Background and Aims: Early administration of parenteral amino acids (AA) has been shown to limit catabolism and improve growth in extremely low birth weight (ELBW) infants. This study aimed to evaluate an earlier, more aggressive administration of amino acids, was safe and well-tolerated, without clinically significant differences in metabolic acidosis or blood urea nitrogen (BUN).

Methods: The 46 ventilator-dependent preterm infants less than 1000g were retrospectively enrolled. The Early group received ≥3 g/kg amino acids, while the Late group did not receive a minimum of ≥3 g/kg of parental AA at ≤3 days of age.

Results: An earlier, more aggressive administration of amino acids (≥3 g/kg of amino acids at ≤3 days of age), was safe and well-tolerated, without clinically significant differences in metabolic acidosis or BUN. There was no correlation between amino acid intake and BUN in ELBW infants within 7 days of life. Using multiple regression analysis, gestational age showed a significant negative correlation with BUN concentrations in ELBW infants within 7 days of life.

Conclusions: High BUN in the early postnatal period might be related not only to amino acid oxidation and the infant’s immaturity but also additional combined factors other than amino acid intolerance. Future studies are required to determine whether early and aggressive administration of amino acids is enough for optimal growth and neurodevelopmental outcome of ELBW infants.

Objective: To determine regional prevalence of breastfeeding very premature infants and identify factors influencing its initiation at birth and continuation at discharge.

Study Design: It was a prospective observational study in preterm <33 weeks of gestational age (GA) from January to December 2010 in Poitou-Charentes. Data were collected from infant report and using a questionnaire sent at home. The variables were analyzed with the Chi² test and Student’s t test at p<0.05 and binary logistic regression for predictive factors.

Results: Questionnaires collected concerns 112/150 infants (74.7%) and 95 parents (17 multiple pregnancy). At birth, 65.2% (n=73) were breastfed. Factors significantly associated with breastfeeding at birth were: maternal body mass index (BMI), employed mothers, mothers that have been breastfed (MoBr) and daycare other than grandparents. In a multivariate regression model, BMI, daycare by grandparents and MoBr were independent predictive factors of breastfeeding at birth with OR [IC 95%]: 1.18 [1.01–1.38], 0.24 [0.08–0.74] and 5.8 [1.49–22.56] respectively. At discharge, 46.4% (n=52) of infants were breastfed. Factors significantly associated with breastfeeding at discharge were: intrapartum information about breastfeeding employed mothers, non smoker mothers, low maternal BMI, high educational level of fathers, daycare by grandparents, and MoBr. The last 4 factors were independent predictors of breastfeeding at discharge in a multivariate binary logistic model with OR [IC 95%]: 0.75 [0.62–0.9], 5.35 [1.24–23.1], 0.18 [0.03–0.96] and 7.5 [1.35–41.8] respectively.

Conclusion: Socio-economic, educational and family conditions influence differently breastfeeding initiation and continuation. This diagnosis is precious to breastfeeding promotion programs.