

PS-273 THE RELATIONSHIP BETWEEN INFANT BIRTH WEIGHT AND NEONATAL BODY COMPOSITION

¹D Anne, ²A O'Higgins, ²C O'Connor, ³L Mullaney, ³AM Bennett, ¹M Sheridan-Pereira, ²MJ Turner. ¹Newborn Medicine, Coombe Women and Infants University Hospital, Dublin, Ireland; ²UCD Centre for Human Reproduction, Coombe Women and Infants University Hospital, Dublin, Ireland; ³Department Human Nutrition Dublin Institute of Technology, Coombe Women and Infants University Hospital, Dublin, Ireland

10.1136/archdischild-2014-307384.573

Background and aims Birth weight has been used as a marker of adiposity in neonates. Ponderal index incorporates infant length and is used in place of body mass index (BMI) in infants. Skin-fold thickness and anthropometric measurements can be unreliable in the first few days of life. Infant body composition can be measured using air displacement plethysmography. Our aim was to explore the relationship between birth weight and neonatal body composition.

Methods Infant birth weight and anthropometry were recorded. Infant body composition was measured within 3 days of delivery using air displacement plethysmography (PEA POD, Cosmed, Rome, Italy). Term infants born between 37–42 weeks were included in analysis. Data were analysed using SPSS Statistics 19. **Results** Measurements were performed on 467 (227 (49%) male and 240 (51%) female) term neonates (37–42 weeks) within the first 72 h of life. Mean birth weight and percentage body fat was 3.58 kg and 9.7% in males and 3.42 kg and 11.3% in females. Infants in the top quartiles of birth weight had higher body fat percentage. A multiple regression was run to predict body fat percentage from birth weight, gestation and gender. 35.7% of variance could be explained by these variables.

Conclusions Birth weight, gestation and gender only have a moderate effect size on infant body fat percentage at birth, therefore birth weight is not a reliable marker of infant adiposity.

PS-274 LACK OF ASSOCIATION BETWEEN BRONCHOPULMONARY DYSPLASIA AND GASTRO-ESOPHAGEAL REFLUX AT ESOPHAGEAL PH-IMPEDENCEMETRY: A PROSPECTIVE STUDY IN SYMPTOMATIC PRETERM INFANTS

S Nobile, C Noviello, G Cobellis, VP Carnielli. *Maternal and Child Department, "G. Salesi" Children's Hospital, Ancona, Italy*

10.1136/archdischild-2014-307384.574

Background and aims The role of GER in the pathogenesis and recovery from BPD in preterm infants is controversial; some Authors suggested symptomatic GER treatment for BPD infants. We tested the hypothesis that BPD predisposes to GER (due to increased respiratory effort, coughing and crying).

Methods We prospectively studied 44 infants born 2-analysis and t-test/Mann-Whitney test were performed to look for differences among the two groups; P value of

Results Demographic and clinical characteristics between BPD and controls were similar: GA 201 vs 202 days, male sex 66.7 vs 46.9%, age at study 51 vs 39 days, orogastric tube feeding 83.3% vs 75%, caffeine administration 33.3% vs 50% (all P > 0.05). The analysis of 1056 h of Ph-MII tracings showed no significant difference between BPD and controls regarding the median number of these parameters: acid (3 vs 2), weakly acid (11 vs 16), non-acid (0 vs 0), gas (7 vs 10) refluxes, ph-only

events (21 vs 9), GER >5 min (1.5 vs 3.5); longest GER (11.2 vs 16.5 min), lower ph (1.5 vs 2.1), acid exposure (ph 0.05).

Conclusions In our experience, BPD was not associated with higher reflux parameters as measured by 24 h Ph-MII examinations among preterm infants. Symptomatic GER treatment with drugs should be reserved for confirmed pathologic Ph-MII tests in order to avoid adverse events.

PS-275 CAN HIGH ENTERAL FEEDING VOLUMES PREVENT POSTNATAL GROWTH RESTRICTION IN VERY PRETERM INFANTS?

¹C Klingenberg, ²FK Muraas, ²CE Isaksen, ³PI Kaaresen. ¹Paediatric Department, University Hospital of North Norway, Tromsø, Norway; ²Department of Paediatrics Faculty of Health Science, University of Tromsø, Tromsø, Norway; ³Department of Paediatrics, University Hospital of North Norway, Tromsø, Norway

10.1136/archdischild-2014-307384.575

Background and aims Postnatal growth restriction is common among very preterm infants (VPI). Optimising enteral feeding is of critical importance to improve neurodevelopmental outcome. We assessed the effect of a feeding regimen with a high enteral volume intake.

Design Retrospective population based study of all VPI (GA < 30 weeks) discharged from a single NICU between 2005–2010. Baseline clinical data, enteral volume intake and postnatal growth data were collected. Weight at birth/discharge and at 1 year of corrected age was converted to standard deviation (SD; Z) scores.

Results 99 infants were included. Infants who died (15/99; 15%) had lower mean GA than infants who survived to discharge (24.9 weeks vs. 27.3 weeks). For all infants enteral nutrition was commenced within first 48 h. Two infants developed surgical NEC, both survived. Daily enteral volume of fortified breast milk was 180–200 ml/kg from 3 weeks of age and until self-regulation. Seven infants were transferred to other units < 34 weeks. Among the other 77 infants the mean (SD) Z-scores for weight were; at birth -0.37 (-0.27), at discharge -0.42 (-0.53) and at 1 year corrected age -0.46 (-0.60). The prevalence of SGA (< 10 centile) at birth (13/77; 17%) was similar to SGA prevalence at discharge (14/77; 18%).

Conclusions The rate of postnatal growth restriction was lower than previously reported in similar patient populations. We believe a high enteral volume intake is a safe method to increase energy and protein delivery and thus improve the nutritional status of very preterm infants.

Oxygen Saturation and Surfactant

PS-276 PRETERM INFANTS EXHIBIT INCREASED PLATELET ADHESION TO VWF UNDER CONDITIONS OF ARTERIAL SHEAR

¹N Quinn, ²J Cowman, ¹S Geoghegan, ¹B Ferguson, ¹T Sharpe, ²D Kenny, ¹EJ Molloy. ¹Neonatology, National Maternity Hospital, Dublin, Ireland; ²Molecular and Cellular Therapeutics, Royal College Surgeons Ireland, Dublin, Ireland

10.1136/archdischild-2014-307384.576

Background/aims Preterm infants have higher rates of haemorrhagic diathesis and respiratory complications than terms and adults. Platelets play a key role in haemostasis but detailed