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Abstract book

OP 19 :

NEURODEVELOPMENTAL OUTCOME OF PRETERM BABIES BORN AT TEACHING HOSPITAL JAFFNA- A PRELIMINARY STUDY

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Introduction: Preterm birth at less than 37 completed weeks of gestation is a major determinant of early neurodevelopment. There have been no previous studies to assess the effect of prematurity on later growth and development.

Objectives: To assess the neurodevelopment of preterm babies at 3/12, 9/12 and 12/12 months and the influence of birth weight, gender, period of gestation (POG) and neonatal care on neurodevelopment.

Methods: A longitudinal hospital based observational study was carried out at the Teaching Hospital Jaffna among babies born before37 weeks of POGbetween October and December 2015.

A pre-tested questionnaire was administered at recruitment and developmental assessment undertakenin cognitive (Cog), communication (Receptive-RC and Expressive communication-EC) and motor (Fine-FM and Gross motor-GM) domains using Bayley Scales of Infant and Toddler Development(Third Edition Bayley-III) at 3, 9 and 12 months of age in the community. The raw scores calculated for each participant were converted into scale scores. The mean scaled score and standard deviation for all three domains for each group were tested for significant relationships with gestational week, gender, birth weight and neonatal care.Data wereanalyzedusing SPSS version 16.0.

Results: A total of 44 babies were recruited between POG of 35 to 36^{+6} with a male tofemale ratio of 1:1. The mean birth weight was 2.36 (±0.52)kg and 14 (31.8%) babies needed neonatal intensive treatment.The mean values forall 3 domains were analyzed together with gender. In the cognitive domain, most babies scored average performance, that is28 babies (63.6%), 26 babies (59.1%) and all 44 babies (100%) at 3, 9 and 12 months, respectively. In language, 35 babies (79.5%) and all babies (100%) were at average levels at 3 and 9 months respectively, while 29 babies (65.9%) were at low average level at 12 months of age. In themotor domain, 22 babies (50%) were at low average level and 2 babies (4.5%) were in the borderlineat 3 months of age; 21 babies (47.7%) were at low average and 8 babies (18.2%) were in the borderlineat 9 months of age; and 42 babies (95.5%) were ataverage level at 12 months.The babiesin the lower range of POG had poor performance in GM andRC at 3 months, RC at9 months and GM at12 months. A statistically significantrelationship wasfound amongthese babies with Cog ($p=0.032$) at 3 months of age, Cog ($p<0.001$), EC ($p<0.001$), FM ($p<0.001$), GM ($p=0.026$) at 9 months and GM ($p=0.019$) at 12 months of age. The babies admitted for special neonatal care showed delayed performance in EC, GM in 3 months and RC, EC, FM, GM in 9 months and RC, FM in 12 months of age. Astatistically significant relationship was found with cognitive ($p=0.009$), expressive communication ($p=0.002$) and gross motor ($p=0.012$) domains at 9 months of age.

Conclusion: The scale of Bayley-III was helpful to identify children with developmental delay. Great concern has to be taken in the gross motor domain of preterm babies.