

29

PRIMARY HYPOMAGNESEMIA: A REPORT OF TWO PATIENTS. Mendilaharsu, H.; Ferrari, P.; Bengolea, V.; Heinrich, J.J.; Bergada, C. División de Endocrinología, Hospital de Niños "R. Gutierrez", Buenos Aires, Argentina.

Primary hypomagnesemia (PH) is a rare condition, where hypocalcemia and hyperphosphatemia are a consequence of the hypomagnesemia. Two patients with PH admitted to the Children's Hospital with seizures are reported. Patient 1: A 12 month old boy with a history of seizures non responsive to anticonvulsant therapy during a period of 4 months. On admission serum Ca: 7mg/dl, P: 7.3 mg/dl, alkalinephosphatase: 170 TU/l, Mg: 0.46 mg/dl. After administration of 200 U of IV PIH he showed an elevation of serum Ca as well as urine phosphate. These data suggest a good end organ response of the bones and the kidneys. He was treated with IV Mg 6 mEq/day with a good clinical and laboratory response. Patient 2: A two month old girl was admitted at the Hospital because of seizures. She did have two sibling with seizures who died during the neonatal period. On admission serum Ca: 7.3 mg/dl, P: 7 mg/dl, alkaline phosphatase: 240 IU/l, Mg: 0.4 mg/dl, PIH: 0.437 pg/ml (NV: 0.221 ± 0.075 pg/ml). The high PIH levels suggests an end organ resistance. She was treated with IV Mg 4 mEq/d with good clinical and lab response. The diagnosis of PH was supported in both cases by recurrent hypomagnesemia when treatment was discontinued and its normalization when treatment was restored. With Mg treatment both patients had a good clinical and neurological evolution. A failure in the intestinal transport of Mg could be the cause of this disease. A lack of PIH secretion or an end organ failure to the PIH action are determinants of hypocalcemia, when hypomagnesemia is present.

30

THE EFFECT OF NON-STERIOIDAL ANTI-INFLAMMATORY AGENTS IN BACTERIAL PNEUMONIAS: ITS SIGNIFICANCE IN PEDIATRICS. Sordelli, D.O.; Cerequetti, M.O.; Fontán, P.A.; Meiss, R.P. Instituto de Investigaciones Hematológicas. Academia Nacional de Med., Buenos Aires, Argentina.

Pseudomonas aeruginosa (Psa) pneumonia is accompanied by extensive lung tissue damage. With the aim of preventing tissue damage thus preserving respiratory function, the use of anti-inflammatory drugs has been suggested for pediatric patients. In this study we investigated the effect of the treatment with a non steroidal anti-inflammatory agent piroxicam on lung inflammation induced by Psa. Swiss mice were treated with 0.04, 0.16, 0.64 2.56 mg/kg piroxicam per day intraperitoneally. Control mice received salina. After a 4-day treatment the animals were exposed to an aerosol containing Psa, and $6 - 8 \times 10^6$ colony forming units of Psa were deposited in each animal's lungs. The mortality rate of the control group was 63%, whereas mortality decreased in a dose-response fashion in piroxicam-treated mice; the rates were 53, 24, 6 and 22% respectively for the doses shown above. Histopathology revealed amelioration of lung inflammation with piroxicam doses of increasing magnitude. Perivascular infiltration was diminished significantly in a dose-response fashion. Peribronchial infiltration was also diminished although less significantly. This study confirms the results of our previous investigation using ibuprofen. Since defense mechanisms of the host against Psa remained unaltered after anti-inflammatory treatment, we conclude that non-steroidal anti-inflammatory agents may be a useful adjunct therapy for the treatment of *Pseudomonas* pneumonia.

31

INTESTINAL ADAPTATION TO ACUTE STARVATION IN RATS. EFFECTS OF REFEEDING. Barudi, C.; Viverman, J.; Antoine, J.L.; Buts, J.P. Catholic University of Louvaine, Belgium.

Acute starvation produces atrophy of intestinal mucosa, but the relation between intestinal adaptation and diet composition is scarcely known. To evaluate aspects of that relationship we studied 96 female rats, 200 grs weight, who were submitted to 4 days fasting. Groups of 16 rats were refed with: A) Lipids (soya bean oil + ovolecythin), protein (casein) and carbohydrates (glucose, maltose, polysaccharides). B) Lipids, 100% total calories. C) Proteins, 100% of calories. D) Carbohydrates, 100% total calories. Every diet group was divided in two of 8 rats each, receiving either 24 or 48 h of refeeding. Afterwards they were killed. Results were compared to controls who were normally fed or starved for 4 days. Fasting provoked decrease of intestinal length (18.2% of normal) at jejunum and ileum, weight (34.3 and 21.8%), mucosa/cm (36.1 and 28.8%), protein/cm (40.4 and 53.4%) DNA/cm (37.4 and 71.8%), height of villi (20.9 and 11.6) and depth of crypt in jejunum and ileum (21.5 and 17.5). Intestinal length became normal after refeeding with all diets; lipids and carbohydrates showed opposite effects in the weight improvement of each intestinal segment. Protein and DNA content of the jejunum improved within 24 hours of refeeding. After 48 hrs., with all diets, ileum protein remained deficient (\bar{x} 2841 vs 4857 ug/cm of normals, $p < 0.001$) and DNA was normal. Intestinal villi and crypts were recovered after 48 h on diet B, in the jejunum; or D at the ileum. We conclude that refeeding provokes different improvement of intestinal components according to the time and type of diet, in rats who were previously starved.

32

TRYPANOSOMA CRUZI: ANTIGENICITY AND IMMUNE CIRCULATING COMPLEXES IN SUBJECTS OF A RURAL POPULATION OF SAN LUIS PROVINCE. Pregliasco, L.; Freilij, H.; Bornardella, E.; Ferrando, M.; Grinstein, S. Hosp. de Niños Ricardo Gutierrez, Buenos Aires, Argentina.

Because serological techniques for determination of *Trypanosoma cruzi* (Tc) infection sometimes give rise to doubts, we have developed immunoparasitological techniques to detect fractions of this protozoarian. These techniques are enzyme immunoassay for specific free circulating antigens (ELISA-CAg) or forming immune complexes (ELISA-CIC). Up to now, both tests have shown higher sensitivity than traditional parasitological techniques, specially in the chronic stage of this infection. The aim of this study is to evaluate the sensitivity and specificity of these ELISAs in an endemic rural population. Specific antibodies were searched by 3 techniques in sera of 236 volunteers between 3 months and 86 years of age living in the rural area of San Luis Province. Positive results by at least two of the three serological techniques were found in 39% of the subjects, who were considered infected. Of this group (92), specific CAg and CIC of Tc were found in 63% of the cases. Both determinations were negative in 80% (114) of the non infected subjects. It is noticeable that the remaining 20%, without antibodies detectable by traditional techniques, had positive results with ELISA-CAg and ELISA-CIC; similar results have been obtained by other authors for Tc and *T. gondii*. Even though the aim of this determinations would be to confirm the traditional serology, if these data can be confirmed in future studies, these techniques should be used to better define an infected subject.