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BEHAVIORAL AND EATING HABITS IN OVERWEIGHT/OBESE CHILDREN 10 - 19.9 YEARS OF AGE

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Knowledge of the behavioral and eating habits of overweight or obese children contributes to the development of prevention and therapeutic programs. Objective: Analyze the data obtained from a questionnaire designed to detect eating disorders in children and adolescents with a Body Mass Index (BMI) > percentile (PC) 90 (Rolland Cachera), and compare them to the rest of the sample studied. Method: A total of 1971 cases (1231 females and 740 males; age range 10 - 19.9 yrs) were evaluated in the period 1998–2001. The Eating Disorder Examination Questionnaire (EDEQ-4), consisting of 34 questions grouped in 5 subscales, was used. Responses and demographic data were assessed for all the sample. Subscale scores of the cases (C) were compared with those of the control group (c). Results: 26.43% of the sample (n=521) had a BMI > 90 PC. Subscales scores (C vs c) were: 1-Eating restraint: 0.97 ± 1.0 vs 0.51 ± 0.82 (p=0.0000). 2-Eating concern: 0.90 ± 1.02 vs 0.49 ± 0.72 (p=0.0000). 3-Shape concern: 1.75 ± 1.45 vs 0.97 ± 1.07 (p=0.0000). 4-Weight concern: 1.69 ± 1.43 vs 0.87 ± 1.08 (p=0.0000). 5-Bulimia: 0.51 ± 0.58 vs 0.3 ± 0.46. Relevant responses to the EDE-Q-4 questions (V cs c) were: a) Attempt to restrain intake: 22. 26% vs 10% (p=0.0000); b) Compliance with dietary rules: 20.7 % vs 11.46% (p=0.0000); c) Fear of gaining weight: 34.35% vs 17.54% (p=0.0000); d) Binge eating: 10.9% vs 8.62% (NS); e) Feeling fat: 46.5% vs 16.62% (p=0.0000); f) Overeating: 12% vs 1.5%; g) Loss of control over eating: 1.3% vs 0.5% (NS); g) Purging behavior (vomiting, laxative or diuretic abuse) was reproted by neither group; h) Influence of weight on self-evaluation: 23% vs 13% (p=0.000); i) Influence of body shape on self-evaluation: 24% vs. 21.5% (NS); j) Physical activity: 2% vs 1.8% practised exercise more than 3 times a week in order to lose weight, and a 80% of the total sample did not exercise. Conclusion: In the group of overweight and obese children and adolescents, self-evaluation was influenced by body weight. Although they had greater fear of gaining weight, they did not exercise, and only 22% restrained their food intake.

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LANGUAGE DISORDERS IN PRETERM TODDLERS WITH VENTRICULAR HEMORRHAGE

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Introduction: Prematurity is a risk factor for neurodevelopment outcome. Ventricular hemorrhage (VH) affects especially preterm infants with low birth weight and low gestational age. Language delay is closely associated with future academic disability. Objective: Investigate the effect of VH on language development in children born prematurely. Methods: Fifty-four toddlers (37 weeks of gestation; < 2000g body weight at birth) were assessed when they were 12 or 24 months. They were admitted to a follow-up Program at the Pediatric Department, Universidade Federal de Sγo Paulo – Escola Paulista de Medicina. The children were divided into two groups: 30 (55.55%) with VH at birth and 24 (44.44%) without it. We used a behavior list concerning expressive and receptive language to assess language development. The performance was classified as typical or not according to the percentage of correct responses at a given chronological age. To study the relation between numeric and categorical variables we used t test and ANOVA. Likelihood ratio tests were used to analyze the association between categorical variables. Finally, the logistic regression model was used to explore the relation between VH, sex, and language delay. Results: Low birth weight (p=0.104), asphyxia (p=0.055), bronchopulmonary dysplasia (p=0.687), and mechanic ventilating therapy (p=0.509) were not associated with VH occurrence. However, the lower the gestational age the more severe the VH (p=0.035). Twenty-six (86%) children with VH at birth showed language delay; this was statistically significant when compared to children without VH at birth (p=0.000). The odds ratio for a child with VH to show language delay was eight times greater than that of a child without VH, being three times greater in boys. Conclusions: VH preterm infants, especially boys, are at a high risk of language development delay. Follow-up programs should pay attention to these children, because language development is linked to the most important levels of functioning of a human being. Moreover, psychological diagnoses at risk conditions should assess children at different ages to verify how these conditions affect the different phases of development.

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UPTAKE, ACCUMULATION AND RELEASE OF BUDESONIDE IN AN *IN VITRO* MODEL OF HUMAN BRONCHIAL CELLS (CALU-3) CULTURED IN MONOLAYERS

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Introduction: Inhaled glucocorticoids (IGCS) have become the first-line therapy of asthma. By increasing the retention time of IGCS in the airway-lung tissue, it might be possible to prolong the interval between doses, thus increasing the compliance to the therapy. The retention of IGCS in the airway epithelium has been correlated to its non-specific binding to cellular and subcellular membranes (related to the lipophilicity of drugs). Recent studies have evaluated the clinical efficacy of IGCS using a same total dose given once or twice daily. It has been reported that Budesonide (Bude) given once daily is as effective as the same total dose given twice daily in the therapy of mild-moderate asthma. Contrarily, the efficacy of other more lipophilic IGCS has been shown to be different when comparing both inhalation regimens. *In vivo* and *in vitro* experiments have demonstrated that Bude is accumulated within airway tissue due to the formation of inactive pharmacological esters. Objectives: To evaluate the uptake, accumulation, and eventual release of Bude in a human bronchial cell line *in vitro* (Calu-3 cell in monolayers). Material and Methods: Monolayers of Calu-3 cells were cultured. Each monolayer was placed between two sample compartments, an apical and a basolateral chamber. Bude solution was applied on the apical chamber for 2 hr. To evaluate the release of Bude accumulated within the cells, both chambers were washed with free-Bude solution. Appearance of the drug in the chambers was followed for 12 hrs. In order to assess if Bude was accumulated in the cells, lysis of the monolayers was performed followed by Mass Spectrometry identificaton of Bude and its esters. Results: Bude was efficiently taken up by the cells and a substantial fraction remained within the cells, mainly as derivative compounds. Bude was then released only as its active form due to the reversibility of the esterification. The release of Budes continued at least during the following 12 hrs. These observations in Calu-3 cells monolayers complement previous results on the efficacy of Bude by once daily inhalation.

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CLINICAL SCORE VALIDATION FOR DETECTING CARDIAC OUTPUT VARIATIONS IN VENTILATED NEWBORNS

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Introduction: Measuring cardiac output (CO) is an important clinical feature in the neonatal intensive care unit (NICU). Although different clinical methods have been used to evaluate CO clinically, there are no studies validating those results regarding any instrumental method to measure CO. In this prospective study we analyzed the relationship between estimation of CO through clinical methods and Doppler ultrasonography. Material and Methods: 26 patients admitted consecutively in the NICU at Hospital de Pediatría "Prof. J.P.Garrahan" were studied. Inclusion criteria were patients receiving mechanical ventilation with admission longer than 4 hrs. Patient with structural congenital heart disease and those who required reanimation maneuver during the preceding 6 hrs were excluded. CO was classified into normal and low, using a score including physical examination, blood gas, arterial tension and urinary output during the preceding 4 hrs. Ultrasonography measurements were performed 30 min after clinical examination and were the average of 4 examinations, blinded to the clinical method. Sensibility (S), specificity (SP), positive predictive value (PPV), negative predictive value (NPV), and p value were estimated for the clinical method. Results: CO was normal in 20 patients and low in 6 patients. Clinical CO had a S=75%, SP= 88%, PPV=75%, NPV=88%, and p= 0.003. Two patients had normal clinical CO and low CO in ultrasonography evaluation. Two patients had low clinical CO and normal CO in ultrasonographic evaluation, both with ductal shunting. Conclusions: Low CO prevalence in our study sample was not significant. CO measuring in NICU through clinical methods was satisfactory and would be useful to complement CO evaluation in ventilated newborns without structural congenital heart disease.