ABSTRACT 2

PREDICTING THE NEED FOR SUPPLEMENTING BREAST FEEDING IN INFANTS WITH BIRTH WEIGHT ≤ 2000 GRAMS IN THE KANGAROO MOTHER CARE PROGRAM (KMCP) OF THE "CLÍNICA DEL NIÑO" IN SANTAFÉ DE BOGOTÁ, COLOMBIA

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Objectives. To develop a prediction rule for identifying kangaroo infants who require supplementation to achieve an appropriate weight at 40 weeks post-conceptional age (PCA) and to describe the composition of preterm breast milk.

Setting: The KMC outpatient clinic at the "Clinica del Niño" hospital.

Design: Prospective prediction rule development.

Study Subjects: 115 mothers and their 129 healthy preterm AGA infants under 2000 g without transitional problems and under ambulatory KMC: continuous kangaroo position and exclusive or nearly exclusive breastfeeding; 126 subjects (98.4%) were available for evaluation at term.

Methods: Mothers received an intensive breastfeeding promotion and close follow-up. Infants were monitored daily until weight gain reached at least 15 g/Kg/day for two consecutive days and then weekly until 40 weeks PCA. *Outcomes:* Prediction rule for identifying failure to breastfeed exclusively: need for receiving supplementation with preterm formula because of inadequate weight gain. The rule was derived by unconditional logistic regression and consistency was assessed by bootstrapping. Composition of breast milk: Foremilk and hindmilk were sampled weekly from entry to term.

Results: Average weights, length, and head perimeter (HP) were 1782 g, 42.2 cm, and 30.8 cm at entry and 2828 g, 47.4 cm and 34.9 cm, at term. Sixty infants (47.6%) did not require supplement, and 66 failed to breastfeed exclusively. Two variables, multiple-single pregnancy and length at entry grouped infants in three categories: low (under 17%), intermediate (17-30%), and high (>30%) probability of failure.

Preterm breast milk was qualitatively different from term milk, and "matured" with postnatal age. There were marked differences in fat content between foremilk and hindmilk in all sampling periods.

Discussion: We were able to develop a practical and easy-to-use prediction rule to identify candidates for receiving early supplementation with formula, with the aim of protecting early postnatal growth under the KMCP. The rule needs prospective external validation before it can be widely recommended.