

19 The maintenance need for water and electrolytes in parenteral fluid therapy in marasmic infants dehydrated by diarrhea

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Water and electrolyte balances in 7 marasmic infants during the first 6 days of treatment for diarrheal dehydration, were studied. The fluid therapy IV was started with 100 ml/kg of half isotonic saline in 2,5% glucose, administered at 20 ml/kg/h. There after the maintenance solution for 100 cal/day was: water - 100 ml, Na - 3 mEq and K - 7,5 mEq.

The average solute load of 18 mOsm/100 cal/day was excreted at a concentration of 473 mOsm/l., in 38ml of obligatory water.

An average of 65 ml/100 cal/day of insensible water loss was obtained. From these, the average figure for total loss of water is 103 ml/100 cal/day.

The water of oxidation will provide nearly 10 ml, obtained from metabolism of proteins, fat and carbohydrates. The balance, 93 ml/100 cal/day must be provided parenterally.

The maintenance need for Na and K was respectively 3,0 and 2,5 mEq/100 cal/day.

20 T CELL DYSFUNCTION IN MINIMAL CHANGE NEPHROTIC SYNDROME (MCNS) OF CHILDHOOD. P.Fodor, M.T.Saitúa, E.Rodríguez B.González, L.Schlesinger. INTA, Hosp.L.C.Mackenna, Universidad de Chile, Santiago.

The pathogenesis of MCNS remains unknown. It has been postulated that this disease could be the result of a systemic T cell dysfunction. In this study, we report certain parameters of cell mediated immunity on 25 well nourished children aged 1-14 yrs. with MCNS. Thirteen of them, were studied during active nephrosis and 12 during complete remission. Percentage and absolute number of E-Rosettes, skin reactivity to PPD, SK-SD, DNCB and lymphocyte proliferative response were determined. Number of T lymphocytes was normal in all nephrotic children. Active patients were unable of becoming sensitized to DNCB but PPD and SK-SD skin reactivity was similar to controls. Phytohemagglutinin (PHA) proliferative response was expressed as stimulation index i.e. cpm mitogen stimulated cultures/cpm unstimulated cultures (SI). In active nephrosis SI was 10.5, during remission 55.6 and 69.6 in controls. There was statistical significance between active and controls and between active and remission infants. SI of active nephrotic children return to normal values when their lymphocytes were incubated with normal homologous plasma. SI decreased when normal lymphocytes were incubated with nephrotic plasma. We suggest that in MCNS there is a T cell subpopulation disbalance with an overactive T suppressor clone.

21 L/S RATIO AND PHOSPHATIDYLGLYCEROL IN AMNIOTIC FLUID. R.Bustos, R.Henríquez, M.Kulovich, L.Gluck, CLAP, Montevideo, Uruguay and Univ. California, San Diego.

The L/S ratio test associated with the determination of phosphatidylglycerol (PG) allows to obtain the lung profile of the fetal pulmonary maturity. In this study the L/S ratio is compared with the measurement of PG in human amniotic fluid. Both determinations were done in the same sample at the same time. The percentage of PG was determined in the amniotic fluid acetone precipitated fraction by adding the total density readings of the phospholipid compounds and calculating the percentage of PG when present. This procedure was performed in 1,354 amniotic fluid samples obtained by transabdominal amniocentesis. It was found that the higher the L/S ratio the greater the amount of PG present in the amniotic fluid. (see Table)

	N with PG	%	N without PG	%	Total
≤ 2.00	707	76.51	217	23.49	924
≤ 2.50	623	87.38	90	12.62	713
≤ 3.00	499	90.07	55	9.93	554
≤ 3.50	352	91.20	34	8.80	386
≤ 4.00	221	93.25	16	6.75	237

PG was detectable in 90% of the samples having an L/S ratio of 3 or more. Therefore the presence of PG with 10% of error, can be predicted when L/S ratio is greater than 3, thus avoiding identification of the compound by two-dimensional chromatography, since performance of this procedure may be more complicated according to available facilities.

22 OXYGEN AND ACID BASE BALANCE IN FETAL BLOOD AT BIRTH IN PHYSIOLOGICALLY CONDUCTED LABORS. G.Giussi, G.Ballejo and R.Caldeyro-Barcia, CLAP, Montevideo, Uruguay.

Twenty six term pregnant women, without associated pathology, with only one fetus in cephalic presentation were studied. Membranes were intact at the onset of labor, which was spontaneous in all cases. The mothers chose the most comfortable position and changed it at will. During cervical dilatation, they were sitting, standing or walking. During the second stage they sat in the obstetrical chair of CLAP. No medication whatsoever (analgesic, sedative, anesthetic or oxytocic) was given; membranes were not artificially ruptured. The husband gave affective support to the mother during labor. The bearing down efforts were made spontaneously, i.e. when the mother felt the urge to push, and with the strength, duration and frequency she wanted. At birth, the umbilical cord was clamped before the first inspiration of the newborn. Blood from the umbilical artery (A) and vein (V) was sampled.

n	pO ₂		pH		pCO ₂		BD	
	A	V	A	V	A	V	A	V
X̄	25.5	32.7	7.31	7.36	39.7	34.9	5.85	4.51
SD	7.02	5.84	0.07	0.06	7.5	4.95	3.19	2.07

The duration of the bearing down period did not influence the variables measured. The values obtained in the umbilical artery were much higher (for pO₂ and pH) and lower (for pCO₂) than those reported by authors that assist labor with the usual techniques.

23 EPIDEMIOLOGY OF THE ABO BLOOD INCOMPATIBILITY. Ceriani Cernadas J.M., Fustiñana C, Bujas M. Hospital Italiano. Buenos Aires, Argentina.

A prospective study was carried out to determine the ABO incompatibility incidence. The population was made up of 5346 mothers and 5368 neonates. Thirty nine percent of the mothers had O blood group and 71.9% of their neonates had the same group, 23.6% had group A and 4.4% group B. A total of 589 newborns having A or B blood groups and their mothers with group O, were studied to determine if they had ABO blood incompatibility. Both anti A or anti B immune antibody measurements in maternal serum, Coombs test in blood cord and peripheric blood smears in the newborn, were carried out. The ABO incompatibility diagnosis was made when immune antibodies could be detected in mothers and when the newborns' blood smear showed spherocytosis. Thus it was determined that 27 (4.6%) of the 589 neonates showed true ABO incompatibility. All but one of these newborns had hyperbilirubinemia and needed treatment. In summary from the total number of mothers with O blood group, 28% of their offsprings had A or B blood groups, but only 4.6% had ABO incompatibility. The later appeared in 3.8% of the neonates with group A and in 8.5% of the ones having B group. The incidence of ABO blood incompatibility was 0.5% in the general population.

24 ULTRASTRUCTURAL FINDINGS OF SKIN AND PERIPHERAL NERVE BIOPSIES IN DEGENERATIVE DISORDERS OF THE CENTRAL NERVE SYSTEM.

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In South America and, particularly in Brazil technical problems make difficult the performance of the majority of the lysosomal enzymes determinations and chemical analysis of central nervous system tissues. Thus, the correct diagnosis of most of the lysosomal diseases is done by clinical and morphological data.

Furthermore, the diagnosis of some degenerative diseases of the central nervous system whose biochemical background is unknown is based only on morphological data. This paper shows the ultrastructural findings in 70 consecutive skin and peripheral nerve biopsies from patients with a clinical history of a cerebral degenerative disorder. Positive results were obtained mainly in lysosomal diseases, i.e., the several forms of mucopolysaccharidosis, neuropilidosis and ceroid lipofuscinosis.