Abstracts

17TH ANNUAL MEETING

Sociedad Latinoamericana de Investigacion Pediatrica

Puerto Iguazo, Argentina

November 1979

- 1** LUNG INESPECIFIC MICROBICIDAL DEFENCES IN A POSSIBLE ANIMAL MODEL FOR CYSTIC FIBROSIS (CF). Sordelli D.O., Cerquetti M.C., Cassino R.J.J. and Pivetta O.H. Centro Nac. de Genetica Medica. Buenos Aires. Argentina.

Homozygous mice for the cri (cribriform degeneration) mutation have been indicated as a possible animal model for CF because they have among other characteristics a decreased pulmonary clearance of Staphylococcus aureus. The aim of this study was to evaluate the inespecific microbicidal defences of the lungs in these mutants. Mice of the DBA/2J-cri (genotypes cri/cri and +/?) and BALB/c inbred strains were submitted to sequential pulmonary and peritoneal washings. Differential cytomorphologic count, the assays for viability, adherence, latex phagocytoses and the kinetic studies for phagocytosis of Candida pseudotropicalis were carried out on the cellular suspensions. Among the different groups of mice studied, the results showed a similar behavior pattern between alveolar and peritoneal cells, and this suggests that the deficient pulmonary clearance found in these mice could be attributed to a variation in the intracellular killing capacity.

- 2** SOMATOSTATIN AS A HORMONE OF THE ENDOCRINE PANCREAS: SOMATOSTATIN SECRETION. Basabé J.C., Bruno L., Pivetta O., Canales L., Cresto J.C. Fundación FLIP, Htal. de Pediatría "P.de Elizalde" and Centro de Genética Medica, Buenos Aires. Argentina.

The somatostatin (St) secretion related to the hormonal dis-regulation that occurs in the diabetic is studied. Pancreas slices perfusion from db/db mice and their controls were utilized. St. determinations were done by specific radioimmunoassay. Glucose 27.5 mM induces a biphasic St secretion in the control pancreas while absence of St first phase and an impaired second phase secretion are observed in the perfused pancreas of the diabetic mice. Theophylline and Pentoxifylline are able in the presence of glucose, to induce a pattern and amount of St. secretion in the db/db pancreas, similar to that observed when pancreas from control mice were stimulated by glucose alone. The pattern of St. secretion described above belong to db/db mice of 1 to 4 months of life. The pattern of St. secretion from diabetic mice between 12 and 28 days of life can be divided into two groups: 12 to 19 days of life, St. secretion from db/db mice is higher than in controls; while 19 and 28 days both secretions are not different. The results suggest that during the first 19 days, db/db pancreas increases St. secretion to compensate the lack of sensitivity of beta cell to St. action; after 30 days beta cell exhausted and secretion goes down.

- 3** SOMATOSTATIN AS A HORMONE OF THE ENDOCRINE PANCREAS; BETA CELL SENSITIVITY TO ITS INHIBITORY ACTION. Basabé J.C., Pivetta O., Bruno L., Karabatas L., Aparicio N. Fundación FLIP. Hospital de Pediatría "P. de Elizalde". Buenos Aires. Argentina.

This paper study the role that somatostatin (ST) could have in the physiopathology of the diabetic syndrom. The db/db mouse, which pancreas were incubated or perfused was utilized as experimental model. The somatostatin inhibitory effect on insulin secretion, was lower in the db/db pancreas than in the controls. The impaired inhibitory effect was observed at different ST. concentrations (0.05; 0.1; 0.5; 1 and 2.5 µg/ml) and in pancreas from mice between 12 and 120 days of life. Diazoxide, a well known inhibitor of insulin secreted from pancreas of db/db and controls mice. The results obtained suggest that beta cell from the diabetic mouse has a lower sensitivity to the inhibitory action of somatostatin. This decreased response seems to be only for somatostatin and not for other insulin inhibitors. The modification in the beta cell sensitivity to the action of somatostatin could explain, at least in part, the presence of hyperinsulinemia and hyperglucagonemia in this form of diabetic syndrom.

- 4** BROMOERGOCRIPTINE ADMINISTRATION TO PREGNANT RABBITS: ITS EFFECTS ON FETAL LUNG MATURATION. Giussi G., Ballejo G., Bustos R., Caldeyro-Barcia R. Centro Latinoam. de Perinatología y Desarrollo Humano. Montevideo. Uruguay.

9 Californian rabbits were given bromoergocriptine starting on 27th day of pregnancy, 1mg/Kg/day, subcutaneously in two daily doses. The control group were 8 pregnant rabbits receiving as placebo, the bromoergocriptine solvent (100mg tartaric acid; 43 ml alcohol 70%; 100ml 0.9% NaCl). The litter was delivered by cesarean section on the 30th day of gestation. The weight gain of the mothers, fetal weight and the concentration of lecithin phosphorus in fetal lung washes were determined. The treated group showed a significantly smaller weight gain from the 27th to the 30th day ($\bar{X} = 156.11 \pm 99.4$ g SD) than the controls ($\bar{X} = 374.38 \pm 166.21$ g SD) ($t = 3.33$, $p < 0.01$). The weight of the fetuses from treated mothers was significantly less ($\bar{X} = 38.22 \pm 6.39$ g SD, $n = 62$) than that from the control mothers ($\bar{X} = 47.62 \pm 6.93$ g SD, $n = 51$) ($t = 7.46$, $p < 0.001$). The lecithin phosphorus concentration in lung washes from fetuses of treated mothers was significantly less ($\bar{X} = 0.022 \pm 0.003$ µg/mg; $n = 9$) than that of the controls ($\bar{X} = 0.069 \pm 0.026$ µg/mg; $n = 8$) ($t = 5.29$, $p < 0.001$). We conclude that bromoergocriptine administration caused a decrease in maternal weight gain, a decrease in fetal weight and in the concentration of lecithin phosphorus in fetal lung washes. As bromoergocriptine is an efficient inhibitor of prolactin secretion these results suggest that prolactin may be involved in normal fetal maturation and growth.