

September 23rd, 2023 09:00 - 11:00

PARALLEL SESSION 34 - EFCNI 5

ID 714. EFFECT OF KANGAROO CARE IN THE NICU ON PRE-ADOLESCENT OUTCOMES IN GUJARAT, INDIA: 10-YEAR NICU FOLLOW-UP

Professor Nisha Fahey², Dr. Binoy Shah³, Dr. Axil Patel¹, Ms Emily Gang², Ms Maryjane Bentley², Dr. Ameer Amin⁴, Dr. Dhvani Patel¹, Professor Dipen Patel¹, Professor Lawrence Rhein², Professor Apurv Soni², Professor Jeroan Allison², **Professor Somashekhar Nimbalkar**¹

¹BHAIKAKA UNIVERISTY, KARAMSAD, INDIA, ²UNIVERSITY OF MASSACHUSETTS, WORCESTER, USA, ³EMORY UNIVERSITY, ATLANTA, USA, ⁴TEXAS CHILDRENS HOSPITAL, HOUSTON, USA

Background:

Kangaroo Care is a lifesaving intervention for neonates in resource-limited settings. Real-world evidence of its efficacy on longitudinal outcomes of growth, cognitive development, morbidity, and mortality among an Indian cohort is not well studied.

Methods:

This prospective cohort study followed a cohort of children who were hospitalized in a NICU in rural India between 2011–2014 with follow-up home visits conducted between 2021–2022. Standardized and validated methods were used to measure height, weight, reading ability, and mathematics skills in addition to survey-based data collection for demographics, family characteristics, and major morbidity history. Data were combined with hospital EMR data from their NICU hospitalization. This combined dataset was used to calculate propensity scores for receiving Kangaroo Care and a fragility index to adjust for possible confounding by indication in the NICU

setting. Multivariable regression models were used to estimate treatment effects at the time of follow-up.

Results:

In total, 442 of the 708 children or their families were recontacted in the follow-up period. Among the living children, those who received Kangaroo Care were older and more likely to be male ($p < 0.001$). Receiving Kangaroo Care was associated with decreased odds of mortality, anthropometric failure, or cognitive delay (Table 1). Adjustments for baseline fragility or their propensity to receive Kangaroo Care did not considerably change these associations.

Conclusion:

This represents the first longitudinal study of Kangaroo Care among children in India and found that not only was Kangaroo Care associated with reduced mortality among high-risk neonates, but those who survived to early childhood also had a lower likelihood of having physical or cognitive deficits.

Table 1. Distribution of preadolescent physical growth, cognitive, comorbidity, and Mortality outcomes stratified by Kangaroo Care status in the NICU.

Outcome	Received KC-179	Did Not Receive KC-126	p-value
CIAF			
no	70 (43.21)	38 (31.93)	0.055
yes	92 (56.79)	81 (68.07)	
Can Add			
no	44 (25.0)	43 (34.13)	0.084
yes	132 (75.0)	83 (65.87)	
Read Words			
no	45 (25.57)	44 (34.92)	0.079
yes	131 (74.43)	82 (65.08)	
Cognitive Delay			
no	117 (66.48)	69 (54.76)	0.039
yes	59 (33.52)	57 (45.24)	
Comorbidity Composite			
no	143 (79.89)	102 (80.95)	0.818
yes	36 (20.11)	24 (19.05)	
Overall Composite among living			
no	59 (32.96)	23 (18.25)	0.004
yes	120 (67.04)	103 (81.75)	
Outcome	Received KC-204	Did Not Receive KC-238	p-value
Died			
no	180 (88.24)	132 (55.46)	0.000
yes	24 (11.76)	106 (44.54)	
Overall composite			
no	60 (29.41)	29 (12.78)	0.000
yes	144 (70.59)	209 (87.82)	

Distribution of Preadolescent Outcomes stratified by KMC received

Distribution of Preadolescent Outcomes stratified by KMC received

Non Declared



ID 319. SHORT AND MID-TERM NEONATAL OUTCOMES IN HIGH-RISK PRETERM AND TERM INFANTS UNDERGOING FICARE: A CASE CONTROL STUDY

Doctor Bárbara Moreno-Sanz¹, Marta Antón¹, María Teresa Montes¹, Marta Cabrera¹, Adelina Pellicer¹

¹Department of Neonatology, La Paz University Hospital. Hospital La Paz Institute for Health Research – IdiPAZ, Madrid, Spain

Background

FICare model reports mainly on stable preterm infants. We have recently published on FICare feasibility at a complex level IIIC NICU, scaling the model to two implementation levels (basic and advanced), making it suitable to the whole spectrum of care of high-risk neonates (1).

Aims

We report on the short- (hospital discharge) and mid-term (first 6 months) outcomes of infants enrolled in a pilot on FICare implementation at our NICU.

Methods

From July 2018 to October 2022 families were invited to join the program if their newborn's admission required neonatal specialized care for at least 3 weeks. Family caregivers were trained according to the program's curricula. Each case was matched by a control infant, admitted at the same time (contemporary control, CC), plus 2 infants (historical control, HC) born within the 3 years pre-FICare site implementation.



Results

Infant–family dyads of 134 preterm [median GA 284wk(265–310); median BW 1151g(855–1403)] and 52 term–infants entered the FICare program at a median postnatal age of 8 days. The CC was compound of 134 preterm [median GA 284wk(264–310) and BW 1105g(890–1349)] and 52 term infants; finally the HC consisted on 268 preterm [median GA 284wk(264–310) and BW 1076 (813–1441)] and 104 term–infants. Rates of breastmilk on admission (preterm cohort $p=0.017$; term cohort $p<0.001$) and at discharge (preterm and term cohorts, $p<0.001$) were higher in the FICare compared to CC and HC groups; whereas intermediate care length of stay (preterm cohort $p=0.019$; term cohort $p<0.001$), or mid–term use of emergency services (preterm and term cohorts $p<0.001$) were lower. In addition, infants on FICare shorter total hospital length of stay(term cohort $p=0.029$), than their corresponding CC and HC groups.

Conclusions

This is the first report on the mid–term impact of FICare implementation on health outcomes and family empowerment in a broader highly–vulnerable neonatal population. The positive results apply to both the high–risk preterm but also to the sick full–term newborn, reflecting the strengths and feasibility of the model in more complex healthcare neonatal services.

Moreno–Sanz B, et al. doi: 10.3389/fped.2021.682097.

None declared