

CAN THE KANGURU MOTHER CARE (KMC) INTERVENTION IMPROVE BREAST MILK PRODUCTION?

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Abstract

Babies who are hospitalized can be one of the factors causing stress for mothers because they have to be temporarily separated from the baby. Stress in mothers with these conditions can affect breast milk production (ASI), meanwhile breast milk is very necessary for optimal baby growth and development. The purpose of this study was to identify the effect of the implementation kangaroo mother care (KMC) on increased milk production as long as the baby was hospitalized. The design of this study is qualitative with multiple case design involving three selected cases and has predefined inclusion criteria. The research was conducted from January to March 2016 at RSUPN Ciptomangunkusumo and RSAB Harapan Kita. Breast milk production was measured during the mother carrying out KMC for 3 days using an electric pump or marmet technique. Furthermore, the results of expressed breast milk are recorded on the sheet provided. The results showed that there was an increase in milk production for 3 days with an average increase in milk production of 16,67-43,33 ml/day. KMC has a positive impact on milk production and volume, especially if the mother frequently implements PMK, so this intervention can support mothers who complain of low milk production.

Key words: breast milk, premature babies, kangaroo mother care (KMC), milk production, stress and anxiety in mothers.

INTRODUCTION

Babies are children who are born until the age of 28 days and experience a process of growth and development. This process takes place quickly and is influenced by the environment, cannot be repeated so it is called the golden period. Every baby experiences a different growth process. Growth and development are two different processes, but they are interrelated and continuous from conception to adulthood. Growth is related to changes in size, size, number, or dimensions at the level of cells, organs, or

individuals. Development is the increase in body structure and functions that are more complex in the ability of gross and fine movements, such as speech, language, socialization and independence (Kemenkes RI, 2013).

To facilitate optimal growth and development, babies need adequate nutrition. Nutrition for newborns up to the first 6 months is in the form of breast milk (ASI). The contents of breast milk include: white blood cells, immune substances, digestive enzymes, hormones and proteins that are suitable for meeting

the needs of a baby up to 6 months old. Breast milk contains complete carbohydrates, protein, mother's milk, multivitamins, water, creatinine and minerals which are very suitable and easily absorbed completely and do not interfere with the kidney function of infants who are in the growth stage (Soetjningsih, 2012). Apart from being beneficial for the baby, exclusive breastfeeding is also beneficial for the mother, including: as a natural contraceptive when breastfeeding, maintaining the mother's health by reducing the risk of developing breast cancer and helping mothers to bond with their children.

The separation of mother and baby can cause stress to both mother and baby. These stressful conditions can affect the production of the hormone oxytocin and the hormone prolactin, which play a role in the production of breast milk. Endah and Masdinarsah (2011) state that the hormone oxytocin will come out through stimulation to the nipple through the baby's mouth suction or through massage on the spine of the baby's mother, by doing a massage on the spine the mother will feel calm, relaxed, increase the threshold of pain and love her baby, so

that the hormone oxytocin comes out and breast milk comes out quickly.

Lack of breastmilk production is a common problem in many mothers with preterm newborns (Karbandi, Hosseini, Masoudi, & Mamouri, 2014), whereas separation of premature babies cannot be avoided (Lau, 2018). This condition disrupted lactation initiation and forced families and the medical team to provide formula milk to newborns. In addition, failure to breastfeed destroys mother's trust, thereby undermining the evolution of the relationship between mother and baby. Finally, stopping breastfeeding is the main result of insufficient milk production and the anxiety that results from it. Finally, stopping breastfeeding is a major consequence of insufficient milk production and the anxiety that results (Ikonen, Paavilainen, & Kaunonen, 2015; Kair, Flaherman, Newby, & Colaizy, 2015).

Failure to breastfeed can also be caused by the condition of the baby such as: LBW or premature birth, experiencing labor trauma, infection, congenital abnormalities, twins and due to maternal conditions such as: swelling, breast abscess, anxiety / lack of confidence, wrong assumptions about the value of

milk bottle, want to work, the mother is malnourished. In addition, other causes of breastfeeding failure are delayed early initiation of breastfeeding, inexperienced mothers, parity status, age, marital status, smoking, unsuccessful breastfeeding experiences, lack of family support, lack of knowledge, attitudes and skills, socio-cultural factors and health workers, low prenatal lactation education and hospital policies that do not support lactation (Karimi, Sadeghi, Maleki-Saghooni, & Khadivzadeh, 2019).

LBW and premature who cannot get enough breast milk for various reasons are the main concerns of mothers and medical personnel (Mirzaie, Mohammad-Alizadeh-Charandabi, Goljarian, Mirghafourvand, & Hoseinie, 2018), because newborns with LBW and premature need Breast milk is more than a healthy baby to achieve optimal growth. Breastfeeding has a positive psychoemotional effect on the mother.

Health workers who care for these premature babies also need to think about the condition of the mother, because it is closely related to the smooth release of breast milk, so that interventions are needed that can be used to prevent anxiety and stress on the mother while the baby is

hospitalized. Nurses can assist mothers in improving maternal coping while the baby is cared for, increasing the mother's confidence in adequate breastfeeding.

A number of studies have been conducted to facilitate breastfeeding, including: Oxytocin massage (Widiyanti, Setyowati Sari, and Susanti, 2014); consumption of long bean leaves (Djama, 2018), combined care (Lusje, Mandan & Kusmiyati, 2014), breast massage (Afiyanti, 2012), combination of marmet technique and oxytocin massage (Eko, 2011).

The success of breastfeeding does not only need to be made from the baby or from the mother, but the success of breastfeeding and breastfeeding involves both mother and baby. This study uses the kangaroo mother care (KMC) as an intervention to accelerate milk production. Nutrition kangaroo is one of the KMC components, namely increasing direct breastfeeding and by giving breastmilk to LBW babies (PERINASIA, 2011). Based on a preliminary study in the perinatology room of the Ciptomangunkusumo Hospital and the perinatology room of the Harapan Kita Hospital Jakarta in December 2015, KMC was carried out only to maintain body temperature so that

there was no hypothermia in LBW babies, while the kangaroo method treatment which focused on the success of breastfeeding had not been done optimally, so that the effect of kangaroo treatment on increasing the success of breastfeeding for low birth weight and premature breastfeeding cannot be explained.

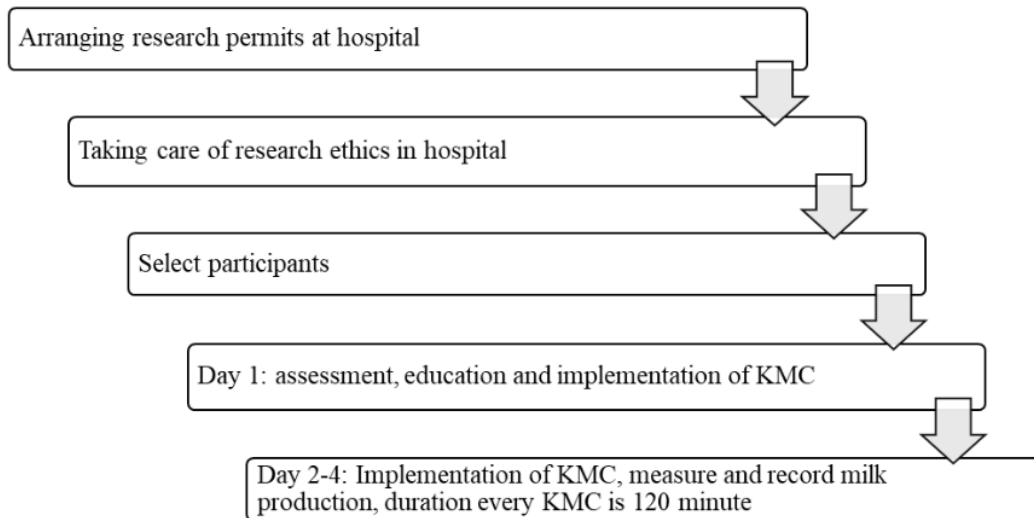
METHOD

This research is a qualitative research with multiple case design. The study involved 3 mothers and 3 babies who met the following inclusion criteria. Inclusion criteria for mothers: 1) The place where the mother lives is close to the hospital, 2) has desire to breastfeed and give breast milk, 3) has desire to do KMC, 4) does not take drugs, 5) does not have dangerous diseases such as HIV/AIDS, tuberculosis, cancer, abscesses breast, postpartum depression, 6) have problems nursing insufficient milk production. Inclusion criteria for baby were: 1) physiological function is stable (pulse, respiration, and temperature), 2) minimum body weight is 900 grams, 3) gestational age 28-33 weeks, 4) long hospitalization time after birth, 5) get permission from doctor to give KMC, 6) does not have congenital abnormalities (eg, omphalocele, meningocele, and

hydrocephalus), 7) no ² central venous catheter in the shoulder, umbilical catheter.

The research was conducted in January-March 2016 in the Perinatology care unit of Ciptomangunkusumo Hospital and Harapan Kita Hospital. Interventions are given at least 2 times with a duration of 120 minutes each intervention for 24 hours. The instrument used was an observation sheet that recorded the results of 24 hours (4-8x /day) expressed breastmilk and measured the urine volume for 24 hours 250-400 ml by weighing the baby's diapers (pampers) using a digital scale. Measurements were carried out for 3 days. Primary data in this study are the measurement results of breast milk production after being given KMC intervention, the general characteristics of the mother include: age, latest education, job and parity status.

Operational process for Kangaroo mother care :



RESULT

Case 1 (Premature)

Baby O, a boy, born on January 10, 2016 with a gestation age of 29 weeks. Birth weight 950 grams, born by cesarean section. Medical diagnosis: Immature Neonates - According to Pregnancy Period (NKB-SMK), the results of the examination by researchers on January 18 2016 were: Baby O was treated in an incubator with an incubator temperature of 31°C, body temperature of 36.6°C. Currently baby O is 8 days old. Awareness of compos mentis, strong crying, spontaneous breathing, pulse rate 140 times per minute, breath rate 52 times

per minute. Current weight is 900 grams, attached orogastric tube (OGT), current body length is 37 cm. Baby O gets breast milk and HMF intake with a frequency of 10 x 15 ml. The total fluid requirement is 150 ml / kg / day, good drinking tolerance, weak suction power. The frequency of urinating 5-6 times per day, the frequency of defecating 2 times per day.

Mrs. L was 32 years old when she gave birth, is a working mother. His last education is S-1. Mrs.L said she had given birth and her first child was a girl. This second birth, she gave birth to 5 twin boys. Mrs., L regularly carries out checks. To make it easier to care for babies in the hospital, Mrs.L rented a boarding house behind the Harapan Kita Hospital so that she could visit her baby every day. Mrs.L said that she will continue to give ASI, the milk will come out on the 3rd day after giving birth. What she did so that breast milk could be fulfilled was to reduce anxiety related to the condition of her five babies, to maintain food intake. Because she rarely breastfed directly, Mrs.L expressed her milk. Each expressing get 20-30 ml and the frequency of expressing milk as much as 8-10 times per day. The total amount of breast milk per day is approximately 230-250 ml / day.

The interventions given were evaluating the baby's vital signs, providing education and facilitating KMC, training mothers to give drinking through a cup, playing music during the KMC, doing baby massage and oral massage, involving parents in baby care, giving medication accordingly. analyzed laboratory results. Evaluation of nursing care after three days of insufficient milk production resolved, indicated by milk production from the first day to the fourth day of the study, respectively: 230 ml / day, 260 ml / day, 300 ml / day, and 360 ml / day, while The total amount of urine on the first day to the fourth day in a row is: 260 ml / day, 268 ml / day, 275 ml / day and 282 ml / day, readiness to care for the baby.

Case 2 (Hyperbilirubinemia)

Baby Mrs. YJ, boy, born on February 4, 2016 spontaneously, gestational age 31 weeks and birth weight 1677 grams. Medical diagnosis: Preterm neonate-according to gestation, hyaline membrane diseases (HMD), hyperbilirubinemia. The results of physical examination on February 7, 2016 (correction age 0 weeks, clinical age 3 days), namely the baby was treated in an incubator with a temperature of 31°C, body temperature 37°C, awareness of *compos mentis*. crying weak, sufficient muscle tone, yellow

facial skin and extremities, attached phototherapy. Installed a continuous positive airway pressure (CPAP) bubble breath aid with 25% FiO₂, PEEP 6. Minimal chest wall retraction, no nasal lobe breaths, 52 breaths per minute, 147 pulse rates per minute. Attached orogastric tube (OGT), good drinking tolerance.

Baby Mrs. YJ received 4x2.5 ml and 4x5 ml of breast milk. Current body weight is 1497 grams, weak suction and swallowing power, total fluid requirement of 120 ml / kg / day. Adequate skin turgor, the mucous membrane of the lips is moist, pink, the skin looks dry, the capillary filling time is less than 2 seconds. The frequency of urinating 3-4 times per day, the frequency of defecating 1 time a day. Blood type AB father, mother B + and baby B +.

Mrs. YJ, 28 years old, is a housewife and from the area of Bojong Gede Bogor, his last education was high school. Currently, Mrs. YJ is renting a boarding house behind RSUPN Ciptomangunkusumo. Mother shared that it was her first birth and was very afraid of losing her baby. The milk comes out on the second day. Mrs. YJ wants to give breastfeeding and in the meantime is expressed breastmilk.

Results of expressed breast milk per day 25-30 ml / day.

The interventions given were evaluating vital signs, treating nasal pronges, changing positions, applying coconut oil to dry skin, evaluating lab results, evaluating breathing patterns, providing education, facilitating KMC, playing music during KMC or during drinking, giving oral massage. Evaluation of nursing care after 3 days, namely the inadequacy of milk production is resolved with the following outcome criteria: Breastmilk production on the first to fourth days is 25 ml / day, 35 ml / day, 50 ml / day and 75 ml / day, respectively. Meanwhile, the total urine output on the first to fourth days was 265 ml / day, 268 ml / day, 275 ml / day, 285 ml / day, respectively.

Case 3 (Sepsis)

Baby A, a girl, was born March 7, 2016 at RSAB Harapan Kita. 33 weeks gestation, birth weight 1700 grams. Medical diagnosis: Preterm neonate-According to gestational period, after fifth day atresia ani surgery and suspected sepsis. The results of March 15 2016 (correction age 1 week, clinical age 8 days) are: Babies are treated in an incubator with a temperature of 31°C, body temperature

36.4°C, babies are inactive, crying weakly. Respiratory rate 52 times per minute, pulse rate 138 times per minute.

The current body weight is 1653 grams, the suction reflex is weak, the fulfillment of nutritional needs using enteral continue for 1 hour. Get 4x12 and 4x15 ml of breast milk. The total fluid requirement is 130 ml / kgBB / day, there is vomiting of 5 ml of ingested milk, the abdomen feels hard, the circumference of the stomach is 29 cm. The consistency of the stool is soft, yellow through the stoma. Hematoma appears in the area of intravenous insertion. The frequency of urinating 4-5 times per day. The results of laboratory tests on March 14 2016 were hemoglobin 11.9 g / dl, hematocrit 36%, leukocytes 23,980 / μ l, platelets 515,000 / μ l, CRP 12.2 mg / L, serum sodium 138 mEq / L, serum potassium 6 mEq / L, 97 mEq / L serum chloride, the cause of sepsis is *Acinobacter baumannii*.

Mrs. AN is domiciled in the Kebon Jeruk area, West Jakarta, the mother's age at birth is 27 years, baby A is the first child. Mother of a housewife, last education was high school. Mother said she was very sad about the condition of her baby and always thought about it. The milk comes out on the fifth day and she intends to

breastfeed. Baby A's mother believes she can give breast milk, so the mother tries to eat long beans and Moringa leaves to increase milk production. Mother conveyed the results of the expressed breast milk of approximately 70 ml/day

The interventions given were evaluating vital signs, changing positions, giving massage to the baby, playing music during drinking, providing education and facilitating KMC, colostomy care, bathing, changing diapers, and oral stimulation. Evaluation of nursing care after 3 days, namely the inadequacy of milk production was resolved by the criteria for the results of milk milk from the first day to the fourth day of the study as follows: 70 ml / day, 90 ml / day, 125 ml / day, 163 ml / day. The results of urine output measurements from the first day to the fourth day were: 255 ml / day, 260 ml / day, 268 ml / day, and 275 ml / day, the bonding disorder between parents and infants did not occur.

DISCUSSION

Babies born with low birth weight and premature conditions give various responses from the mother, there are negative and positive responses. In the early phase, mothers know that babies who are born LBW or premature can

show negative responses, such as crying, being shocked, surprised and not having the heart to see their babies small, while positive responses come from participants who are able to face reality, starting to accept the birth of their babies. , pray and try. The mother's response when she sees her baby for the first time, and in the first year of life creates an archetypal pattern for interaction, and this will influence the response of subsequent mother interactions (Maulidah, 2009).

Table 1 Mother Characteristics

Characteristic of mother	Ny.L	Ny.YJ	Ny.AN
Age	32	28	27
Last education	S-1	High school	High school
Job	employees	Housewife	housewife
Parity Status	P2	P1	P1

Comprehensive assessment is carried out based on the principle of convenience. The assessment includes the infant's comfort to changes in the intrauterine to extrauterine environment. Physical discomfort will result in more energy needs due to high energy expenditure as a form of compensation for maintaining the comfort of the baby. The nutritional status of the three selected cases indicated that

most of them experienced physical comfort problems in the nutritional domain, such as: 1) Ineffective feeding patterns in infants, 2) Lack of fluid volume, and insufficient breast milk. Based on the Fenton chart, the nutritional status in cases 1 to 3 is below the 50% percentile and the parents of the babies have the same complaint, namely insufficient milk production due to anxiety about the condition of the baby being treated.

Diseases suffered by babies also affect the nutritional needs of LBW. BBR with severe disease will cause discomfort and body imbalance (Kolcaba & DiMarco, 2005). The nutrient intake needed is more than usual to meet the baby's needs. In case three, a baby with a sepsis condition worsens the baby's condition, due to poor nutrient absorption, so that the baby will experience slow weight gain (Saari, 2006).

The clinical condition of the baby affects the anxiety in the mother. According to Morey and Gregory (2012), mothers who have low birth weight, low gestational age and high-risk babies spend more time in the NICU and show high anxiety. The experience of mothers who have preterm LBW babies is an unexpected crisis

experience. The existence of separation between mother and baby is a source or cause of stress for mothers with LBW babies who are treated at the NICU (Rahayu, 2010). Mothers who experience anxiety will also affect their milk production, so that the baby's nutritional needs are not fully obtained from the mother, but need to be assisted with additional nutrition, namely through parenteral nutrition (Dewey, 2006).

In the three cases, there were nursing problems related to psychospiritual comfort in the form of relief in parents, namely insufficient breastfeeding. This can occur due to the anxiety experienced by mothers with babies who are experiencing hospitalization. According to Kong et al (2013) separation from babies is the most influencing factor for maternal anxiety. Meanwhile, Akbarbeglo and Valizadeh (2009) in their research on the stress of parents whose children are treated at the NICU reported that parental stress is mainly caused by relationships with babies and changes in the role of parents. The anxiety experienced by the mother has an impact on milk production to meet the baby's nutritional needs.

based on research data, all were infants less than 38 weeks' gestation. The baby's

nutritional status is also influenced by gestational age. Marofi et al'opinion (2016) , gestational age affects weight gain. Babies with a higher gestational age have a greater body weight. Baby weight is related to nutrition and body temperature. Optimal nutrition is an important effort in increasing the baby's weight. LBW has a limited digestive function. The ability to suck and swallow existed before birth, but the coordination was only formed at 32-34 weeks and the synchronization was complete at 36-37 weeks of gestation. In addition, LBW has less brown fat deposits. This causes LBW to have difficulty maintaining body temperature so that it will affect metabolism in the body. Furthermore, this metabolism will greatly affect the availability of energy and baby weight. This will affect the baby's weight.

In all three cases, the parents needed psycho-social comfort, this was indicated by the need to overcome anxiety and fear of the baby's health condition. Parental anxiety can interfere with the parent-baby attachment process and milk production to meet the baby's nutritional needs. Environmental comfort is seen from excessive environmental stimuli such as light, sound, temperature, the distance of the bed from one another. In these five

cases, the infants in primary four needed environmental comfort. The environmental comfort needed is noise reduction, the distance between the beds, so that environmental modification is needed to overcome this problem.

After establishing a nursing diagnosis, then create nursing interventions where the nurse actively participates in each baby's environment and provides support in the baby's comfort against difficult conditions due to disease. Nursing interventions are aimed at increasing comfort and maintaining overall health. Nursing intervention is to encourage good comfort from the baby / family or to be better physically, psychospiritual, socially and environmentally, then the nurse takes therapeutic action when the baby's response is not good, the nurse provides support for the baby. Treatment is focused on the management of this response to disease (Alligood & Tomey 2010).

Breastmilk production in the three mothers is not sufficient for the baby's needs, especially for babies born underweight or premature who need adequate fluid intake to pursue optimal growth. Rahayu (2012) states that the production and release of breast milk occurs after the baby is born which is

followed by a decrease in estrogen levels which encourage an increase in prolactin levels for milk production. Even though on the first day only a little milk comes out, the mother must continue to breastfeed. This action is not only intended to provide nutrition to the baby but so that the baby learns to breastfeed or get used to sucking mother's nipples and supports milk production.

The main intervention in this study was the kangaroo mother care (KMC) method. Researchers provide education through flipcharts, watch videos on how to do KMC, facilitate mothers carry out KMC, explore mother's feelings, motivate mothers to breastfeed and express breastmilk, and teach mothers how to store breast milk and breastfeed through OGT or through a cup and record the results of breast milk. every day.

This intervention was chosen to be the main intervention considering that babies and parents cannot be separated just like that. Babies who experience hospitalization will experience temporary separation from their parents and this will result in various things, including increased length of stay, the baby's healing process takes longer and the baby gets less affection (Cockroft, 2012). This

will also affect mother's motivation and self-confidence to care for their babies, so that PMK can facilitate the needs of mothers-babies through the comfort provided with the hope that KMC can stimulate the release of the hormone oxytocin and can have an impact on the production of mother's milk. Dabrowski (2007), which states that KMC increases mother-infant bonding, increases the release of the hormone oxytocin, maintains a stable infant comfort during the intrauterine to extrauterine transition.

Babies cannot be separated from the family. Nursing care for low birth weight and premature are provided with a focus on the family or better known as "Family Centered Care (FCC)". At the FCC the family is seen as a constant, influential environment in a child's life. Family members, especially parents, have important information and potential in improving the baby's health and recovery. Family is the primary source of strength and enthusiasm that a baby has. Service providers should support, respect, encourage and increase the family's abilities and competencies through collaboration with families (Lightbody, 2009).

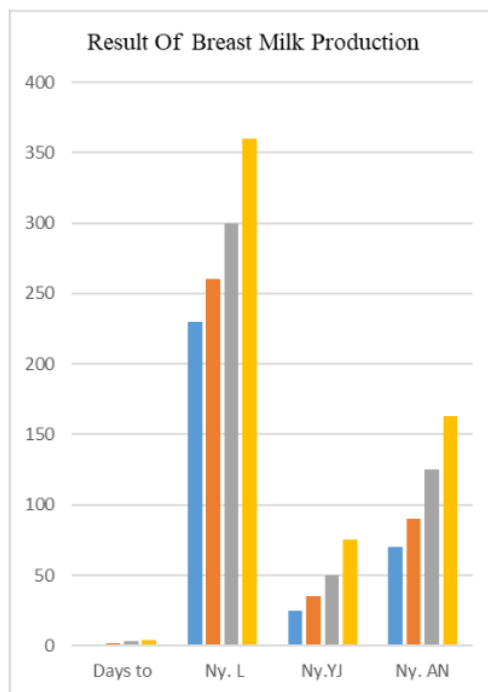
The concept of family-centered care emphasizes that policy making, planning

care programs, designing health facilities, and daily interactions between patients and health workers must involve the family. Families are given the authority to be involved in patient care, this means that families with a background of experience, expertise and family competence provide positive benefits in LBW care. Giving authority to the family means giving the opportunity for the family to find out the strength and ability of the family in caring for LBW

Mrs. L during the research he carried out KMC at least 3 times every day, and he admitted that he was very happy to do KMC for a long time, because he hoped to give the best for his five sons including breastfeeding, and he was also sure of his ability to give breastmilk like when he was fully breastfeeding. to his first child. Mrs. L said that she does not mind if the doctor recommends additional milk, because she just wants all the babies to be healthy. Meanwhile, Mrs. YJ implements PMK at least 1-2 times, this is because the baby with CPAP cannot be removed frequently for fear of his condition. During the implementation of the KMC, Mrs. YJ played the holy Quran verses. This he admits can calm him down. When implementing KMC, babies were occasionally trained to release CPAP, and

on the third day of intervention, the baby was no longer on CPAP and Mrs. YJ was very grateful. The third mother, Mrs. AN, also implements KMC at least 2-3 times. The condition of a baby with sepsis does not make the mother afraid to carry out KMC, on the contrary, she feels that her baby is better.

Below is an overview of the results of breast milk production for 3 days (n = 3)



Based on the recognition of the three mothers, the researchers concluded that frequent KMC implementation can help mothers feel comfortable, relaxed and calm so that the release of the hormone

oxytocin runs smoothly and has an effect on increasing milk production. This is in line with the results of research by Flacking, Ewald, and Wallin (2011) showing that PMK interventions can help the process of breastfeeding babies and have the effect of increasing milk production. According to Beiranvand et al (2014), at the time of PMK implementation, skin contact between mother and baby is a stimulus that will be carried to the brain. Furthermore, this stimulus will trigger the release of oxytocin which will have a positive impact on the mother's emotional and subsequent milk production and the process of breastfeeding the baby. The increase in breastmilk production is obtained from measuring the amount of breast milk using a milk bottle or a special plastic for breast milk which is measured every day.

In the first selected case, the mother gave birth to 5 twin boys, doing KMC one time with 2 and 3 babies at once. In a day, the mother admits that she can perform KMC 3-4 times, because the hospital does not limit her visiting time, and this is used properly. In the second and third selected cases, mothers can carry out PMK 2-3 times for 24 hours. In the second selected case, the implementation of KMC was

carried out carefully, because the baby was using CPAP, but this did not hinder the mother's efforts to provide breast milk. The three mothers admitted to expressing breastmilk if they did not breastfeed directly. Expressing breast milk is done 3-5 times a day.

² Acuña-Muga et al (2014), examining the level of breast milk secretion during and after KMC, found that the volume of milk was higher in mothers during KMC than in mothers without KMC intervention. ² Hurst et al (1997) examined the effect of maintaining infant-mother contact (i.e., skin-to-skin) on milk volume in mothers with preterm infants. They observed a significant increase in the amount of milk production in mothers who had skin contact with their babies for 24 hours, compared to mothers who had no skin contact with their babies. The results of this study are in line with the results of the research conducted, that there is an effect of giving kangaroo treatment on increased milk production. ² In a qualitative study examining the biological experiences of mothers with premature babies, Wilson (2012) introduced this intervention as an effective strategy for increasing the amount of mother's milk production. In the study, mothers reported that when touching a baby, touch is seen as

² stimulating milk production and has a significant impact on the process of milk transfer and milk production. Some mothers even report that KMC increases the amount of milk in their breasts.

The provision of KMC in these three cases shows a positive impact on maternal comfort which affects milk production. Dowswell (2012) stated that skin to skin contact significantly affects the breastfeeding process, cardio-respiration stability and reduces baby crying. The increase in baby weight which is carried out by PMK for longer shows better results, this is because PMK has a positive effect on the length of breastfeeding and the baby's temperature is in the normal range (Lawn, Mwansa-Kambafwile, Horta, Barros, & Cousens, dabrowski 2010). Breast milk production during KMC facilitated an increase because of this KMC is skin contact between the baby and the mother which can stimulate the ³ release of the hormone oxytocin and the work of the oxytocin hormone is influenced by the thoughts and feelings of the mother, thus KMC is said to be successful when the mother feels calm and comfortable when the mother is given KMC. Conditions like this can increase the closeness of the relationship between

mother and baby (bonding attachment), comfort and cause a calming effect so that it can reduce stress marked by a decrease in cortisol levels. When the oxytocin hormone is released, it will help the excretion of breast milk.

The motivation that makes mothers do KMC is to save and maintain the survival of the baby. In line with Endyarni (2013) that infant mortality in the KMC group is smaller than in the non-KMC group. Another motivation is the desire to do the best for their child, the hope that the little baby can survive. Mother needs both internal and external stimuli. Internal stimulus for mothers can be in the form of a value system adopted, expectations, interests and aspirations of the mother, while external stimuli such as environmental conditions both in the health service unit (information and recommendations from health workers to carry out KMC), as well as in the family environment.

KMC makes babies who breastfeed the mother longer, makes the baby feel calm and comfortable so that the baby gets an adequate supply of breast milk and the energy obtained by the body is only focused on growth. Babies who are given KMC have a relatively normal body

temperature, regular heart rate and breathing, sleep longer and cry less (Beiranvand, Valizadeh, Hosseinabadi, & Pournia, 2014). In addition, Ludington-Hoevalizadeh (2015) also reported that KMC is a therapeutic intervention to facilitate comfort in premature and LBW infants.

CONCLUSION

Kangaroo mother care can be an intervention option for mothers who have breast milk production problems. While in the hospital, nurses should provide clear and structured health education and assistance so that the goals of providing kangaroo care interventions are achieved. This intervention can also be given to infants who are treated with CPAP with the doctor's consent.

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