0031-3998/87/2203-0368$02.00/0$02.00/0
PEDIATRIC RESEARCH

Vol. 22, No. 3, 1987
Printed in U.S.A.

LATIN-AMERICAN SOCIETY FOR PEDIATRIC RESEARCH

Abstracts for the XXIV Annual Meeting—October 27–30, 1986
Angra dos Reis, Rio de Janeiro, Brazil

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1 SYSTEMATICAL APPROACH TO PULMONARY HYPERTENSION (PH) IN CHILDREN WITH CONGENITAL HEART DEFECTS (CHD). Lopes, A.A.B.; Aiello, V.D.; Ratti, M.A.; Riso, A.; Ebaid, M. Heart Institute, University of São Paulo, Brazil.

Criteria used for estimation of surgical risk in children with CHD and PH have been controversial. The clinical, hemodynamic and angiographic data were analised in 23 candidates for surgical treatment. The data were scored as follows: Clinical grade 1,2 or 3 according to signs of pronounced, mild or absent pulmonary congestion and left ventricular overload. Hemodynamics: 1- pulmonary to systemic resistance ratio PR/SR less than 0.5; 2- PR/SR $\geq$ 0.5 with a greater than 30% decrease in PR after vasodilators; 3- PR/SR $\geq$ 0.5, no significant vasodilation. Pulmonary wedge angiography: 1- mild dilatation of arteries, normal or increased capilary haze; 2- difuse tortuosity of muscular arteries and decreased background haze; 3- accentuated tortuosity, arterial retaining of contrast material, sparse or absent capilary network. An optimistic opinion was established for mean of scores equal to or less than 2.0. The data were compared with histopathological findings wich were considered advanced if a difuse grade III(Hearth-Edwards) or an alveolar/artery ratio $\geq$ 12:1 were observed. The results were in accordance in 16 patients (P = 0.04). Twenty children underwent corrective or paliative surgery. Only 12 patients with an optimistic result (mean of scores) underwent a corrective procedure. One child died on the postoperative period as a consequence of infectious disease, not related to pulmonary vascular problems. On the basis of these results, the scored analysis of multiple data was considered a safe method for evaluation of surgical risk in patients with congenital heart defects and pulmonary hypertension.

2 GROWTH HORMONE AND GLUCOSE IN THE PROTEIN-CALORIC UNDERNOURISHMENT OF THE PREGNANT RATS. Lippelt, R.T.T.; Lippelt, R.M.C.; Nóbrega, F.J. Department of Pediatrics, São Paulo, Brazil.

Three-hundred and forty albino Wistar rats, female, distributed at random for the formation of groups were studied: control pregnant (CP), undernourished pregnant (UP), control non-pregnant (CNP), undernourished non-pregnant (UNP). The groups were subdivided according to the time established for the study, i.e., with the sacrifice of animals with 0, 3, 6, 9, 10, 12, 15, 18 and 21 days. The control groups received "ad libitum" diets with 21% of casein protein, while the undernourished had a 50% reduction of the daily ingestion of the (CP) and only received 1% protein concentration. The growth hormone presented significant variation during pregnancy, while the caloric-protein undernourishment associated to pregnancy altered in a more significant way the rate of plasmatic rGH. While the control pregnant group, at the end of pregnancy, demonstrated an approximate increase of 80% in the rGH concentration, the undernourished presented an increase of approximately 200%. For the undernourished non-pregnant group, there was no significant alteration in relation to control, from the moment that nutrition restriction was imposed until its end. The sanguineous glucose for the pregnant groups demonstrated negative correlation in the course of time studied, nevertheless, the (CG) group presented percentually lower decrease in the glicemia during pregnancy, i.e. nutrition failure imposed on the pregnant rats aggravated the hypoglicemic state during pregnancy.

3 PLASMA ZINC AND COPPER AND NUTRITIONAL STATUS OF PRE SCHOOL CHILDREN. Fisberg, M.; Lippelt, R.T.T.; Amancio, O.M.S.; Nóbrega, F.J. Pediatric Nutrition, Department of Pediatrics, Escola Paulista de Medicina, São Paulo, Brazil.

Many authors have demonstrated low levels of trace elements in preschool children's low socieconomic levels. To evaluate this we measured plasma Zinc (Zn) and Copper (Cu) in 141 children (3-6 years) from Rio Claro (SP), Graffar IV-V standards. Children were classified by nutritional status (Gomez related to Brazilian standards). We studied 50 eutrophic children, 54 malnourished of first grade (DPC I), 24 of second grade (DPC II) and 13 of third grade (DPC III). Samples were collected in ideal conditions and determined by atomic absorption spectrophometry (Perkin Ekmer 460). Zinc values (X/ug/dl + SD) were: 118 ± 33 ug/dl (eutrophic), 114 ± 41 (DPC I), 112 ± 47 (DPC II) and 94 ± 19 (DPC III). The copper values were: 180 ± 33 ug/dl (eutrophic), 179 ± 37 (DPC I), 177 ± 25 (DPC II) and 181 ± 31 (DPC III). There were no significant differences in either Zn or Cu values between the groups studied. We observed one child with hypocupremia (Cu < 90ug/dl) and 8 with hypozincemia (Zn < 70 ug/dl). We conclude that the normal values for Zn and Cu levels demonstrated in the population studied suggest an adequate nutritional status in our four nutritional groups.

4 CRANIAL ULTRASOUND IN MALNOURISHED INFANTS RESISTANT TO USUAL NUTRITIONAL SUPPLEMENTATION. Balassa, R.; Pinto, F. Hospital Paula Jaraquemada, Department of Ultrassonography, Neonatology and Child Neurology.

In the differential diagnosis of hospitalized malnourished infants, central nervous system malformations and genetic abnormalities should be considered. 38 malnourished infants referred by "Corporación para la Nutrición Infantil" (CONIN) for being refractory to usual nutritional supplementation and/or having possible genetic abnormalities, were evaluated with Cerebral Ultrasound via anterior fontanella (CUS). 125 CUS were done in 38 patients (from 1 to 12 CUS, average 3.3) from 3 to 24 months of age. Most frequent causes for referral were persistent malnutrition 20 (53%), macrocephaly 9 (24%), moderate to severe psychomotor retardation 6 (16%), nonspecific genetic anomalies 5 (13%), small for gestational age 4 (11%). 22 patients (58%) showed normal CUS, 16 (42%) showed abnormal findings: cerebral atrophy (8 patients), corpus callosun malformations (4), periventricular calcifications (2), multiple cerebral malformations (1), etc. A higher incidence of CUS anomalies was seen in patients referred for: decreased neonatal development for gestacional age (75%), psychomotor delay (66%), prolonged malnutrition (45%) and abnormal genetic features (40%). We conclude that the large number of malnourished infants not recovering in the usual pattern, who present abnormal CUS (42%), demonstrates the value of including CUS in the evaluation of these patients.