Univariate analysis showed that gestation ($p < 0.001$), birthweight ($p < 0.001$) and rate of weight gain ($p = 0.001$) inversely correlated with grade of ROP, but with multiple regression only gestation remained significant ($p < 0.001$). Rate of weight gain correlated with gestation; this may explain findings in previous studies.

Conclusions: Screening only babies with a growth rate below the 1st quartile would have missed 54% babies with grade 3 ROP.

1189

NEUROCOGNITIVE OUTCOME OF BIRTH AT 23 WEEKS GESTATION

F.R. Litman^{1,2}, M.D. Ahronovich^{1,2}, I.S. Baron^{1,2}, K. Erickson¹, R. Baker^{1,2}

¹Neonatology, Fairfax Neonatal Associates at Inova Fairfax Hospital for Children, ²Pediatrics, Inova Fairfax Hospital for Children, Falls Church, VA, USA

Background and Aims: Birth at 23 weeks gestation is at the threshold of viability and associated with high mortality and morbidity rates. Survivors are predicted to have moderate-to-severe neurodevelopmental impairments but these have not been well-described. Our aim was to describe cognitive and behavioral outcomes at early school age in these at-risk children.

Methods: We assessed 5 males at age 6 who were born at our hospital 2000-2003 at 23 weeks (birth weights: 482-660 g). Standardized neuropsychological and parental report measures were administered, and scores corrected for prematurity.

Results: Survival-to-discharge rate was 56% for 23 weekers born 2000-2003 at our NICU. Compared to normative data, our participants' mean Differential Ability Scales-II General Conceptual Ability was 89 ± 7.59 (range 81-100); composite scores were Verbal= 94.8 ± 12.36 , Nonverbal Reasoning= 92.0 ± 8.12 , but Spatial= 85.4 ± 10.88 . None required special education. Parental behavioral ratings indicated three were intact for internalizing problems, externalizing problems, behavioral symptoms, and adaptive skills; two at-risk for externalizing problems, one also for behavioral symptoms and one with significantly poor adaptive skills.

Conclusions: Although resuscitation of extremely early gestation neonates is not universally endorsed, low average (80-89)/average (90-109) functioning can be expected for some born at 23 weeks; severe impairment is not certain. Resuscitation decisions are difficult without knowledge of the best predictors of adequate functional outcome. Risk of spatial dysfunction, hyperactivity, attention problems, and ineffective activities of daily living may be greater in this select population, requiring early interventional therapies in preparation for school entry. Further study of these fragile survivors is warranted.

1190

FACTORS WITH IMPACT ON THE INCIDENCE OF LARGE FOR GESTATIONAL AGE BIRTHS

E. Coleta, M. Gheonea, M. Siminel, C. Berceanu

Department of Neonatology, University of Medicine and Pharmacy of Craiova, Craiova, Romania

Background: Large for gestational age (LGA) newborns associate both significant neonatal morbidity and potential threat for the mother. To date, it is difficult to accurately predict neonatal macrosomia clinically.

Objective: To examine the risk factors associated with LGA newborns in a geographically defined population.

Methods: Retrospective cohort study (N=14831) of singleton live births (2004-2008) using maternal and newborn data from a Regional tertiary unit. The variables selected for inclusion in this study were based on a review of published medical research and included infant characteristics (gender, gestational age), genetic or constitutional factors (maternal prepregnancy weight, maternal height), lifestyle factors during pregnancy (smoking, alcohol), preexisting medical diseases (diabetes mellitus), obstetrical history (parity, gravidity), medical problems during current pregnancy. Multivariable regression statistics were used to determine the significance of each variable.

Results: LGA newborns represented 4.48% (N=665) of the studied population, whereas adverse neonatal outcomes (i.e. shoulder dystocia, brachial nerve injuries, clavicular fractures, and neonatal hypoglycemia) were reported in 9% of LGA newborns. After adjusting for potential confounders, the main predictors LGA births were a previous history of an LGA delivery (i.e. associated with a 3-fold increase in the likelihood of delivering a