Aims: Evaluation of long-term growth in relation to standard intake with low and higher amount of amino acids (AA), Ca, P.

Methods: consecutive cohort study (C1, C2) preterm infants with follow up until 24 months; standard parenteral intake: **C1:** max: 2.5g/kg/d AA, Ca/P: 1/0,26 mmol/kg/d **C2:** max: 3g/kg/d AA, Ca/P: 3/1,9 mmol/kg/d. Enteral feeding: not different, starting day 1; human milk fortification from 50ml/d on. Comparison between two cohorts: nutritional intake and growth during first five weeks, follow up at term corrected age (TCA), 6, 12 and 24 months. SDS for weight and length according to Dutch reference^{1,2}.

Results: **C1:** Male: n = 28, GA 29.3 ± 2.3, BW 1272 ± 351g. Female n = 29 GA 28.8 ± 1.7, BW 1129 ± 319 **C2:** Male: n = 35 GA 29.5 ± 1.9, BW 1325 ± 359, Female n = 30, GA 29.4 ± 3.6, BW 1272 ± 340

Mean SDS	Birth weight	TCA weight	6 m weight	12 m weight	24 m weight	TCA length	6 m length	12 m length	24 m length
C1Fem	0.11	-1.9	-0.5	-0.6	-0.5	-3.0	-0.5	-0.6	-0.5
C2Fem	0.15	-2.2	-0.8	-0.6	-0.5	-2.7	-0.3	-0.5	-0.5
C1Male	0.53	-1.5	-0.7	-0.6	-0.5	-2.6	-0.2	-0.2	-0.2
C2Male	0.36	-1.2	-0.4	-0.5	-0.4	-1.8	0.1	-0.1	0.0

[Table 1 SDS for weight and length]

Conclusions: AGA infants demonstrated main catch up at 6 months after TCA with complete recovery for length in C2male. Male infants take more advantage from improved feeding regimen.

1. Visser GHA Early Hum Dev 2009

2. Frederiks AM Ped Res 2000

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BODY COMPOSITION OF ADEQUATE AND SMALL FOR GESTATIONAL AGE NEWBORNS AND THE RELATIONSHIP WITH MATERNAL BODY COMPOSITION

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Introduction: Low birth weight and intrauterine growth restriction are associated to high morbidity and mortality. A compromised maternal nutritional status and placental failure could be responsible for intrauterine growth insufficiency.

Objective: To describe mothers' body composition of adequate for gestational age (AGA) and small for gestational age (SGA) newborn infants, and to correlate them with newborns' body composition.

Methods: 19 term AGA newborns and 18 term SGA newborn were studied. Anthropometric data was registered. The body composition of mothers and their respective babies was determined by deuterium dilution and analyzed by gas isotopic ratio mass spectrometry and bioelectrical impedance analysis (BIA).

Results: There was no difference in anthropometric characteristics and body composition between AGA and SGA mothers. There was a strong correlation between the two methods utilized for analysis of maternal body composition (deuterium vs BIA). Gestational age, gender distribution and Apgar score were similar between AGA and SGA babies. AGA newborns showed higher weight and length at birth and study period, as well as higher Rohrer index, cephalic, thoracic and braquial circumference, tricipital and subscapular skinfolds, compared to SGA newborns. There was a significant difference in body composition between AGA and SGA groups regarding fat mass (13,5% ± 4,80 AGA vs 7,01% ± 3,41 SGA) and total body water (74,4% ± 2,73 SGA vs. 68,3% ± 4,51 AGA). It was not found any significant correlation between maternal and newborn's body composition in both groups.

Conclusion: Intrauterine growth restriction is not related to maternal body composition in our university hospital.

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EATING, DRINKING AND SWALLOWING DISORDERS: A NEW REGIONAL CLINIC REVIEW

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Background: Eating, drinking and swallowing (EDS) disorders can have serious consequences for children which include dehydration, malnutrition, failure to thrive, aspiration pneumonia, choking and possibly death. Paediatric feeding disorders have been reported in up to 25% of children. This number increases to 80% in developmentally delayed children. Therefore disordered feeding should involve assessment by a multidisciplinary team.

The problem is seldom limited to the child alone and non-organic factors must also be addressed.

Aims: To audit the first 18 months of practice in a new regional EDS clinic from July 2007-December 2008

Methods: Retrospective chart review of clinic reports was carried out. All patients had formal assessment of EDS by a speech and language (SALT) and occupational therapist (OT), a medical review by a doctor and dietetics consult at each clinic visit.

Results: 28 patients received full assessment. Average age of 1st consult was 4.16 years. 27/28 patients had an underlying diagnosis, the most common being; genetic disorder(n=7), autism(n=3), cerebral palsy(n=3), Ex-prem(n=3), developmental delay of unknown aetiology(n=3). Diverse reasons for referral included(often > 1); issues with coordination of swallow(n=14), perceived behavioural issues(n=6), chronic reflux(n=5), PEG feeding(n=4), aspiration(n=4). 22/28 patients had an abnormal EDS assessment. The two most common interventions initiated were a sensory feeding programme(n=15) or food desensitisation programme(n=4) by SALT/OT.

Conclusion: Our EDS clinic has provided further therapeutic intervention for children already with complex medical needs. In conjunction with medical therapy, behavioural and oromotor strategies can be applied successfully even in feeding disorders with an underlying organic cause.

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EFFECTS OF BREASTFEEDING ON MORBIDITY AND DURATION OF HOSPITALIZATION OF CHILDREN WITH ACUTE DIARRHEA

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Introduction: The acute diarrhea is one of the most common causes of morbidity and for hospital treatment of children in nondeveloped countries. Etiology is usually viral infection but can be included other infective agents. Breastfeeding importance decreases morbidity, clinical manifestation and duration of hospitalization in compare with children with infant formulas.

Aim: of this presentation is to present the children hospitalized from acute diarrhea under 6 months old exclusively on breastfeeding with children of the same age feeded with infant formulas, in Children's Clinic.

Methods: Anamnestic data, clinical examination and statistical data.

Discussion: Retrospectively we analyzed 219 children under 6 month age hospitalized from acute diarrhea during 2008-2009. Children were divided in two groups depending on their feeding. In first group, were 66 children with breastfeeding, clinical manifestation and electrolyte disturbances in admission were less severe, hospital treatment duration was significantly shorter in compare with group of children without breastfeeding. None of children on the breastfeeding didn't presented clinical manifestations of severe dehydration in compare with second group were 21 children had severe dehydration.

Conclusion: Promotion of breastfeeding in nondeveloped countries, excluding other priority has very important role in prevention, severity and treatment of acute diarrhea.

Key word: Breastfeeding, Infant formula, Diarrhea, Hospitalisation duration.

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THE SELECTED LIPIDS PARAMETERS IN NEWBORNS AND INFANTS

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Introduction: Disorders of lipids metabolism, particularly elevated cholesterol concentration are favouring factors of atherosclerotic changes in the arteries. The lipids metabolism may be the results of the influence of genetic as well as environmental factors.

Aim: The aim of the present study was the evaluation of the concentration of triglycerides, total cholesterol and its fractions and apolipoproteins in the newborns and infants with relation to intrauterine growth, nutritional status and method of feeding from the birth.