

KANGAROO CARE TRANSPORT VERSUS TRANSPORT INCUBATOR IN TRANSPORTING STABLE PRETERM NEONATES: A RANDOMIZED CONTROLLED TRIAL

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Background : Neonatal transport is not good for neonates especially to those born prematurely. Numerous studies have cited the beneficial effects of KMC on the physiological outcomes of preterm neonates; however, only one study has documented it as a safe and effective alternative to transport incubator.

Objectives : To determine whether kangaroo care transport would result to (1) a significant change in heart rate, respiratory rate, oxygen saturation and temperature (2) occurrence of adverse events such as cardiorespiratory and temperature instability, oxygen desaturation, restlessness, and intraventricular hemorrhage; and (3) reduced occurrence of sepsis as compared to use of transport incubator.

Methodology : This is a randomized-controlled trial of physiologically stable preterm neonates weighing < 2200 grams delivered at a tertiary government hospital from September 10, 2011 to April 18, 2012. After written consent was obtained from the mother, randomization to either the kangaroo care transport group or the transport incubator group was done. Participants in the intervention group were transported from the delivery room to the NICU while on skin-to skin contact with the caregiver while the control group were placed in a transport incubator. Heart rate, respiratory rate, temperature, oxygen saturation and blood glucose were measured prior to transport and upon arrival at NICU. Monitoring of adverse effects and morbidities was also done. Data were recorded using a standard data base.

Results : The mean change in heart rate in the kangaroo care transport decreased by 1.6 beats per minute, respiratory rate decreased by 0.18 breaths per minute, temperature increased by 0.01 0C, oxygen saturation decreased by 0.07%, blood glucose decreased by 5.07 mg/dl. Statistical analysis on the mean change on the physiologic responses (heart rate, respiratory rate, temperature, oxygen saturation and capillary blood glucose) of participants pre-transport and upon arrival showed no significant difference with the transport incubator group. Moreover, in the kangaroo care transport, there was a trend to lower incidence of hypothermia, hypoglycemia, tachypnea and tachycardia; however; there was a trend to higher incidence of sepsis but were not statistically significant.

Conclusion : There is no significant difference in the heart rate, respiratory rate, temperature, oxygen saturation and blood glucose levels among preterm neonates on kangaroo care transport compared with those on transport incubator. Nonetheless, the findings of this study do not confirm that kangaroo care transport is neither superior nor inferior to transport incubator in transporting physiologically stable preterm neonates.