

Effect of Kangaroo Mother Care on Weight Gain in Low Birth Weight Babies

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Abstract

Background: The term Kangaroo Mother Care (KMC) is derived from practices similar to marsupial care. It is an alternative to conventional neonatal care for LBW babies. Main components of KMC are- Skin to skin contact between mother and baby, exclusive breast feeding, early discharge and follow up. The advantages of KMC are, it reduces the overall mortality of the baby, increases the confidence and self-esteem in mother and bondages between mother and baby. *Aim and Objective:* To assess the weight gain in low birth weight babies with KMC care. *Methodology:* It is a prospective observational study conducted in a tertiary care hospital. All new born babies less than 1800 grams weight, accepting oral feeds are included in the study. After initiation of KMC, mother was instructed to record the duration of KMC practiced. Baby's weight is monitored at the time of enrolment, daily in the morning and at time of discharge. During this study period baby is also monitored for complications like hypothermia, apnea, sepsis and jaundice. If any complications arise baby is withdrawn from the study and necessary intervention is done. KMC is continued till discharge of baby. *Results:* Significant weight gain is observed in babies with proportionate to the duration of KMC practice. *Conclusion:* Kangaroo mother care for low birth weight babies is the need of the hour for better survival and better quality of life.

Keywords: Marsupial care; Kangaroo Mother Care (KMC); Hypothermia; Apnea; Sepsis; Jaundice.

Introduction

Low birth weight (LBW; <2500 g regardless of gestational age), which is often associated with preterm birth, is an important predictor of infant death within 28 days of birth [1]. It is also estimated that, in developing countries, LBW infants are approximately 13 times more likely to die than normal birth weight [2]. A major problem with such babies is their inability to control body temperature - a preventable cause of their morbidity and mortality.

A World Health Organization (WHO) supported study showed that hypothermia was common in newborn infants soon after birth; increased mortality was noted across all grades of hypothermia, and the

risk was 12 times higher among low birth weight babies [3].

The term Kangaroo Mother Care (KMC), is derived from practices similar to marsupial care. The term KMC was coined by Dr. Edgar Rey in 1978 in Bogota, Colombia [4]. It is an alternative to conventional neonatal care for Low Birth Weight babies. Kangaroo mother care (KMC) implies placing the newborn baby in intimate skin to-skin contact with the mother's chest and abdomen coupled with frequent and preferably exclusive breast-feeding [5].

KMC has emerged as a non-conventional low cost method for newborn care that provides warmth, touch, and security to the newborn and is believed to confer significant survival benefit. An updated Cochrane review has reported that KMC benefits breastfeeding

outcomes and cardio-respiratory stability in infants without negative effects [6]. Indian data on outcome of KMC are limited, though it has been found to be an effective and feasible method of care of LBW babies in hospital setting [7].

With this background, the present study was conducted to reinforce the advantage of KMC when compared to conventional care in a teaching hospital setting. The broader intention was to generate data to recommend wider implementation of the strategy.

Material and Method

Study Design

Prospective observational study

Study Setting

The study was done in the neonatal unit attached to a tertiary care hospital.

Study Period: 6 months

Inclusion Criteria

All newborn babies whose weight was less than 1.8kg, haemodynamically stable and accepting oral feeds or expressed breast milk.

Exclusion Criteria

Critically ill babies requiring neonatal intensive care unit and those mother who were critically ill or refused for KMC were excluded.

Before initiation of KMC, mother was instructed about the advantages of KMC and the steps of KMC and was motivated to give KMC care. After initiation of KMC, the mother was instructed to record the duration of KMC which she practiced. Baby's weight was monitored at the time of enrollment, then daily in the morning and at the time of discharge from the hospital. During this study period baby was also monitored for complications like hypothermia, apnea, sepsis and jaundice. If any complications arose, baby was withdrawn from the study and necessary intervention was taken. KMC was continued till the discharge of baby from the facility.

Results

Total of 68 newborn were enrolled in the study and followed upto discharge. Among these 68 babies, KMC was initiated within 7 days after delivery in 7 babies. And in 47 babies it was initiated between 1 to 2 weeks. But in 14 babies it took more than 2 weeks to initiate KMC.

Table 1: No of babies grouped as per their weight at enrollment

Sr. No:	Weight at enrolment (grams)	No: of babies(n=68)
1.	<1200	7
2.	1200-1500	32
3.	1500-1800	29

Table 2: Describes the duration of KMC provided to the babies which was recorded by the mothers themselves in the format given to them

Sr. No.	Duration of KMC	No: of babies(n=68)
1.	<4hrs	13
2.	4-8hrs	31
3.	8-12hrs	17
4.	>12hrs	7

Table 3: Reveals the weight gain observed in the study group depending upon the duration of the KMC practice. By this the average weight gain of 19.66 grams was observed by KMC

Sr. No.	No: of babies(n=68)	Duration of KMC
1.	13	<4hrs
2.	31	4-8hrs
3.	17	8-12hrs
4.	7	>12hrs

Discussion

The gaining weight was directly proportionate to

the duration of KMC. Though we have not compared our data with conventional care, our experience has shown that there was greater average daily weight gain and shorter duration of hospital stay in babies

who had received KMC. Ramanathan et al have also reported greater weight gain with this method [8]. Charpak et al showed that the hospital stay was reduced by as much as 50% with this technique [9]. As no LBW infant in our study suffered from hypothermia this technique is successful in prevention of hypothermia. In low birth weight babies of less than 1800grams who are unable to maintain their body temperature, KMC is at least as safe and as effective as traditional care with incubators and radiant warmers [4].

Conclusion

Weight gain is significant in babies with KMC care. It is proportionate to the duration of KMC practice. KMC facilitates mother baby attachment in low birth weight infants. Kangaroo mother care for low birth weight babies is the need of the hour for better survival and better quality of life. KMC because of its simplicity may have a place in home care of LBW babies, which will result in reducing load of already overloaded paediatric wards as well as nursery.

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