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EFFECT OF KANGAROO MOTHER CARE ON GROWTH AND DEVELOPMENT OF LOW BIRTH WEIGHT BABIES UP TO 12 MONTHS AGE: A CONTROLLED CLINICAL TRIAL.

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Abstract

Background & Objectives: Low birth weight (LBW; < 2500 g) is an important cause of neonatal morbidity and mortality and may impact future development. Kangaroo Mother Care (KMC) is a non-conventional method of caring for LBW babies that satisfies their needs for touch, warmth, love and security. The objective of this study was to assess if KMC provides satisfactory outcome at 12 months age, as regards growth and development, in comparison to conventional care.

Methods: Techniques of exclusive breast feeding and KMC were taught to study group mothers and only exclusive breast feeding to control mothers. Group allocation was based on purposive sampling – 67 mothers were allocated to KMC and 50 to conventional care (control group). Weight, length, head circumference, chest circumference and average mid-arm circumference were measured at birth and at corrected age of 0, 3, 6, 9 and 12 months. Developmental assessment was done by Developmental Assessment Scale for Indian Infant (DASII) at 12 month age.

Results: At birth KMC babies had significantly lower values for birth weight (1407.7 ± 291.06 g vs. 1796.8 ± 410.37 g; $p < 0.001$) and all 4 anthropometric parameters than control babies. However, by the corrected age of 0 months, all parameters were comparable, other than mid-arm circumference that was still lower in KMC babies. At 12 months, all measurements were comparable other than chest circumference which was slightly greater in KMC babies. DASII motor quotient was comparable between groups (92.6 ± 16.26 vs. 88.6 ± 21.00) but the DASII mental quotient was higher for KMC babies (99.6 ± 13.40 vs. 92.3 ± 16.37; $p = 0.009$) at 12 months.

Conclusions: Though babies receiving KMC were born with significantly less birth weight and lower measurements than control babies, they rapidly achieved the same norms. The higher mental quotient for KMC babies at 1 year may indicate a more rapid cognitive development.