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EDITORIAL

Kangaroo Mother Care (KMC) Therapy: A Bonding Between Mother and Baby

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INTRODUCTION

Hypothermia is a major problem particularly among low birth weight (LBW) newborns as a result of fetal intrauterine growth restriction (FIUGR), prematurity or both, contributing to major causes of neonatal morbidity and mortality. Kangaroo Mother Care (KMC) is a simple method of maintaining normothermic temperature in the LBW babies by keeping them warm and protecting babies away from the untoward consequences of hypothermia. KMC is very useful in a developing country like Nepal, where neonatal facility centers are not equipped by all the sophisticated devices like warmer and incubators.[1]

In 1978, Dr Edgar Rey Sanabria from Bogotá, Colombia introduced KMC as an alternative to incubators for LBW infants. WHO defines KMC with four components: -1. Continuous and prolonged skin-to-skin contact (SSC/Chest-chest) between the newborn and mother; 2. exclusive breastfeeding; 3. early discharge from the health facility and 4. Close follow-up at home.[2]

KMC is advantageous being preventative, economical method for saving LBW newborns particularly in developing countries with poor resources and infrastructure in neonatal care. It has various benefits both to mother and baby in numerous aspects. The review standpoints the alleged effect of KMC in promotion of breastfeeding rates during the hospital stay as well as at home, improvising mother-infant bonding.[3] And in addition by helping to stabilize newborns hemodynamically, increases baby's sleep hour duration, weight gain increment and lastly assures neuronal development of premature brain.[4]

KMC, both Short-term and long-term is beneficial for better neonatal survival of preterm LBW babies who are exposed to risk of neonatal mortality and morbidity due to respiratory/ gastrointestinal problems, autoimmune disorders and neurological defects as compared to full-term and normal-weight babies.

KMC having so many beneficial effects, it is not routinely practiced in all the hospitals in Nepal. Therefore, in the current scenario, the promotion and publicity of KMC among mother, father, other adults in the family, caregivers and health personnel's including doctors and nurses is essentially required.

KMC PROCEDURE

KMC involves bare chest skin-to-skin contact between the baby and the mother. Skin-to-skin contact between the mother and baby begins at birth especially for preterm babies and persists constantly for hemodynamically stabilized baby. KMC continues for at least one-to-three hours every day and generally takes 3 -7 days. One hour after giving birth, the mother has to start breastfeeding and it might last for two to three hours. KMC can be extended till 12-18 hours/day and continued till the baby is discharged from the hospital.

Before starting KMC, orientation on KMC, its procedures and benefits should be explained to the mother or caregivers. Premature / LBW babies with diaper and head cap were kept over the mother's bare chest with the help of cotton made slings eg. Nyano Angalo wrap or KMC wrap. The proper steps of using Nyano Angalo Wrap / KMC wrap should be explained and demonstrated by the nursing staff.[1] The mother must be trained to express milk so she can feed the baby from a cup as an underweight newborn is too weak to suck

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properly in the initial few days. When the mother is busy with her daily tasks, other family members can give the newborn KMC as well. KMC will promote baby's weight gain and increased baby's sleep hour duration.[5]

DISCUSSION

KMC was first started in Tansen Mission Hospital, Midwestern region of Nepal in 1996. KMC is a simple, cheap method of keeping the baby warm by transferring heat from the mother to the baby by conduction and is effective in neonatal weight gain.

Average weight gain of 30 gms /day was observed within average KMC duration of 5.9 days.[5] While mean weight gain in KMC group was 12.11±9.04 gms as compared to 3.29±15.8 gms in control group (p value 0.001) from RCT, the studies having mean gestational age at birth was 32.22±2.4 weeks and mean birth weight of babies included being 1385.87±23 gm.[6] KMC received babies were, similarly, were apt to gain more weight/day as noticed during discharge (mean weight difference 3.6 gms/day; 95% CI 0.8-6.4).[6]

KMC has been effective in preterm LBW babies in various countries particularly in low middle income countries (LMIC) of Asia and Africa, dramatically demonstrating improvement in neonatal weight gain and reduction on nosocomial infections. A multi-centered, RCT from India, Ghana, Gambia, Malawi and Tanzania, over a period of three years, that included

1609 newborns in the intervention group and 1602 newborns in the control, projected sepsis related mortality was 37% less in intervention group than in the control; RR 0.63 (CI 0.47–0.85) which is statistically significant. The intervention group had fewer cases of Gram-negative isolates (n = 9) than Gram positive isolates (n = 16). The control group had more cases of Gram-negative isolates (n = 18) than Gram positive (n = 12).[7] According to eClinical Medicine journal published in 2023, combining skin-to-skin contact in Immediate KMC (iKMC) with exclusive breastfeeding, was seen to reduce the risk of sepsis among vulnerable small and preterm newborns by 18% and sepsis-related deaths by 36% and or overall deaths by 25%.[8]

CONCLUSION

Kangaroo mother care (KMC) is a simple, feasible and non-expensive intervention to improve neonatal health particularly among preterm LBW babies. It enhances breast feeding and bonding between the mother and the newborn babies. Its extensive use might help in the reduction of present high neonatal mortality of our country, particularly among preterm LBW babies due to sepsis and hypothermia.

REFERENCES

1. Manandhar SR. Experience of Providing Kangaroo Mother Care at a Tertiary Hospital. J Perinat Soc Nep. Sept 2022;01(01):41-42.
2. Chan GJ, Valsangkar B, Kajeepeta S, Boundy EO, Wall S. What is kangaroo mother care? Systematic review of the literature. J Glob Health. 2016 Jun;6(1):010701. DOI: 10.7189/jogh.06.010701. PMID: 27231546; PMCID: PMC4871067.
3. Koreti M , Gharde PM . A Narrative Review of Kangaroo Mother Care (KMC) and Its Effects on and Benefits for Low Birth Weight (LBW) Babies. Cureus. 2022 Nov 27;14(11):e31948. DOI: 10.7759/cureus.31948 PMID: 36582577 PMCID: PMC9794926
4. Closa Monasterolo R, Moralejo Benéitez J, Ravés Olivé MM, Martínez Martínez MJ, Gómez Papí A. Kangaroo method in the care of premature infants admitted to a neonatal intensive care unit. An Esp Pediatr. 1998 Nov;49(5):495-8. Spanish. PMID: 9949592
5. Subedi K, Aryal DR, Gurubacharya SM. Kangaroo mother care for low birthweight babies: A prospective observational study. J Nepal Paediatr. Soc.2009;29(1):6-9. DOI:10.3126/jnps.v29i1.1593
6. Acharya N, Singh RR, Bhatta NK, Poudel P. Randomized Control Trial of Kangaroo Mother Care in Low Birth Weight Babies at a Tertiary Level Hospital. J Nepal Paediatr Soc 2014;34(1):18-23. DOI:10.3126/jnps.v34i1.8960
7. Conde-Agudelo A, Belizan JM, Diaz-Rossello J. Kangaroo mother care to reduce morbidity and mortality in low birth weight infants. Cochrane Database Syst Rev.2011 Mar 16:(3):CD002771. DOI:10.1002/14651858.CD002771.pub2
8. Sugandha AS, Chhabra S, Singhal R, Kumari A, Wadhwa N, Anand P et al. Effect on neonatal sepsis following immediate kangaroo mother care in a newborn intensive care unit: a post-hoc analysis of a multicentre, open-label, randomized controlled trial. May 2023; 60: 102006. DOI: 10.1016/j.eclinm.2023.102006 PMID:37251633 PMCID:PMC10209186