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Experience of Providing Kangaroo Mother Care at a Tertiary Hospital

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ABSTRACT

Introduction. Hypothermia is a major problem in newborns particularly among low birth weight (LBW) babies and it is one of the major cause of mortality and morbidity among LBW babies. Kangaroo Mother Care (KMC) is a simple method of maintaining temperature by keeping the LBW babies normothermic and indicated especially for LBW babies without using costly equipment. Dr Edgar Rey Sanabria introduced Kangaroo Mother Care (KMC) in Bogotá, Colombia in 1978 as an alternative to incubators for LBW infants to keep small babies warm. WHO defines KMC with its four components: early, continuous, and prolonged skin-to-skin contact between the newborns and mother; exclusive breastfeeding; early discharge from the health facility and close follow-up at home.

Objective. To share the experience of Kangaroo Mother Care (KMC) at Kathmandu Medical College Teaching Hospital (KMCTH) Materials and Methods: At neonatal unit, 5 bedded an air-conditioned room were allocated as the KMC room and the temperature of this room was maintained at 28 0C. Before starting KMC, orientation on KMC, its procedures and benefits were explained to the mother or caregivers. Premature /LBW babies were kept over the mother's chest with the help of cotton-made slings (Nyano Angalo wrap). The study period was of a one-year duration (Nov 2018- October 2019) .

Results. 35 babies born in KMCTH received KMC during 12 months period (Nov 2018- October 2019) using Nyano Angalo wrap. The mean birth weight of babies kept on KMC was 1340 gms and mean gestational age was 33.6 wks. Each baby received KMC for 14.5 hrs average duration.

Conclusion. Kangaroo mother care is a simple, feasible and non expensive intervention. It enhances breast feeding and bonding between the mother and the newborn babies. Its extensive use will help in the reduction of present high neonatal mortality, particularly among LBWs due to hypothermia.

Keywords. *Kangaroo Mother Care, Nyano Angalo wrap, Preterm LBW babies*

INTRODUCTION

Hypothermia is a major problem in newborns particularly among low birth weight (LBW) babies and it is one of the major causes of mortality and morbidity among LBW babies.[1] Kangaroo Mother Care (KMC) is a simple method of maintaining temperature by keeping the LBW babies normothermic and indicated especially for LBW babies without using costly equipment.[2] In 1978, Dr Edgar Rey Sanabria introduced Kangaroo Mother Care (KMC) in Bogotá, Colombia as an alternative to incubators for LBW infants.[3] The World Health Organization (WHO) defines KMC with four components: early, continuous, and prolonged skin-to-skin contact (SSC) between the newborn and mother; exclusive breastfeeding; early discharge from the health facility; and close follow-up at home.[4] So, the objective of this study is to share the experience of Kangaroo Mother Care (KMC) at Kathmandu Medical College Teaching Hospital (KMCTH).

Citation
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MATERIALS AND METHODS

This is a prospective observational study at the neonatal unit having a five-bedded air-conditioned Kangaroo Mother Care (KMC) room of the Pediatrics Department, Kathmandu Medical College Teaching Hospital. The study was done over one-year duration (Nov 2018- October 2019). This study included 35 hemodynamically stable premature/low birth weight (LBW) babies. Critically ill babies requiring neonatal intensive care unit (NICU) and those mothers who were critically ill or refused for giving KMC were excluded.

Before starting KMC, orientation on KMC, its procedures and benefits were 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 named as Nyano Angalo wrap. The proper steps of using Nyano Angalo Wrap were explained and demonstrated by the nursing staff. In this study, intermittent KMC has been practiced. So, KMC duration was from 2 to 18hrs/ day and intermittently babies were breastfed or given expressed breast milk (EBM) via spoon feeding. The mothers were provided KMC chart to keep the records of duration of KMC

RESULTS

During the period of one year (Nov 2018- October 2019), a total of 35 babies borne at KMCTH received KMC using Nyano Angalo wrap. There were 18 male and 17 female babies. The mean gestational age of babies receiving KMC was 33.6 wks (28 wks – 40 wks) and the mean birth weight was 1340 gms (900 gms – 1820 gms). Each baby received an average duration of KMC (done by mother) was 14.5 hrs. (min. 3hrs to max. 120 hrs.) . KMC was started from 5 hrs of postnatal life and continued up to 12th days of postnatal life.

DISCUSSION

KMC provides a simple, cheap method of keeping the baby warm. KMC helps in the transfer of heat from the mother to the infant by conduction. In Nepal, at first time, KMC was started in Tansen Mission Hospital, Midwestern region of Nepal in 1996. A randomized control study done by Acharya N et al at BPKIHS, Nepal showed a mean weight gain in KMC group was 12.11±9.04 gms as compared to 3.29±15.8 gms in control group ($p < 0.001$).[5] In that study, a mean birth weight of babies in KMC was 1385.87±23 gms and mean gestational age of babies in KMC was 32.22±2.4 wks . This was similar to our study as mean birth weight and gestational age of babies kept on KMC were 1340gms and 33.6 wks respectively.

A study done by Conde- Agudelo et al showed KMC received babies gained more weight/day during discharge (mean weight difference 3.6gms/ day,95% CI 0.8-6.4).[6] Similarly, a study done at Paropakar Maternity and Women's Hospital, Thapathali, Kathmandu by Subedi et al also showed that babies had good weight gain of 30 gms /day after giving KMC on average with an average KMC duration of 5.9 days.[2] In our study also KMC was started from 5 hrs. of postnatal life and continued till 12 days of life with an average duration of KMC was 14.5 hrs recommending that much longer duration of KMC can be obtained in hospital stay.

CONCLUSION

Kangaroo mother care is a simple, feasible and non-expensive intervention. It enhances breast feeding and bonding between the mother and the newborn babies. Its extensive use will help in the reduction of present high neonatal mortality, particularly among LBWs due to hypothermia.

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