remaining children were too young. Postoperative highest and lowest glucose levels within 24 hours after bypass surgery were prospectively collected. Neurodevelopmental outcome at one year of age was assessed with the Bayley Scales of Infant Development II (Mental Developmental Index-MDI, Psychomotor Developmental Index-PDI) in 160 children and at four years with the WPPSI.

Results: Mean age at surgery was 2.9 months (0.1-10.7 months). Mean highest postoperative glucose values were 12.76 (SD 4.9), mean lowest were 6.82 (SD 1.9). Glucose values normalized in all children within 48 hours, seven children (4%) received insulin infusions. Postoperative highest and lowest glucose levels were not associated with neurodevelopmental outcome at one year or at four years, whereas more abnormal preoperative neurological findings were associated with poorer one-year outcome (MDI p< 0.001, PDI=0.03).

Conclusion: In our population glucose values normalized within 48 hours and had no adverse effect on neurodevelopmental outcome.

1036

GROWTH FAILURE AT 3 YEARS OF CORRECT AGE IN CHILDREN BORN BELOW 31 WEEKS GESTATION: PREVALENCE AND RISK FACTORS

F. Serrao, F. Gallini, L. Maggio, S. Costa, F. Cota, C. Romagnoli

Division of Neonatology -Department of Paediatrics, University Hospital "Agostino Gemelli"- Catholic University Sacred Heart, Rome, Italy

Background and aims: Early growth failure in extremely preterm infants is associated with negative long term outcomes. The aim of this study was to report the prevalence and postnatal risk factors of growth failure at 3 years correct age (c.a.) among children born below 31 wks GA

Methods: Anthropometric measures and background information of 133 AGA infants with GA ≤30 weeks were collected during their stay in NICU and then in a follow up program planned until 3 years c.a. Growth failure (GF) at 3 years was defined as a z score < -1.28.

Results: At 3 years c.a the GF prevalence was 45.9% for weight, 34.6% for height and 30.3% for head circumference. Infants with weight growth failure (WGF) were similar to controls (C) for GA (27,7 ± 1.4 vs 27,8 ± 1,6 wks), BW (1026 ± 200 vs 1006 ± 219 g), nutritional intakes, main clinical and growth outcomes during the NICU stay. Multiple logisitic regression analysis showed that Zscore variation from birth to discharge was independently associated to WGF (OR 0.30, 95%CI 0.16-0.56) and HC GF (OR 0.29, 95%CI 0.14-0.56).

Conclusions: These data suggest that, in our population of ELBW infants, the early postnatal growth is an important prognostic factor of growth at least up to 36 months c.a.

1037

MOTHER-CHILD ROOMING-IN FOR PRETERM AND LOW BIRTH WEIGHT NEONATE AT OUR MATERNITY WARD

H. Yoshio[1], Y. Yokoi[2], Y. Yamauchi[2]

[1]Neonatology, St. Marianna University School of Medicine, Kawasaki, [2]Neonatology, Okayama Medical Center, Okayama, Japan

Backgroud and aims: The goodness of rooming-in for term baby has already been considered to promote breastfeeding and the mother and child relationship. However, not many reports have been published about from how much birth weight or how low gestational ages we should start rooming-in just after birth. We evaluated the possibility and efficacy of mother and child rooming-in together soon after birth for near term or low birth weight (LBW) neonate.

Methods: The healthy inborn preterm and LBW neonates were enrolled and divided into three groups, namely Group A (13 cases), Group B (42 cases) and Group C (99 cases). The birth weights (BWs) of Group A and B were larger than 2kg and their gestational ages (GAs) were 35 and 36weeks, respectively. Group C consisted of term and LBW neonates heavier than 2kg of BW.

Results: The number of infants from Group A, B and C that discharged from hospital through rooming-in were 9/13(69%), 36/42(86%) and 96/99(97%), respectively. The exclusive breastfeeding rates of Group A, B and C at the time of hospital discharge were 56%, 69% and 85%, respectively, and also they had good weight gains at one month of age.

Conclusions: This study showed that the rooming-in for both near term (35 and 36weeks of GA) and term, LBW neonates over 2kg of BW seems to be

possible under careful nursing just after birth and should be promoted.

1038

REAL-TIME GLUCOSE MONITORING AND GLUCOSE CONTROL IN THE EXTREMELY PRETERM INFANT DURING THE FIRST WEEK OF LIFE

R. del Rio Florentino[1], I. Iglesias Platas[1], M. Thio Lluch[1,2], X. Krauel Vidal[1]

[1]Neonatology, Hospital Sant Joan de Deu, Esplugues de Llobregat, Spain, [2]Neonatology, Royal Women's Hospital, Melbourne, VIC, Australia

Background: Hyperglycaemia is a metabolic disturbance affecting up to 80% of extreme preterm babies. It increases the risk for mortality and morbidity in this population. The current therapeutic approach for hyperglycaemia in our unit involves treatment with insulin infusion. Continuous glucose monitoring systems have been shown by our group and others to accurately reflect blood glucose levels in preterm infants. Our hypothesis is that new generation monitors that allow immediate access to glucose values by the clinician will improve glucose control in these patients.

Materials and methods: 11 patients ≤29 weeks and/or ≤1000g were monitored for the first week of life using a real-time glucose monitor (RT-Guardian®, Medtronic), in which glucose values are visibly displayed and continuously available. These data were compared to the values of 10 clinically matched premature babies obtained with a blinded device (CGMS®- Gold, Medtronic), with delayed access to the data after computer download.

Results: There was a non-significant trend to longer periods of normoglycaemia in the Real-time Group. Amongst the patients requiring insulin infusion, higher doses could be used safely in the Real-time Group with no recorded episodes of hypoglycaemia. The number of heel pricks for the management of insulin treatment was significantly higher in the group with CGMS® Gold blind monitoring. No complications due to the use of the devices were detected in either group.

Conclusions: Real-time continuous glucose monitors are safe devices that have huge potential for the improvement of glucose control and insulin therapy management in the extremely preterm population.

1039

INBORN ERRORS OF METABOLISM (IEM) IN INFANTS ADMITTED TO INTENSIVE CARE UNITS: A STUDY ABOUT DIFFERENT INVESTIGATIONAL STRATEGIES

C.G. Carvalho[1], R. Giugliani[2], C.F.M. Souza[3]

[1]HCPA - UFRGS, [2]Genetic Service, UFRGS - HCPA, [3]Genetic Service, HCPA, Porto Alegre, Brazil

Background and aims: IEM are genetic diseases the majority with recessive inheritance and varied clinical presentation that turn diagnosis into a challenge. Especially in developing countries, knowledge of IEM by health professionals is restricted. In order to overcome this problem, an Information Service on IEM (SIEM) was created in Brazil, being a pioneering service in Latin America. SIEM is operating in the Genetics Service of HCPA since October 2001, helping physicians to diagnose suspected patients as a toll-free service. For each consultation a follow-up is conducted and the case is considered "concluded" after its diagnosis is confirmed and classified as metabolic disease or not. Some cases remain undiagnosed. This study aims to compare investigational strategies in infants admitted to ICU under 1y-old, in order to emphasize personal investigation and remote advisement in diagnosis.

Methods: Cross-sectional study of 3 groups of children suspected to present an IEM, to be developed in 24 months, enrolling patients of NICU or PICU of HCPA, or suspected cases that consulted to SIEM, or even suspected cases which their biological samples were sent to IEM Laboratory of HCPA.

Results: We did not find any paper comparing investigational strategies, that´s why this study is important. Giugliani et al, in 1991, diagnosed IEM in 8% of suspected samples and Sanseverino studied ICU suspected patients confirming 13%. Unpublished data from SIEM showed a prevalence of 16%.

Conclusions: we estimate to study 225 for each group to find a difference of at least 8% between SIEM cases and laboratory cases.