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1 EXTERNAL NET ACID BALANCE (NAB) IN INFANTS WITH CHRONIC DIARRHEA CONSEQUENT TO ACQUIRED GLUCOSE INTOLERANCE (AGI). F.R.Carrazza, B.L.Nichols. USDA/ARS-CNRC, Baylor College of Medicine, Houston,TX,USA and Dept. Pediatrics/Instituto da Criança, Hospital das Clínicas, FMUSP, São Paulo, Brazil.

A close relationship exists between the presence of a watery and acidic diarrhea and the development of metabolic acidosis in AGI infants.With the objective to identify possible mechanisms of acidosis, 12 malnourished infants, 2 to 17 months old were studied during 3 to 4 days, by the NAB technique, divided in : Group 1 - infants with diarrhea, glucose in stools, and acidosis; Group 2 - infants who tolerated formula feedings well and free of acidosis. Endogenous acid production (AP) was significantly higher in group 1: 3.69 ± 1.92 vs 0.45 ± 1.70 mEq/kg/day ($p < .002$). Urinary excretion of sulfate was similar in both groups and organic acids (OA) were higher in group 1 ($p < .05$). Absorbed undetermined anions (UA) were significantly different between the groups, positive in group 2, representing base gained : 1.65 ± 1.80 mEq/kg and negative in group 1 , representing produced and gained acid: -022 ± 1.85 mEq/kg ($p < .05$). Urinary net acid excretion (NAE) was similar in both groups, observing group 1 who had inappropriated high urinary pH and bicarbonaturia. We concluded that the metabolic acidosis was conditioned largely by the overproduction of intestinal OA as well as urinary excretion of AO as salts. Impairment in NAE was the factor responsible for maintaining systemic acidosis in group 1.

2 FECAL CYTOTOXIN ON VERO CELLS (VT) AND CIRCULATING VT1 ANTIBODIES IN THE IDIOPATHIC HEMOLYTIC UREMIC SYNDROME (HUS), COMPARED WITH FAMILY MEMBERS LIVING TOGETHER (FM) AND CONTROLS WITH DIARRHEA (C). L.Voyer, M.Rivas, M.Tous, C.Iriarte, S.Corti, S.Santarcángelo. Hospital Geral de Niños Pedro de Elizalde. Instituto Nacional de Microbiología C. Malbrán, Buenos Aires, Argentina.

Between January and July 1988, 14 children with HUS, 28 FM and 12 C were investigated. Mean age of HUS was, 11.9 months(3 - 36) and of C, 7.5 months (3-15). In both groups sex distribution was 50%. The prodromal illness in HUS was characterized by diarrhea in 100%, bloody stools in 85.7% and upperrespiratory tract symptoms in 21.4%.

Laboratory data in HUS and C respectively were: hematocrit 22% (13-29) and 34 (28-41); leukocytes, 23,170 (8,800-91,000) and 10,700 (7,800-14,300). Platelet count, 92,000 (10,000-200,000) and 287,000 (170,000-650,000); blood urea, 161mg% (40-290) and 22 (10-61); serum creatinine, 3.5mg% (0.8-7.8) and 0.54 (0.45 - 0.81). In HUS red blood cell transfusion and peritoneal dialysis was respectively required in 78.6% and 42.9% of the cases.

First samples were obtained in HUS at mean of 9.6 days (4-27) and in C at 5.8 days (2-16) after the onset of acute diarrhea. 42.8% of HUS and none of C had reveived previous antibiotic treatment.

Fecal VT was detected in 10 HUS (71.4%) in 4 FM (14.3%) and in 1 C (8.3%; $p<0.01$). Specific neutralization of VT1 was obtained in 6 HUS, 1 FM and 1 C. Circulating VT1 neutralizing antibodies were detected in 1 HUS, 2 FM and 1 C.

3 SHIGA-LIKE TOXIN (SLT) ASSOCIATED DIARRHEA AND HEMOLYTIC UREMIC SYNDROME (HUS) IN ARGENTINA. E.L.Lopez, M.Diaz, S. Devoto, S.Grinstein, M. Vazquez, M. Turco, E.Rubeglio,F.Mendilaharzu, B. Murray, S. Ashkenazi, L.K.Pickering and T.G. Cleary. Hospital de Niños "R. Gutierrez", Buenos Aires, Argentina. University of Texas Medical School, Houston, Texas, USA.

We conducted a prospective study to determine the frequency of SLT-related HUS and SLT-related diarrhea in Argentinian children. Fecal toxin measured in a (^{3}H) Hela cell system was detected in 10/31 (32%) HUS patients, in 7/31 (22.6%) age - season matched children with diarrhea (CD) and in 0/19 (0%) healthy children ($p<0.025$). Neutralization with specific antisera showed that in 5 HUS patients and in 4 CD only SLT-I was present and in 5 HUS and 3 CD SLT-I and SLT-II were found. DNA hybridization was used to screen 555 E. coli strains isolated from these patients for SLT-I and SLT-II. Three HUS and 3 CD were DNA probe positive for SLT-II and 1 HUS case was DNA probe positive for both toxins. E. coli 0157:H7 were detected in 2 CD and in 1 HUS patient. Fifty-one percent (21/41) HUS patients, 21% (10/47) CD and 5% (1/19) healthy children had serum neutralizing titers of $\geq$ 1:4 to shigatoxin ($p<0.0005$). These date show that HUS is associated with SLT-producing E. coli and suggest that the high frequency of HUS in Argentina is related to the common occurrence of SLT-associated diarrhea.

4 ETIOLOGICAL FACTORS OF GROWTH FAILURE IN INFANTS OF PRIMIPARA MOTHERS OF LOW SOCIOECONOMICAL LEVEL (SEL). R.Burrows, L.Leiva, A.Zvaighaft, S. Muzzo. Endocrine Unit, INTA. University of Chile, Santiago, Chile.

We have found in children of teenager mothers lower growth velocity and low birth weight, compared with children of adult mothers. We have seen that nutritional and genetic factors that influence this failure are similar in both group of mothers, but affecting a greater number of infants of adolescent's mothers. The more adequate the enviromental conditions the higher the birth weight. We were interested in studying the etiological factors that may delay growth of infants of primipara mothers of medium-low SEL. A transversal study in 500 infants aged 15-24 months was carried out. Nutritional and growth status was evaluated through weight for height (W/H), weight for age (W/A), height for age (H/A), frontoccipital circumference (FOC/A) lean and fat braquial area (LBA, FBA), according to WHO criteria. It was considered short stature when H/A was below 95%. The SEL was evaluated through Graffar scale, the familiar and pregnancy characteristics, and weight and birth height (BW and BH), was recorded. A lower percentage of adequation of W/A, H/A, FOC/A and growth velocity at a lower maternal age and SEL was found. A relation between this parameters and statural adequation was not observed but stature was related with paternal schoolarity, dwelling quality, nutritional pathology and smoking during pregnancy, BW, BH and gestacional age. Statural adequation was more impactated by BW and BH, than many other parameters. Adequations of W/A, W/H, HC/A, LBA and growth velocity were lower when decreasing B/W. The importance of a normal BW to prevent growth failure early in life specially in children of adolescent teenager mothers is discussed.