

## ***Kangaroo Mother versus "Traditional" Care for Newborn Infants <2000 Grams. A RCT.***

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***Objectives: Low birth weight (LBW) is a serious health problem. At the main Social Security Hospital in Bogotá, 18% of all live newborn infants are <2500 g, and a third of them are under 2000 g. This study compares effectiveness and safety of Kangaroo Mother Care (KMC) and "traditional" care in LBW infants. Design: Open Randomized Controlled Trial.***

***Setting: A Colombian Social Security Referral Hospital***

***Patients: Newborn infants >2000, surviving the neonatal period and eligible for an in-patient minimal care unit. 1084 consecutive deliveries <2000g were followed and 746 were randomized, 382 to KM and 364 to control; information on 693 (93%) was available at one year. A convenience sub-sample of 582 infants assigned either to KMC or control were followed up to 15 months to evaluate mother-to-infant bonding.***

***Interventions: KMC infants were discharged as soon as randomized. Infants remained 24 hr/day in skin-to-skin contact on the mother's chest until infants resisted being held in kangaroo position. Control babies remained in incubators at the minimal care unit until meeting usual discharge criteria. Both groups were followed up to 1 year (corrected age).***

***Main outcomes: mortality, incidence of infection, growth, development hospital stay, length of breast-feeding, mother-to-infant bonding, home environment and mental development. Measurement were made at term, 3, 6, 9 and 12 month of corrected age and included a neurological screening test (INFANIB), a developmental scale (Griffiths), the HOME inventory and a mother-infant interaction scale***

***Results: Baseline variables were evenly distributed, except for weight at recruitment. Mortality RR (control/KMI) was 1.76 95%CI 0.85-3.7. After adjusting for confounding factors, OR was 1.93 (95%CI 0.90-4.15). Frequency of infection was similar, but severity was higher in the control group due to an excess of nosocomial infections. KMC infants had slightly higher lengths and head circumferences at 9 months and 1***

*year. Breast-feeding proportion was higher in KMI at 3 months. KMI infants <1500 g at birth spent less time in hospital. KMC families had higher HOME scores, appearing as stimulating more efficiently their infants. In addition several interactions between KMC intervention and subgroups were noticed: protective effect with regard to mortality and infectious morbidity for more fragile infants, protective effect when father's level of education is very low, better Grifits quotients in infants with transient abnormalities in the INFANIB test and a mid-term impact (15 months) on mother-infant interactions where KMC mothers of infants with "transient" INFANIB were more sensitive and had more contingent responses*

*Conclusions: Our results suggest a 50% RR reduction in mortality. Growth indices were appropriate, clarifying a doubt about poor early growth with KMI. There are early savings in hospitalization. It seems that beneficial effects of the intervention could be greater for more fragile infants and might influence family attitude towards the infant in a positive way: better home environment, better attachment.*

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