

neonates without probiotics treatment were run, 0.7% were found positive for *L. rhamnosus*, 0.4% were positive for *B. lactis*, non of the samples were positive for both. A total of 247 faecal samples from premature neonates treated with probiotics were run, 57.0% of the collected faecal samples contained both *L. rhamnosus* and *B. lactis*, 38.0% were positive only for *L. rhamnosus*, 4.4% were positive for only *B. lactis* and 0.6% was negative for both probiotics.

**Conclusion** The probiotic supplementations do reach the gastrointestinal tract and be detected. In general the rate of NEC and death were reduced in premature neonates treated with *L. rhamnosus* and *B. lactis*.

### 1384 KNOWLEDGE AND ATTITUDE OF BREAST FEEDING AMONG FEMALES IN SAUDI ARABIA

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**Background** As stated by the WHO, exclusive breastfeeding is unequalled for healthy growth and development in young infants. In this study; we attempted to address the attitude of females in Saudi population toward awareness and knowledge of breastfeeding.

**Method** An observational cross-sectional survey distributed participants who were interviewed at shopping malls in the city of Riyadh. The survey addressed socio-demographic data and attitude of eligible females toward breastfeeding exploring the benefits and reasons limiting breastfeeding practice among the population.

**Results** A total of 332 females were enrolled in this study. Most of the interviewed participants were Saudi, married, and had more than one child. 86% of interviewed participants believed the best way to start feeding the newborn are solely breastfeeding. 41% attended breast feeding health education. Availability of formula, cosmetic, short maternity leave from job and lack of awareness were factors believed to limit breast feeding. Mother's education, parity, and age significantly correlated with the belief that exclusive breast feeding is the best start for the newborn.

**Conclusion** Females in Saudi Arabia are well aware that breast feeding is the best start for the newborn. Practical steps such as intensive education, support at postnatal period and longer maternity leave are required to improve rates of exclusive breast feeding in the country.

### 1385 OPTIMIZING NUTRITION AFTER BIRTH WITH A UNIQUE STANDARDIZED PARENTERAL SOLUTION MAY REDUCE ELECTROLYTES ANOMALIES IN < 1250G INFANTS

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Nutritional recommendations in VLBW infants advised to increase protein and energy intakes but also advised to avoid parenteral nutrition electrolytes intakes during the first 2–3 days of life to reduce electrolytes anomalies that are frequently observed.

**The Aim** of this study is to evaluate the electrolytes tolerance of an optimized nutritional program using a unique standardized parenteral nutrition solution (StPNsol) containing electrolytes from the first day of life in < 1250g infants (N=102) during the first 15 days of life.

On the first day of life, PN intakes from the StPNsol included  $38 \pm 6$  kcal/kg\*d,  $2.4 \pm 0.3$  g/kg\*d of protein,  $0.8 \pm 0.4$  mmol/kg\*d of sodium and  $0.8 \pm 0.4$  mmol/kg\*d potassium. Afterwards, nutritional intakes rapidly increased.

Hyponatremia >150 mmol/L occurs in 16 infants (15.6%), on 27 days (1.8%), essentially between 1 and 3 days of life (19 days).

Hyponatremia < 130 mmol/L occurs in 31 infants (30.4%) on 55 days (3.6%), essentially between 1 and 7 days of life (40 days).

No infant develops a hyperkalemia >7 mmol/L. Hypokalemia < 3 mmol/L occurs in 9 infants (8.8%) on 16 days (1.0%), mainly between 1 and 3 days of life (7 days).

This study demonstrates that increasing protein and energy intakes with a StPNsol containing electrolytes from the first day of life is not associated with an increased incidence of hypernatremia or non-oliguric hyperkalemia. Furthermore, this study seem to suggest that optimizing nutritional intakes and increasing anabolism may require higher electrolytes intakes than usually recommended during the first days of life in VLBW infants.

### 1386 DOES TOTAL PARENTERAL NUTRITION RAISE SERUM VITAMIN D LEVEL IN PRETERM INFANTS?

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**Background** Vitamin D (25OHD) plays an important role in skeletal and non skeletal health. 25OHD deficiency is common in preterm infants. Very low birth weight (VLBW) preterm infants depend entirely on total parenteral nutrition (TPN) and breast milk for their nutritional requirements during early post-natal life.

**Aim** To assess serum 25OHD status in VLBWs and the effect of TPN on serum 25OHD level during early parenteral nutrition.

**Methods** Serum 25OHD levels were evaluated by radioimmunoassay from VLBWs at birth and immediately before commencement of oral additional vitamin D supplementation.

**Results** 22 VLBWs were included in this study and had 44 samples taken. Their mean gestational age (SD) was  $28 \pm 2$  weeks and birth weight  $1.2 \pm 0.4$  kg. There were 11 males and 11 females, 3 Black Africans, 1 Asian, and 18 Caucasians. The number of TPN days was  $12 \pm 5$  and the daily intake of 25OHD<sub>3</sub> from TPN was  $118 \pm 45$  IU/day. The 25OHD content in expressed breast milk was negligible. The 25OHD levels increased from  $26 \pm 18$  nmol/L (at birth) to  $36.2 \pm 20$  nmol/L (pre-vitamin D enteral supplementation) ( $p=0.09$ ). The increase in 25OHD levels did not reach sufficiency ( $\geq 50$  nmol/L).

**Conclusions** Inadequate nutrition during the early days of preterm infants can lead to poor growth and increased morbidity. Total parenteral nutrition and breast milk are the predominant source of nutrition in early postnatal life of VLBWs. This study showed that vitamin D content of TPN increased 25OHD level but not up to sufficiency ( $\geq 50$  nmol/L).

### 1387 IMPACT OF PERINATAL NUTRITION ON KIDNEY FUNCTION AT FIVE YEARS IN VERY LOW BIETH-WEIGHT CHILDREN

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**Aim** To determine the impact of perinatal factors on renal function in five year-old preterm-born children.

**Material and Methods** Prospective longitudinal study of preterm-born children from birth to five years of age, and five year-old full-term controls. Renal function measured in the neonatal period and at five years.

Primary outcome was renal function at five years: blood pressure (BP), estimated glomerular filtration rate (eGFR), albuminuria. Multivariate analysis was performed with multiple linear regression models.