

Immediate “Kangaroo Mother Care” and Survival of Infants with Low Birth Weight

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Background: Infants with low birth weight who are born preterm, are small for their gestational age, or both constitute approximately 15% of all neonates worldwide but account for 70% of all neonatal deaths. A meta-analysis of previous studies showed that infants who received kangaroo mother care had fewer infections, higher rates of exclusive breast-feeding, and better weight gain than those who did not. In studies included in the review, the mean age at randomization (when the condition of the infants was considered to be stable) ranged from 10 hours to 24.5 days of life. Approximately 45% of neonatal deaths occur within 24 hours after birth and 80% during the first week of life. Hence this “**WHO Immediate KMC Study Group**” conducted a large, multicenter, randomized, controlled trial to evaluate the safety and efficacy of continuous kangaroo mother care initiated immediately after birth in infants with a birth weight between 1.0 and 1.799 kg.

Methods: They conducted a randomized, controlled trial in five hospitals in Ghana, India, Malawi, Nigeria, and Tanzania involving infants with a birth weight between 1.0 and 1.799 kg who were assigned to receive immediate kangaroo mother care (intervention) or conventional care in an incubator or a radiant warmer until their condition stabilized and kangaroo mother care thereafter (control). A total of 2944 mothers and 3211 infants underwent randomization, with 1470 mothers and 1609 infants assigned to immediate kangaroo mother care and 1474 mothers and 1602 infants assigned to conventional care, including kangaroo mother care after stabilization.

Inclusion Criteria: All live-born infants with birth weight was between 1.0 and 1.799 kg, regardless of gestational age, type of delivery, or singleton or twin status.

Exclusion Criteria: 1. mother was younger than 15 years of age, 2. Triplets or more, 3. mother sick and unlikely to be able to provide kangaroo mother care within the first 3 days after birth, 4. could not be enrolled within 2 hours after childbirth, 5. resided outside the study area, 6. unable to breathe spontaneously by 1 hour after birth or 7. who had a major congenital malformation.

PRIMARY OUTCOMES : (1) mortality from 0 to 28 days of age and (2) mortality from 0 to 72 hours of age.

SECONDARY OUTCOMES: (1) hypothermia (any axillary temperature $<36^{\circ}\text{C}$), (2) hypoglycemia (3) suspected sepsis, (4) time to clinical stabilization, (5) exclusive breast-feeding (only by suckling) at the time of discharge, (6) exclusive breast-feeding at 28 days of age, (7) maternal satisfaction with care, and (8) maternal depression.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



KMC immediately started within 2 hours for LBW Infants: Reduce Mortality. WHO Multicentric Study.

| Primary Outcomes. [no./total no. (%)] | IMM-KMC | CONV-KMC | |
|---------------------------------------|-----------------|-----------------|-------|
| Death between 0 and 28 days | 191/1596 (12.0) | 249/1587 (15.7) | 0.001 |
| Death between 0 and 72 hrs | 74/1606 (4.6) | 92/1599 (5.8) | 0.09 |

Secondary Outcomes: The proportion of infants with suspected sepsis was 22.9% in the intervention group and 27.8% in the control group (adjusted risk ratio, 0.82; 95% CI, 0.73 to 0.93); hypothermia was documented in 5.6% and 8.3% of infants, respectively (adjusted risk ratio, 0.65; 95% CI, 0.51 to 0.83). The time to stabilization and the incidence of hypoglycemia, feeding fully by suckling at the time of discharge, and exclusive breast-feeding at the end of the neonatal period were similar in both groups.

EXPERT COMMENT

“In this multicenter trial, the initiation of continuous kangaroo mother care soon after birth in infants with a birth weight between 1.0 and 1.799 kg improved neonatal survival by 25% as compared with kangaroo mother care initiated after stabilization, the approach that is currently recommended.”

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With warm regards,

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