Summary

The valuable effects of KMC obtained from different studies uptill now urged us to study the possibility of implementation of this technique and compare the results of it's implementation versus the traditional artificial incubator care of neonates.

Our study included 90 infant-mother pairs classified into two main groups as follow:

Group 1 (30 infant-mother pairs):

Low birth weight infants who cared for by KMC maneuver (30 infants, 11 males and 19 females), their birth weight ranged from 1500 to 2050 grams.

Group 2 (60 infant-mother pairs):

Low birth weight infants who cared for by traditional incubator care. This group was subdivided into two subgroups according to type of feeding:

Group 11a (30 infant-mother pairs):

Predominantly maternal breastfed infants " more than 50 % of total frequency " (30 infants, 16 males and 14 females), their birth weight ranged from 1500 to 2220 grams.

Group 11b (30 infant-mother pairs):

Artificial formula fed infants (30 infants, 14 males and 16 females), their birth weight ranged from 1500 to 2200 grams.

Infants in all groups were matched for gender, birth weight, and gestational age. Families in all groups were matched for maternal and paternal age, education and socioeconomic standard. All infants recruited in the study were delivered by normal vaginal delivery and admitted within 24 hours of birth to NICUs of hospitals included in the study. Their birth weight ranged from 1500 to 2500 grams.

The following exclusion criteria were considered for all participants and their families:

1. Infants who had been resuscitated were excluded from the study, but any episodes of apnea or bradycardia in infants who required mild stimulation only were included in the study.

2. Any apparent or symptomatic congenital anomalies.

3. Any intercurrent infections and any other medical disease (physiologically stable infants)

4. Any mothers reported smoking or using drugs during pregnancy.

5. divorced mothers

6. Multiple births.

7. Recent immigrants to avoid drop out defaulters as possible.

All subjects included in the study were subjected to the following:

1. Collection of parents data (including maternal and paternal names, age, education, occupation, socio - economic level, special habits, residence and their phone number).

2. Thorough family history including paternal and maternal illness and history of the previous pregnancies.

3. Thorough maternal antenatal history (with special focus on smoking, infections, drugs and any medical problems occurred during pregnancy).

4. Thorough obstetric history.

5. Resuscitation data including required or not and if required for how long, methods needed (tactile stimulation, oxygen by bag / mask).

6. Initial assessment on admission (including gestational age, time and date of birth, weight, temperature, respiratory rate, heart rate, voiding urine and stool).

7. Complete physical examination with evaluation of neonatal reflexes.

8. The infants were followed up periodically nearly at the same time every 3rd day during admission in the hospital, and weekly after discharge till doubling their birth weight (end point of the study). Each follow up visit included:

a- full clinical examination

b- measuring the weight using a digital scale which was regularly standerdized.

c- assessing feeding protocol including type of feeding and it's frequency and amount.

d- assessing the breastfeeding to ensure correct attachment via observation of the mother position, infant holding, usage of both breasts alternativly and ensure exhaustion of one breast before shifting to the other.

e- counseling the mother to resolve any problems faced her during feeding or care by KMC.

9. Duration of stay in hospital was recorded to all cases and the age (in days) of occurrence of morbidity or mortality if any.

10.Infants of group (1) were cared for by KMC, while infants of group (11) were cared for by the traditional incubator care. Subgroup (11a) infants were predominantly breastfed while those of subgroup (11b) were artificially fed.

11. The mothers of all neonates underwent assessment for depression using the Beck Depression Inventory (appendix 4) at 6 wks postpartum **(Abd El-Fattah; 1996)**. This was conducted on a person – to – person basis interview

12. the previously prepared questionnaire (appendix 5) was used to assess the knowledge, attitude and practice (KAP) of medical staff (physicians and nurses) towards KMC before and after the implementation of KMC maneouver.

The aim of our study was:

1. Compare the effect of implementation of Kangaroo Mother Care (KMC) with that of traditional artificial incubator care of low birth weight infants in the neonatal intensive care as regard the following:

a- weight gain
b- morbidity rates
c- mortality rates
d- length of hospital stay

2. Study the effect of KMC on the depression scores of the mothers with low birth weight neonates included in the study.

3. Studying the knowledge, attitude and practice (KAP) of physicians and nurses towards KMC and breast-feeding in NICUs of hospitals included in the study before and after the implementation.

Our results showed: A highly significant statistical difference of both age of the end point (doubling of birth weight) and length of hospital stay between group 1 and group 11b, also, between group 1 and group 11a without any statistical difference between group 11a & 11b.

Also our results showed a significant statistical difference of maternal depression scores between group 1 and group 11b without any statistical difference else.

In addition, our results showed a non significant statistical difference of both morbidity and mortality rates among all groups included in the study.

The correlation study resulted in a significant +ve correlation between maternal depression scores and birth weight, gestational age, maternal and paternal age, age of end point of the study (doubling the birth weight) and length of hospital stay.

Lastly, our results showed a statistically significant difference of knowledge and attitude of medical staff work in NICU of Cairo University Hospitals (with total number = 21) before and after implementation of KMC, and a statistically significant difference of knowledge only of medical staff work in NICU of Zagazig University Hospitals (with total number = 36) before and after implementation of KMC. Finally, there is no statistically significant difference as regard the practice in both targeted hospitals.