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Incidence and predictors of extra uterine growth restriction in preterm neonates

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Statement of the Problem: Extra Uterine Growth Restriction (EUGR) is a major problem in preterm neonates and adversely affects long term growth and development(1,2). The objective of this study was to identify the incidence and predictors of EUGR in neonates \leq 32 weeks of gestational age.

Methodology: A retrospective observational study done including 603 neonates \leq 32 weeks of gestational age admitted in a tertiary care neonatal centre from January 2015 to December 2017. Growth parameters at discharge from hospital were plotted on Fenton 2013(3) growth charts and neonates falling below the 10th percentile were considered as EUGR. Neonatal data during the birth and hospital stay was analysed for identification of predictors of EUGR.

Findings: The incidence of EUGR for weight, length and head circumference was 56.9%, 35.5% and 33.3% respectively. The incidence of EUGR is inversely related to gestational age and birth weight. Factors which were found to be significant for EUGR (Discharge Weight) are birth weight, IUGR at birth, pregnancy induced hypertension and time to reach full feeds. Predictors for EUGR (Discharge length) were found to be Doppler abnormalities, male sex, birth weight and IUGR at birth. Predictors for EUGR (Discharge head circumference) were found to be birth weight and IUGR status at birth.

Conclusion & Significance: More than 50% of our preterm neonates admitted into NICU have EUGR. Presence of lower birth weight was associated with increased risk of EUGR for weight, length and head circumference. Being SGA at birth was associated with decreased risk of EUGR for weight, length and head circumference.

Biography

Venkat Reddy Kallem, Neonatology resident in Fernandez hospital, Hyderabad, currently he is working on a research project titled "Comparison of Growth, Metabolic and Neurodevelopmental outcomes among preterm AGA and SGA infants at 12-18 months of corrected age". He is working under the guidance of Dr. Srinivas Murki MD,DM Consultant Neonatologist in Fernandez Hospital.

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