Objective: To assess the correlation between PTHrP level in preterm HM and PTHrP in maternal and neonatal serum.

Design/methods: We collected samples of expressed HM obtained from 16 mothers of preterm infants (25-34 weeks' gestation). In addition, blood samples from both mothers and infants were drawn. All samples were collected at days 2 and 10 postpartum. PTHrP levels were measured by two-site immunoradiometric assay. Blood calcium (Ca), Phosphorus (P) and alkaline phosphatase (ALP) levels were also measured.

Results: Both maternal and neonatal PTHrP serum levels did not vary after 10 days of breastfeeding. No correlation was found between PTHrP level in HM and serum PTHrP, Ca, P and ALP of the breastfed PTI.

Conclusions: Despite high levels of PTHrP in preterm HM, serum levels of PTHrP of the breast fed PTI do not increase over time. We found no correlation between PTHrP in HM and neonatal Ca serum concentration. We speculate that PTHrP intestinal absorption in the PTI is not significant.

1028

GASTROESOPHAGEAL REFLUX IN CRITICALLY ILL CHILDREN

M.J. Solana, C. Sanchez, J. Lopez-Herce, M. Crespo, A. Sanchez, J. Urbano, M. Botran, J.M. Bellon, A. Carrillo, Gregorio Maran PICU

Gregorio Maran General University Hospital, Madrid, Spain

Introduction: Gastroesophageal reflux (GER) is common in children, but its incidence in critically ill pediatric patients is unknown. Our objective was to study the incidence and type of GER in critically ill children.

Methods: Prospective observational study in critically ill children aged 1 month to 14 years. A multichannel catheter (MII) was inserted at the admittance in the PICU. This catheter has 6 channels for esophageal multichannel intraluminal impedance (MII) and 2 channels for esophageal and gastric pH measurement. Patients were studied during 48 hours.

Results: Twenty-four patients (mean age, 16.4 months) were studied. MII detected the presence of GER in 80% of patients, whereas pH monitoring

only detected 20%, although the correlation between the two was good. MII detected 320 episodes of GER (58% acid, 42% alkaline; 143 were gas type) whereas pH monitoring detected 26 episodes (100% acid). Patients with most episodes of GER were children between 7 and 12 months. The median duration of the longest episodes of GER was 4.1 minutes by pH monitoring and 2.3 minutes by MII. There was no relationship between the PRISM or PIM scores and the number of episodes of GER. There were no differences in the number or types of reflux according to the administration of epinephrine, dopamine, midazolam, fentanyl, or vecuronium.

Conclusions: The incidence of GER in critically ill children is high. MII is more sensitive than pH monitoring because many GER episodes are alkaline or weak acid.

1029

POLYMORPHIC VARIANTS OF UGT1A1 IN NEONATAL JAUNDICE IN SOUTHERN BRAZIL

C.G. Carvalho¹, S.M. Castro², A.P. Santin², L.A. de Azevedo², M.L. Pereira³, R. Giugliani³

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

Background and aims: Neonatal jaundice seems a benign condition but babies must be monitored in order to identify those who are at higher risk of encephalopathy. Abnormalities in hepatic conjugation of bilirubin were proposed in those cases - polymorphisms of the hepatic enzyme UGT1A1. Herein, we estimated the frequency of alleles and of genotypes of the promoter region of UGT1A1 gene in newborns and evaluated its association with severe hyperbilirubinemia

Methods: Case-control study, including all neonates who were in phototherapy at NICU/HCPA from March to December 2007, born > 35w of gestational age and weight > 2000g. Controls were neonates not jaundiced. Informed consent form applied. PCR performed and analyzed in GeneMapper® program

Results (490 NBs included): There were 7 of the 10 possible UGT1A1 genotypes identified; those related to Gilbert's syndrome were in 16%. Prevalence of polymorphic genotypes in icteric patients was 13.5% and in normal patients was 18.2%, p=0.08. In 86.6% of white neonates - low-risk genotypes, 13.4%, Gilbert's genotypes, while

among blacks, 34% showed the latter genotypes, and 76%, low-risk ($p=0.001$).

Conclusions: In the present sample the presence of polymorphic variants of UGT1A1 could not be associated to severe hyperbilirubinemia. Variants showed allelic prevalence and frequencies similar to those observed in other populations, with a highlight to the genotypes of higher risk in blacks and mulattos. Possibly due to the high miscegenation found in our state, other factors and genic interactions should be sought in order to explain severe neonatal hyperbilirubinemia, including the study of other polymorphisms.

1030

VITAMIN D AND OTHER PARAMETERS OF CALCIUM AND PHOSPHATE METABOLISM IN HEALTHY TERM NEWBORNS AFTER BIRTH

J. Dort¹, M. Bayer², E. Dortova¹, V. Dubova¹,
A. Mockova¹

¹Dpt. of Neonatology, Univesity Hospital, Pilsen,

²Dpt. of Pediatrics, 1st Medical Faculty, Charles University, Prague, Czech Republic

Background: The literary information about vitamin D saturation in newborns is rare. Levels of vitamin D in healthy term newborns in the Czech Republic have not been examined yet. The vitamin D saturation in newborns depends mainly on maternal saturation during gravidity that may be decreased due to nutritional habits and climatic conditions in the Middle Europe.

Objective: To get comparative values for examining of bone metabolism in newborns with very-low-birth weight.

Design: A prospective study conducted in spring period 2006 in a cohort of 28 healthy term caucasian newborns with normal birth weight . Blood and urine samples were drawn at the age of 3-7 days for examination of 25-hydroxyvitamin D (25/OH/D), calcium (Ca), phosphate (P), alkaline phosphatase (ALP), osteocalcin (OC), intact parathormone (PTH) in serum and calcium and phosphate in urine.

Results: Though other parameters of Ca and P metabolism were in normal range, levels of 25/OH/D were considerably lower than reference values found in literature . A significant correlation was found between 25/OH/D level and OC level, and futher a negative correlation (but not significant) of 25/OH/D and PTH.

Conclusion: Term newborns in the Czech Republic are born with an insufficient supply of vitamin D in the spring period obviously. The significant correlation of 25/OH/D level with bone formation marker (OC) and the tendency to higher PTH concentrations in newborns with lower 25/OH/D levels support the premise of an adverse effect of low vitamin D supply on long-term bone development.

Keywords: Vitamin D, newborn, bone development

1031

A COMPARISON OF THE WHO CHILD GROWTH STANDARDS AND THE CZECH GROWTH REFERENCES: PREVALENCE OF WASTING AMONG INFANTS

J. Vignerova¹, J. Riedlova², M. Paulova¹,
L. Humenikova³

¹Dept. of Children and Adolescents, Institute of Public Health, ²Dept. of Anatomy, 3rd Faculty of Medicine, Charles University, Praha, Czech Republic, ³Dept. of Nutritional Sciences, Oklahoma State University, 311 Human Environmental Sciences, Stillwater, OK, USA

Subjects: The study (grant IGA Mof H grant No. NS 9974, 4/2008) utilized the 2006 WHO Child Growth Standards and the 1991 Czech growth references. The WHO standards were based on a longitudinal study of 882 children aged 0-24 months and on cross-sectional studies of 6,669 children aged 18-71 months. The 1991 Czech growth references were based on a cross-sectional survey including 90,910 children aged 0-18 years (4,164 were children < 5 years).

Methods: The overall ratio of wasting in the sample of Czech children from the 1991 survey was calculated using the WHO Anthro software (version 2) and the WHO criteria for wasting.

Results: The prevalence of wasting was significantly higher among Czech children when using the WHO growth standards compared to the Czech references. The prevalence of wasting among 0-5 month old children was 15.5 % among boys and 12.9 % among girls compared to the expected 2.3% of the WHO standards.

Conclusions: The application of the WHO growth standards may results in a significant increase in the prevalence of wasting among Czech children, especially among infants aged 0-5 months. The performance and potential impacts of the WHO