



A CROSS-SECTIONAL STUDY TO ASSESS KANGAROO MOTHER CARE AND BREAST FEEDING STATUS OF LOW BIRTH WEIGHT BABIES

Paediatrics

Dr. Rajeshwari P*	Post Graduate in Paediatrics, Bangalore Medical College and Research Institute, K R Road, Fort, Bangalore-560002. *Corresponding Author
Dr. Sahana Devadas	Professor in Pediatrics, Bangalore Medical College and Research Institute, K R Road, Fort, Bangalore-560002.
Dr. Malleesh Kariyappa	Professor in Pediatrics, Bangalore Medical College and Research Institute, K R Road, Fort, Bangalore-560002.

ABSTRACT

Globally, about 22 million infants are born with birth weight of <2500g every year, with India having the third highest incidence of low birth weight infants in the world. Low birth weight babies are at high risk of hypothermia, infections, weight loss, respiratory distress which in turn increase the mortality of these babies. Kangaroo Mother Care is a method of care of preterm or low birth weight neonates by placing them in skin to skin contact with mother or caregiver in order to ensure their growth and development. **Objectives:** This is a cross sectional study to assess the Kangaroo Mother Care, breastfeeding status and early discharge from the hospital with which effectiveness of Kangaroo Mother Care in reducing the risk of mortality among preterm and low birth weight infants is evident. **Methods:** In this cross sectional study, 1102 low birth weight babies- mother dyad in the post natal wards were evaluated. All the mothers were educated for Kangaroo Mother care method by scheduled program. Time of initiation of Kangaroo mother care and duration of kangaroo mother care were noted. The breast feeding status of the mothers were assessed and recorded. The time of discharge from the hospital also noted. The relationship between kangaroo mother care, breast feeding status and time of discharge from the hospital were studied. **Results:** In this study, among 1102 babies, 336(30.5%) babies received short kangaroo mother care, 636(57.7%) babies received Extended Kangaroo Mother Care, 130(11.8%) babies received long Kangaroo Mother care. Majority [553(50%)] of the babies were exclusively breast fed, 24(2%) of babies were predominantly breastfed, and 17(2%) of babies were on mixed feeds. About 4(0.4%) babies who were given extended Kangaroo Mother care were discharged within 2 days of birth with majority of babies being discharged early with early initiation of Kangaroo mother care. **Conclusion:** Kangaroo mother care increases exclusive breastfeeding successfully. It is safe, effective and feasible method of care for low birth weight infants.

KEYWORDS

Kangaroo Mother Care, Low Birth Weight babies, Breastfeeding, early discharge

INTRODUCTION

Neonates with birth weight <2.5kg are called low birth weight (LBW). Globally, about 22 million infants are born with birth weight of <2500g every year, with India having the third highest incidence of low birth weight (LBW) infants (28%) in the world [1]. KMC is a method of care of preterm or low birth weight neonates by placing them in skin to skin contact with mother or caregiver in order to ensure their growth and development. KMC helps in improving infant outcomes such as Reduction in risk of mortality, reduction in hospital stay and hypothermia (temperature regulation), reduction in sepsis, increase weight gain, fewer respiratory complications and maternal outcomes i.e., improved maternal competence and longer breast feeding duration [2]. Duration of KMC is classified as Short KMC-upto 4 hours daily, extended KMC- 5 to 8hrs daily, Long KMC- 9-12 hours daily, continuous KMC- more than 12 hours daily. Recommended duration of KMC is 24 hours a day, interrupted only for changing diapers. Breast feeding status is classified as Exclusive Breast feeding (EBF), predominant breastfeeding (1-2 supplemental feeds/24 hours), mixed feeding (breastfeed plus >2 supplemental feeds/24 hours) and total supplemental feeding. About 50-70% of LBW babies born in Vani Vilas hospital are in postnatal wards of VVH. therefore this study is aimed at assessing KMC, Breast feeding status of mothers, early initiation of KMC and early discharge of low birth weight babies from the hospital.

Mohammad Heidarzadeh et al. conducted a study on the effect of KMC on breast feeding at the time of NICU discharge and concluded that there was 4.1 time increase in exclusive breast feeding by KMC [4]. Amit Sharma et al. conducted a study on the efficacy of early skin to skin contact on the rate of exclusive breast feeding in term neonates and concluded that a significantly higher proportion of neonates were exclusively breast fed at 6 weeks of age in the skin to skin contact group than in the control group [5]. Iqbal Mahmood et al. conducted a study on the effect of mother – infant early skin to skin contact on breast feeding status and concluded that about 85.3% infants were exclusively breastfed at one month as compared to 65.7% in conventional care group [6]. Hence the objectives of this study are –

1. To assess the kangaroo mother care and breast feeding status of mothers of low birth weight babies.
2. To correlate kangaroo mother care and early discharge from the hospital

In this paper, a cross-sectional descriptive study has been presented to address the issues mentioned above.

METHODOLOGY

A cross-sectional descriptive study was conducted on total of 1102 low birth weight babies in the post natal wards of a tertiary care hospital in Bangalore. All the babies who are hemodynamically stable with birth weight of 1.8kg to 2.4 kg were included in the study. Kangaroo mother care was taught to mothers of low birth weight babies. The duration of Kangaroo mother care and the day of discharge from the hospital were recorded. Their breast feeding status was assessed at 6 weeks of birth on follow up. The overall methodology is shown in the Figure 1.

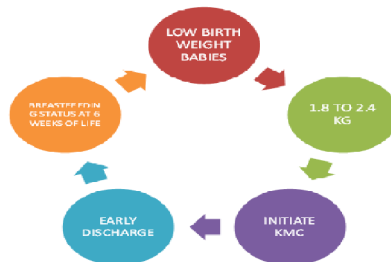


Figure 1: Overall methodology of the current study

RESULTS

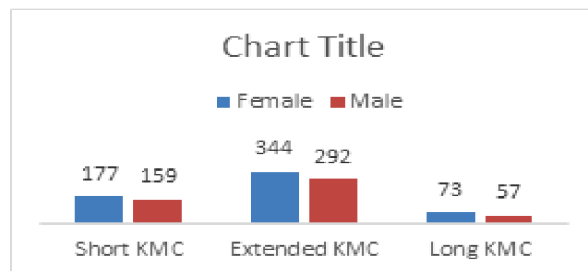


Figure 2: Gender distribution according to duration of KMC

The sex distribution of the subjects is shown in Figure 2. Out of 594(53.9%) female babies, 177(52.7%) babies received short KMC, 344(54.1%) babies received extended KMC & 73(56.2%) babies received long KMC. Out of 508(46.1%) male babies, 159(47.3%) babies received short KMC, 292(45.9%) babies received extended KMC & 57(43.8%) babies received long KMC.

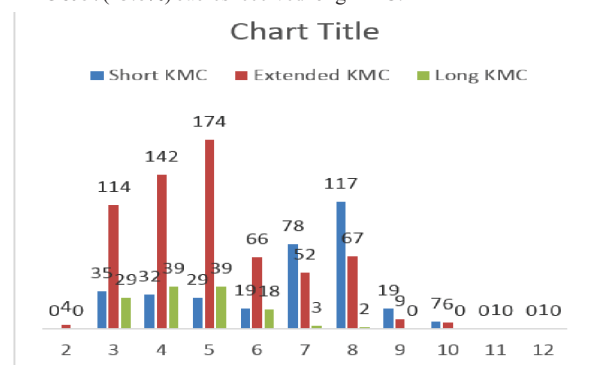


Figure 3: Correlation between Duration of KMC and day of discharge

Figure 3 shows there is positive correlation between duration of KMC and day of discharge with p-value 0.001. Longer duration of KMC helps in early discharge from the hospital. About 4(0.4%) babies who were given extended KMC were discharged within 2 days. Among 178(16.2%) babies who were discharged on day 3 of life, 35(10.4%) babies were given short KMC, 114(17.9%) babies were given extended KMC & 29(22.3%) babies were given long KMC. Among 213(19.3%) babies who were discharged on day 4 of life, 32(9.5%) babies were given short KMC, 142(22.3%) babies were given extended KMC & 39(30%) babies were given long KMC. Among 242(22%) babies who were discharged on day 5 of life, 29(8.6%) babies were given short KMC, 174(27.4%) babies were given extended KMC & 39(30%) babies were given long KMC. Among 103(9.3%) babies who were discharged on day 6 of life, 19(5.7%) babies were given short KMC, 66(10.4%) babies were given extended KMC & 18(13.8%) babies were given long KMC. Among 133(12.1%) babies who were discharged on day 7 of life, 78(23.2%) babies were given short KMC, 52(8.2%) babies were given extended KMC & 3(2.3%) babies were given long KMC. Among 186(16.9%) babies who were discharged on day 8 of life, 117(34.8%) babies were given short KMC, 67(10.5%) babies were given extended KMC & 2(1.5%) babies were given long KMC. Among 28(2.5%) babies who were discharged on day 9 of life, 19(5.7%) babies were given short KMC & 9(1.4%) babies were given extended KMC. Among 13(1.2%) babies who were discharged on day 10 of life, 7(2.1%) babies were given short KMC & 6(0.9%) babies were given extended KMC. 1(0.1%) baby was discharged on day 11 of life who was given extended KMC & 1(0.1%) baby was discharged on day 12 of life who was also given extended KMC. But discharge from the hospital is also influenced by the mode of delivery. Babies born by normal delivery are discharged early and by LSCS are discharged late.

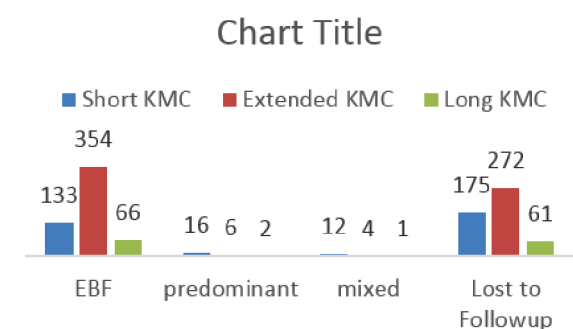


Figure 4: breast feeding status and KMC at 6 weeks of age

The correlation between duration of KMC and breastfeeding status of babies at 6 weeks of life is shown in figure 4. Out of 1102 babies, 508(46%) babies were lost to follow up due to various technical issues. About 553(50%) babies were EBF, 24(2%) babies were predominantly breastfed & 17(2%) babies were on mixed feeds. Out of 553 EBF babies, 133(40%) babies were given short KMC, 354(56%) babies

were given extended KMC & 66(51%) babies were given long KMC. Out of 24 predominantly breastfed babies, 16(5%) babies were given short KMC, 6(1%) babies were given extended KMC & 2(2%) babies were given long KMC. Out of 17 mixed fed babies, 12(4%) babies were given short KMC, 4(1%) babies were given extended KMC & 1(1%) babies were given long KMC.

DISCUSSION

Kangaroo mother care, an important component of Developmental Supportive Care of LBW babies, contributes greatly towards the reduction of neonatal mortality and morbidity especially in resource limited settings. For a holistic, family centered care of LBW neonates, KMC has shown to have proven benefits with reduced requirement of medical interventions and focus on Mother-Neonate bonding.

Our study provided background data on no. of LBW babies receiving KMC in the post natal wards which was minimal to almost zero. Among the 1102 cases registered for the study, 508 cases lost to follow up. A lack of supportive environment, pain, fatigue, lack of confidence in handling small babies in primi gravida mothers were the main barriers for practicing optimum KMC. This study shows that by early initiation of KMC and by increasing the duration of KMC, we can improve the breastfeeding status of women and also facilitates early discharge of low birth weight babies from the hospital.

CONCLUSION

LBW babies are more prone to lose weight due to dehydration, go to hypothermia due to large body surface area. KMC is the most affordable, acceptable and cost effective method of increasing weight of LBW babies and to prevent hypothermia. It also helps in increasing breast feeding in mothers of LBW babies. Our study shows that there is significant association between duration of KMC and early discharge from the hospital. Also KMC increase exclusive breast feeding rates after discharge from the hospital. Therefore we conclude early initiation of KMC possibly helps in improving the general condition of both mother and the LBW babies indirectly reducing the mortality and morbidity of LBW babies.

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