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PERCUTANEOUS CATHETERIZATION OF PERIPHERAL VEINS IN CRITICALLY ILL NEWBORNS.

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Our experience in percutaneous central venous access in critically ill infants is presented. From July 1990 to August 1993, 56 catheters in 51 infants were placed. The peripheral vein was punctured with 19G needle and silicone catheter of 0.6mm, introduced into the vein. Catheter length range was 11 to 20cm. Mean patients weight was 1511.9g \pm 848.05 (R=660-3750). Mean gestational age was 31.3 wks \pm 4.30 (R=25-40) and mean postnatal age was 9.38 ds \pm 9.2 (R=5-102). Success rate for catheterization was 85.2% (48/56) in the first attempt and 94.6% (53/56) in the second one. All central line ended in the subclavian, or superior vena cava. Median catheter duration was 10 days (R=1-57). Complications during catheter duration included: accidental remove (11.3%), sepsis (9.3%), obstruction (3.76%), arrhythmia (1.8%), phlebitis (1.8%). None of these complications contributed to the patients mortality. Peripheral venous approach is a valid route for central venous catheterization in ill infants.

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HEART AND HEART-LUNG PEDIATRIC TRANSPLANTATION IN ARGENTINA.

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Between May 1990 and December 1992, the first 14 pediatric heart and 1 heart-lung transplants (HTx) in Argentina were performed. Heart TX: Median age was 6 years (1-16). Diagnosis were dilated cardiomyopathy (13) and hypertrophic cardiomyopathy (1). Pulmonary vascular resistances (PVR) higher than 5 U Wood/m² were present in 5 patients. Long distance procurement was performed in 6 cases. Average ischemic time was 2.5 hours. Weight difference between donor and recipient ranged from 100 to 550%. Immunosuppression regime consisted in cyclosporine (CyA), azathioprin (AZA), steroids (STE) and antithymocyte globulin (ATG). Acute rejection was detected by non invasive methods and routine biopsies were not performed. Five patients required prostaglandins postoperatively for management of PVR. There were 2 early deaths, one for graft failure and the other due to multiorgan failure. One patient have a sudden death 1 year after HTx (overall mortality: 21.4%). Rejection presented in 5 children within the first 6 months, and in 2 beyond this time. All episodes resolved with (STE) and ATG therapy. Four patients had bacterial infections and 4 developed CMV infection which responded to specific therapy. Hypertension presented in nine children, requiring enalapril and diuretics. Average hospital stay was 20 days. All patients returned to normal life including school and sports. The longest follow up is 34 months (mean follow up: 24 months). Heart/Lung TX: The first pediatric HLTX was successfully performed in a 9 year old girl with primary pulmonary hypertension. Pulmonary rejection presented on day 21st and resolved with (STE). No further complication was observed. Pioneering efforts in pediatric heart and heartlung transplantation in Argentina have been encouraging. Logistic and social issues, together with donor scarcity, remain as major challenges to be solved.

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STUDIES OF PREVALENCE OF GLUCOSE INTOLERANCE IN CYSTIC FIBROSIS PATIENTS: EXPERIENCE WITH THE USE OF INSULIN.

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The prevalence and treatment of glucose intolerance were evaluated in 18 cystic fibrosis patients. With this objective, 10 females and 8 males with ages varying from 8 to 19 years were submitted to oral glucose tolerance test (OGTT) associated with the following determinations: glycated haemoglobin, C-peptide, anti Langerhans cells antibodies and fasting glucose level. The diagnosis was made in 8/18 patients (41%) only by the OGTT. All other laboratory tests were normal. In 3 patients with malnutrition and delayed puberty, we used insulin. Form these 3 patients, 2 of them had a good recovery both on nutritional and pubertal development. In conclusion we found a high prevalence of glucose intolerance in cystic fibrosis patients. The OGTT was the only procedure to identify these patients. We speculate that the use of insulin could be an important useful therapy in these patients.

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RISK FACTORS ASSOCIATED TO LOW SCHOOL PERFORMANCE.

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In order to evaluate risk factors associated to low school performance (LSP) in students of the basic cycle in Sao Paulo, 99 children attending peripheral schools of the municipality were studied: 48 with low and 51 with high school performance (assigned by teachers). The following aspects were analysed: anthropometry, visual acuity, screening for speech and hearing problems, learning maturity (ABC Test), socio-economic level (GRAFFAR) and some personal and familiar basic information. Results showed strong and significant association between low school performance and: alcoholism, marginality, low socio economic indexes and family problems. The malnutrition prevalence was higher in this group as compared to the controls. The LSP students presented 5 fold maturity learning problems and 25 fold phonoaudiological difficulties more than the control group. It is concluded that for the studied population, school difficulties are related to may risk factors acting simultaneously, which must be taken into account for planning purposes.

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VALIDITY OF REPORTED PARENTAL HEIGHT IN TWO GROWTH CLINICS.

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Parental height represents the most important component of the total variance of height in population groups. The difference (D) between reported (Reh) and actual (Ah) parental height measured at the office were evaluated in a private (Pric) (83 parents) and a public (Pubc) (61 parents) growth clinic. Mean D + SE in Pric was 1,93 \pm 0,18 cm., DS 1,21 (P < 0,001) in the mothers, and 1,81 \pm 0,22 cm., DS 1,36 (P < 0,001) in the fathers. Differences ranged from -5,0 to 4,4 cm. in mothers and from -6,2 to 1,9 cm in the fathers; 86,0% of mothers and 90,0% of fathers overestimated their own height respectively. In Pubc, mean differences were 2,09 \pm 0,33 cm, DS 2,43 (P < 0,001) in mothers, and 1,99 \pm 0,68 cm, DS 1,73 (P < 0,001) in fathers. Differences ranged from -12,2 to 6,7 and -3,8 to 5,9 cm respectively; 66,17% of mothers and 59,1 of fathers overestimated their own height. Mean \pm SE of differences between father actual height and mothers report of fathers were 2,74 \pm 0,35, and 2,96 \pm 0,69 cm in Pric and Pubc respectively. Correlation coefficients between differences Ah-Reh and Ah or between Ah-Reh and parental age were not significant. In the evaluation of patients with growth problems, parental, height, when obtained by parents report, must be taken with great caution.

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DIRECT DEMONSTRATION OF WATER ABSORPTION IN THE COLON OF INFANTS IN RELATIONSHIP TO CARBOHYDRATE FERMENTATION.

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Absorption of water from the colon is facilitated by short-chain fatty acids (SCFA). The absorption of water from the colon and its relationship to SCFA production was studied in 5 infants without diarrhea recovering from malnutrition. Total body water was calculated from the 1-h postdose plasma ³H abundance following a 10 mg/kg IV infusion of deuterated water (²H₂O). Immediately after the collection of the postdose plasma sample a 4.2 Ml/kg that provided 0.25 g/kg of glucose, 5 mg/kg of ¹³C-glucose, 40 mmol/L Na Cl, and 100 mg/kg of ²H₂O was infused over the next hr through a naso-cecal tube. The increment in ³H plasma abundance 2 hr after the intracecal infusion was used to calculate water absorption from the colon. Breath was analyzed for H₂, plasma for acetate, and feces for SCFA, glucose, and ¹³C-labeled compounds. Results demonstrated that a variation in the different indicators of carbohydrate fermentation (ranges: area-under-the-curve for breath H₂ 0-945 ppm, plasma acetate 65-2610 umol/L, and increase in fecal acetate 0-1.5 mmol/g) water absorption from the colon was 100%. However, final water content of the feces following the intracecal infusion was 2.6-10.2% greater than in baseline samples. These results indicate that under the conditions of this study initial absorption of water from the colon is carried out with further variable secretion which is unrelated to the parameters of fermentation measured.