3.60%), congenital abnormalities (11.32%) and other causes (18.43%) (Situmeang & Ningsih, 2022). Low birth weight (LBW) is a baby born weighing less than 2500 grams, which increases the risk of neonatal morbidity and mortality. Babies with LBW have a higher risk of experiencing various health complications, including hypothermia, hypoglycemia, infection, growth disorders and increased neonatal mortality (Julina Br Sembiring, 2019). Good prevention efforts can reduce the birth rate of LBW babies and must be implemented comprehensively and comprehensively by prioritizing promotive, preventive, curative and rehabilitation aspects in an integrated manner (Sunarti & Batrisya, 2019). Along with the development of

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science and technology and more and more research related to the care of LBW babies, the temperature of LBW babies can be managed effectively, namely maintaining normal body temperature by frequently hugging and holding them.

The kangaroo method treatment (KMC) was first introduced by Dr. Edgar Rey Sanabria in Colombia in 1978, is a treatment approach that has been proven effective in treating LBW babies. The method involves skin-to-skin care between mother and baby, which is known to provide a variety of benefits for the baby, including thermal stability, increased weight gain, and better psychosocial development. Apart from that, the kangaroo method also strengthens the emotional bond between mother and baby, which is important for the well-being of motKMC her and baby (Riskawati, 2016).

Kangaroo method treatment can be done in two ways, first is intermittent KMC, namely babies with serious conditions requiring intensive and special care in the perinatology room, perhaps even requiring the help of tools. For babies with this condition, KMC is not given all the time but is only done when the mother visits the baby. KMC is done for a minimum duration of one hour. After the baby is stable, the baby is transferred to the ward to undergo continuous KMC. The second method is continuous KMC, in this KMC the baby's condition must be stable and the baby must be able to breathe naturally without the help of oxygen (Pratiwi, 2015).

Method

This study used a descriptive case study approach and literature review to investigate midwifery care for small term neonates with low birth weight. The patients in this study were low birth weight patients. Signs and symptoms experienced by patients during the assessment include body weight 2100, thin skin fat layer and irregular sleep patterns. The priority obstetric problems identified are low body weight and thin skin fat layer. The author uses the Apgar score format, weighing equipment, thermometer and records the data on the midwifery care form.

The KMC intervention was carried out in accordance with the standard operational procedure guidelines for the Management of the Indonesian Midwives Association using the SOP for the kangaroo method of the UPT Samarang Garut Community Health Center to determine the obstetric diagnosis, goals and objectives, plan, and evaluate the actions given to the patient. The interventions provided include monitoring vital signs, monitoring weight gain. The author provides intervention using the kangaroo method of treatment.

Result and Discussion

On March 1 2023, the baby was born at 38-39 weeks' gestation with a birth weight of 2100 grams, body length 47 cm, head circumference 30 cm. chest circumference 29 cm abdominal circumference 28 cm. according to WHO and cognition et al., in 2021, if the baby's weight is less than 2500 grams, the aspect of gestational age is not taken into account and the weight is measured in the first 24 hours after birth, namely babies with low birth weight. The movements are quite active, the crying is quite strong, the fat under the skin is thin in accordance with the theory of the Ministry of Health in 2015 that signs of a small baby for pregnancy include the baby being old enough, less or more than a month but weighing less than 2,500 grams, the movements are quite active, the crying is quite strong , wrinkled skin, thin subcutaneous fat, breasts and nipples according to pregnancy period, full term female baby, labia majoran covering labia minora, male baby's testicles may have descended, soles of feet more than 1/3 of the way, and sucking quite strongly (Ministry of Health, 2015).

The treatment carried out is in accordance with the UPT procedures at the Samarang Garut Community Health Center, namely the initial treatment of drying the baby. In the initial treatment of drying the baby, this is in accordance with Nurasiah's theory, 2014, that babies with low birth weight easily experience hypothermia, therefore body temperature must be maintained strictly. cutting pins, giving Vit K1 and eye ointment immediately after birth and initiate early breastfeeding. At 2 hours the baby underwent a head to toe physical examination, no caput suscedanum, no cephalic hematoma, positive reflexes, normal physical examination. Vital signs showed heart rate 138x/minute, respiration 46x/minute and temperature 36.8 Celsius. Apgar score obtained 7. Observe danger signs and provide KMC training to the baby's mother.

The kangaroo method teaches mothers to wash their hands in 6 steps according to the procedure, measure the baby's temperature with a thermometer, wear a baby hat and diaper, put a kangaroo shirt on the mother, position the baby upright on the mother's chest (skin contact) like a kangaroo, after the baby is in a good position, The kangaroo clothes are tied to support the baby, then the mother can carry out activities as usual while carrying the baby in an upright position (skin to skin contact) like a kangaroo, apart from this step, to keep the baby warm with a 60 watt floodlight which is effective in maintaining body warmth.

Treatment using the kangaroo method for LBW was then carried out again by Freeri, Agonwardi and Nandiati in 2017, showing that there was an effect of kangaroo method treatment on weight gain for LBW in the perinatology room at Dr. RSUD. Rasidin Padang in 2017. This research was carried out for 6 consecutive days on 15 mothers who had LBW babies in the

perinatology room, all of whom were in the intervention group because the design used was pre test and post test one group design.

Other research has been conducted on the effect of kangaroo method treatment on physiological stress in low birth weight babies before and after treatment with the kangaroo method at Sukoharjo District Hospital. This research was carried out first with a pre-test carried out by measuring the baby's physiology (body temperature, oxygen saturation, baby's heart rate) before the kangaroo method intervention and then recording it on an observation sheet. When carrying out the research, carry out the research for at least 1 hour and measure temperature, oxygen saturation and pulse after completing the KMC implementation. The KMC will be implemented for 3 days. The increase in the physiological response of babies after the kangaroo method of treatment was due to the fact that the majority of babies before the kangaroo method of treatment had low physiological responses. This means that the kangaroo treatment method can stabilize the physiological response of LBW babies. The effect of kangaroo method treatment on body weight is that there is an influence of low weight newborn babies who are fitted with medical equipment on kangaroo method treatment.

Conclusion

Midwives can provide comprehensive midwifery care to low birth weight patients, one of which is providing kangaroo method treatment which has been proven to be effective as a non-pharmacological intervention. The role of the kangaroo method of care in the care of babies with low birth weight as a simple method of baby care to provide baby warmth and care for growth.

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References

1. Batrisya A. (2019) The Effort of pregnant Mothers in Preventing Low Birth Weight in Sukorejo Peripheral Hospital. J Nursing Malang; 4 (2): 67-75
2. Gratisari, Mardiani, & Agonwardi, Agon-wardi. (2017). The Effect of Kangaroo Method Treatment on Weight Gain in Low Birth Weight Babies in the Perinatology Room at RSUD Dr. Rasidin Padang Year 2017.Jik-October Volume 1 No 1 Year 2017,1(1), 32-38
3. West Java Health Service. (2021). West Java Health Profile 2021. West Java Health Office
4. Garut District Health Service. (2020). Garut Regency Health Profile 2020. District Health Office. Garut
5. Indonesian Ministry of Health. (2015).Essential neonatal health services: Technical guidelines for basic health services.(Revised ed.). Jakarta:Department of Health.
6. Ningsih, NS, Situmeang, IF, & Karya Husada, P. (2022). factors associated with the incidence of preeclampsia in pregnant women at BUNDA MARGONDA RSU in 2019. Bunda Edu-Midwifery Journal (BEMJ), 5(1), 16-24.
7. Nur S., Nugraheni, Sri. A., & Cahyo, K. usyogo. 2016. Analysis of the Implementation of the Kangaroo Method Treatment Program (KMC) and Patient Participation in Health Services for Low Birth Weight (LBW) Babies (Study of Patients at Mardi Rahayu Kudus Hospital). Indonesian Journal of Health Management, 4(2), 98-108
8. Pratiwi, A. (2015). Providing the Kangaroo Mother Care (KMC) Method for the Stability of LBW Body Temperature in the Nursing Care of Mrs. Y in the Neonatal HCU Room at Dr. Moewardi Surakarta.
9. Riskawati Y, Utomo MT, Lestari P. (2021). The Effect of Kangaroo Method on Increasing Body Weight at Low Birth Weight. Indonesian Midwifery Heal Sci J.;4(3):241-252. doi:10.20473/imhsj.v4i3.2020.241-252
10. Sembiring, JB, Pratiwi, D., & Sarumaha, A. (2019). The relationship between age, parity and gestational age with low birth weight babies at Medan Medan Partner General Hospital. *Journal of Community Midwifery* , *2* (1), 38-46.
11. Sembiring, JB. (2017) Textbook for Neonates, Babies, Toddlers, Pre-School Children Ed. 1, Cet. 1. Yogyakarta: Deepublish.
12. Sunarti, S. (2019). An Effort by Pregnant Women to Prevent Low Birth Weight Babies in the Sukorejo District Health Uptd Area. Malang Nursing Journal, 4(2), 67-75.
13. WHO. (2022). World Health Organization. https://www.who.int/news-room/fact-sheets/detail