

KANGAROO MOTHER CARE IN LBW INFANT – REVIEW**Dr. Shubhangi K. Thakur***

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Article Received on 15/03/2021

Article Revised on 04/04/2021

Article Accepted on 25/04/2021

ABSTRACT

20 million low-birth-weight (LBW) babies are born each year, because of either preterm birth or impaired prenatal growth, mostly in less developed countries. They contribute substantially to a high rate of neonatal mortality whose frequency and distribution correspond to those of poverty.^[1,2] LBW and preterm birth are thus associated with high neonatal and infant mortality and morbidity.^[3,4] Of the estimated 4 million neonatal deaths, preterm and lbw babies represent more than a fifth.^[5] Therefore, the care of such infants becomes a burden for health and social systems everywhere.. One-third of LBW babies die within the first 12 hours after delivery. One of the main reasons that lbw / premature babies are at greater risk of illness and death is that they lack the ability to control their body temperature; they get cold or hypothermic very quickly. A cold newborn stops feeding and is more susceptible to infection.^[6] the use of incubators is standard for thermal care of LBW babies. However, “incubator care” is not widely available in developing countries, especially outside of large cities. Even in the limited cases where incubator care is available, the use of this method can be very challenging. Problems such as poor maintenance, power outages and lack of replacement parts reduce the number of available, functional incubators. Fortunately, there is an alternative approach for providing thermal care for and improving survival of LBW infants that is both effective and affordable namely, Kangaroo Mother Care or KMC.^[6]

KEYWORDS: Low birth weight infants, neonatal mortality, thermal care, kmc.**INTRODUCTION**

Kangaroo mother care (KMC) is the term given to a Method where baby is kept in direct skin to skin contact with the mother. This is humane, low cost technique for care of low birth weight (LBW) babies. Kangaroo mother care is care of preterm infants carried skin-to-skin with the mother. It is a Powerful, easy-to-use method to promote the health and well-being of infants born preterm as Well as full-term. It was first presented by Rey and Martinez, In Bogotá, Colombia, where it was developed as An alternative to inadequate and insufficient incubator care for those preterm newborn infants who had overcome initial problems and only to feed and grow.^[7]

Kmc had three components.

1. Kangaroo position - mothers were used as `incubators` with the infant kept 24 hours a day in strict Upright position, in skin to skin contact, firmly attached to the mother’s chest. Infants remained in the kangaroo position until they no longer accepted it by demonstrating discomfort, pushing out limbs, or Crying and fussing when mothers tried to return them to the upright position.
2. Kangaroo feeding - were breastfed regularly. Pre-term formula supplements were administered to

guarantee adequate weight gain (20 g per day) if necessary.

3. Kangaroo discharge - infants less than 2000 g at birth were discharged as soon as they overcame major adaptation problems to extra-uterine life, received proper treatment for infection or concomitant condition, could suckle and swallow properly, and achieved a positive weight gain regardless of actual weight or gestational age.

When to start KMCKMC can begin for those small babies must be judged individually, and full account should be taken of the condition and status of each baby and his mother.^[8]**Length and duration of kmc**

Skin to skin contact should start gradually, with smooth transition from conventional care to continuous kmc .The length of skin-to-skin contacts gradually increases to become as continuous as possible, day and night, interrupted only for changing diapers, especially where no other means of thermal control are available.

Duration - When the mother and baby are comfortable, skin-to-skin contact continues for as long as possible, first at the institution, then at home. It tends to be used

until the baby reaches term (gestational age around 40 weeks) or 2500g. KMC at home is particularly important in cold climates or during the cold season and could go on for longer. During kmc baby's condition including temperature, feeding, breathing, babies feeding position also monitor growth weight and head circumference. Weigh small babies daily and check weight gain to access first adequacy of fluid intake and then growth. Weigh babies once in a day; more frequent weighing might upset the baby.^[8]

DISCUSSION

Skin-to-Skin Care is recommended for all babies immediately after delivery to ensure warmth. It is also a recommended method when transferring sick newborns to a health facility. In skin to skin contact with mother, babies touch gives stimulation to pituitary glands and releases pitocin and oxytocin reach into blood circulation and helps to formation and ejection of milk from the mammary glands which help to improve lactation and better breast milk and volume and there is less chance of use formula feed for their babies. Release of oxytocin circulation in the skin overlying the mammary glands is increased during suckling resulting in increased skin temperature this makes suckling more pleasant for pups which can help to development and maturation of sucking reflex in preterm and lbw infants and initiation of breastfeeding earlier.^[9] Some study shows that oxytocin administer in mice has an analgesic effect in response to pain. Babies kept in kmc skin to skin contact realised oxytocin in blood circulation so preterm infants exhibit less audible and inaudible crying during and after heel pricks when baby in kmc compared to incubators. Thermal synchrony develops between mother and baby in kmc which can help to increase body temperature in preterm and low birth weight infants and helps to prevent from hypothermia. In preterm and lbw infants sleep and sleep cycles are essential for sensory system development in the foetus and young infants, creation of long term memory and learning preservation of brain plasticity. Sleep deprivation in foetus and neonate has Profound effects on early sensory development and creation of permanent neural circuits for the Primary sensory systems. Some studies kmc effect on sleep organisation shows that increase in quantity of sleep and quiet Sleep normal cycling with organised sleep pattern less sleep arousals⁹. In preterm sleep cycles generally requires 60 min to complete and within 5 minutes of the onset of kmc, cycling begins which can help to improvement in neurodevelopment and brain maturation. Cortisol levels have been studied as a sign of Physiological stress in preterm infants There was >60% reduction in cortisol levels in Stable preterm receiving KMC for 20 min or more kmc reduces stress in preterm infants most likely due to the buffering protection of adult support and secretion of oxytocin and stimulation of the parasympathetic nervous system. Babies in kmc skin to skin contact increased oxytocin level, less stress and exclusive breastfeeding helps to increase immunity

and decreases the nosocomial infections and better survival of preterm and lbw infant.^[10]

The Cochrane review (2003), studies found that kmc reduced severe illness, infections, breastfeeding problems and maternal dissatisfaction with method of care, improved some outcomes of mother and baby bonding. Infants cared for with kmc also demonstrated better weight gain after the first week of life, compared with babies cared for with incubators.^[11]

In 2011, an updated Cochrane review kmc was found to reduce: mortality at discharge and at the latest follow up, severe infection (sepsis), nosocomial infections, hypothermia, severe illness, lower respiratory tract disease and length of the hospital stay, and improved weight, length and head circumference, breastfeeding, mother infant bonding and maternal satisfaction with the method of care as compared to conventional care.^[13] Kangaroo Mother Care is a technique to promote mother and child bonding. There was a significant correlation between Kangaroo Mother Care with stable Heart rate, oxygen saturation, temperature axial and arterial blood pressure in the low birth weight or Premature.^[14] De Olivera Hunt in his research said Kangaroo Mother Care is a method of treatment of LBW Infants that has benefit stability of heart rate, respiratory rate, thermoregulation and increase breast milk production and the baby will suckle longer.^[15] KMC is a cost effective complementary method of Caring for stable low birth weight (LBW) and preterm Neonates^[16] that can contribute to improving the quality of care, as it ensures constant temperature regulation and improved survival of these infants. KMC is one of the 10 recommendations of the World Health Organization (WHO) for providing care for pre-Mature neonates.^[17] Evidence-based studies have shown The efficacy of KMC to reduce mortality and morbidity In preterm neonates, prevent hypothermia and infection, and improve maternal-infant attachment and increase the duration of exclusive breastfeeding.^[18]

CONCLUSION

Kmc techniques are low cost, promotes exclusive breastfeeding practices and increases mother's confidence in handling small babies and builds good mother and infant bonding. Promotes early initiation of breastfeeding, kmc protecting the lbw infant from hypothermia, hypoglycaemia and sepsis. kmc is useful method of caring lbw baby in respect of early weight gain. It is definitely feasible, acceptable to mothers and can be continued at home. Hence, health facilities need to implement the kmc for preterm and lbw infants.

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