

CARDIOVASCULAR RESPONSE TO HYPOXEMIA (H) IN CHRONICALLY CATHETERIZED FETAL LLAMAS. Raquel Riquelme, Mauricio Espinoza, Fernando Moraga, Emilia Sanhueza, Cristian Gaete, Gertrudis Cabello, Rodrigo Zapata, Anibal Llanos, Universidad de Chile. Fac. Medicina, Dpto. Cs. Preclínicas., Fac. Cs. Quím-Farmacéuticas, Dpto. Bioq-Biol. Molecular. U. de Tarapaca Fac. Ciencias, Dpto. Biología y Salud. Chile.

Fetal sheep responds to H with blood hypertension, bradycardia, and cardiac output redistribution. Since the response to H in fetuses from species that evolved at high altitudes is not fully known, we studied the cardiovascular response to H in chronically catheterized fetal llamas. We determined in 7 fetal llamas (4 post surgery days) arterial gases, mean arterial pressure, heart rate, cardiac output and its distribution (radiolabelled microspheres) basally (50% Sat Hb descending aorta) and after 20 min of H (14% Sat Hb). The results were:  $X \pm SEM$ , \* $p < 0.05$  vs basal).

	Basal	Hypoxemia
Mean arterial pressure (mmHg)	47 ± 2	54 ± 2*
Heart rate (1/min)	118 ± 6	95 ± 7*
Cardiac output (ml/min x Kg)	261 ± 21	255 ± 17
Brain blood flow (ml/min x 100g)	122 ± 10	123 ± 7
Heart blood flow "	157 ± 12	502 ± 64*
Kidney blood flow "	126 ± 12	35 ± 8*
Carcass blood flow "	14 ± 2	7 ± 1*

Cardiovascular response to hypoxemia in fetal llamas is comparable to that of fetal sheep. However, in contrast to fetal sheep, brain blood flow does not increase and kidney blood flow markedly decreases, which could affect oxygen supply to these organs. This suggests selective mechanisms of adaptation in these territories that could allow them to arrest metabolic function of the cells. FONDECYT89-1080

CHILD ABUSE: VARIABLES TO CONSIDER IN THE ELABORATION OF THERAPEUTIC STRATEGIES.

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Introduction: Child abuse is hardly conceivable; yet, it has acquired epidemic magnitude in certain communities. Hypothesis: Features of child abuse are function of the mothers' age, and of the children's age. Material and methods: The analysed sample consists of 39 families attended at the Family Violence Service, "Dr. Pedro de Elizalde" Hospital, referred from inpatient wards, between August 1991 and June 1992. Results: Case analysis reveals the following: in relation to patients' age, children younger than 3 years prevailed (62%) in fractures and/or multiple injuries group; 92% of those in the group of injuries from maternal neglect were below 5 years, 64% of the sexually abused children were between 9 and 14 years. Distribution of mothers' age was as follows: 29% of those in the fracture and/or multiple injuries group were below 20 years of age, and 71% were 20 or older; 100% of mothers in the other two groups (neglect and sexual abuse) were above 20 years of age. Conclusions: These results show that it is not operative to design uniform therapeutic strategies for pediatric patients who have been diagnosed a Child Abuse Syndrome.

BODY MASS INDEX (QUETELET) IN A NATIONAL REPRESENTATIVE SAMPLE OF 88,861 18 YEAR OLD BOYS. ARGENTINA, 1987. Horacio Lejarraga, E. Abeva, J. Andrade. Crecimiento y Desarrollo, Hospital Garrahan y Ministerio de Salud. Buenos Aires, Argentina.

Body Mass Index (Quetelet) (BMI) ( $\text{weight/height}^2$ ) is widely used as indicator of nutritional status in children. This index was evaluated in 49% of the total national population of 18 year old boys, on the basis of standardized measurements carried out during the medical examination for military service. Mean BMI for the whole sample was  $22.1 \pm 0.01 \text{ Kg/m}^2$  ( $\bar{X} \pm SE$ ) greater than those found in other countries. Frequency distributions were in all provinces skewed to the right. Taking 30.1 as upper normal limit, obesity prevalence by province ranged from 0.9% (Jujuy) to 3.4% (Buenos Aires). With a cut-off point of 25.1, prevalence ranged between 3.9 (Misiones) and 15.1 (Federal District). National prevalence of obesity was 2.5 and 12.1% for each limit respectively. The results may help the design of health care and education strategies. The participation of the Health Statistics Direction, and the periodic and regular replication of the survey, will allow the long term growth and nutrition monitoring of this age group, as well as the evaluation of secular trends.

SPICOSOCIAL AND FAMILIAL CHARACTERISTICS OF TEENAGE PREGNANCY. Raquel Burrows, Maria E. Rosales, Margarita Alayo, Santiago Muzzo. Institute of Nutrition and Food Technology, University of Chile and "Maternidad Carolina Freire" Foundation, Chile.

The prevention of teenage pregnancy would decrease infant mortality, early undernutrition and in these ways decrease social and economic expenditure. The cost of these programs would decrease with a more sensitive risk indicator. We were interested in searching others psychosocial and familial parameters, useful to build up this indicator. Self esteem (Piers - Harris test) intrafamilial relationship (Familial Appgar of Magdaleno) attitudes towards sexual relations (Thurstone scale) and the use of break time were studied in 60 pregnant teenagers (PT), 60 non pregnant teenagers at a low risk of pregnancy (LRT) and 60 non pregnant teenagers at a high risk of pregnancy (HRT). PT and LRT showed lower self esteems (88.3 and 70.0% respectively), under C50) familial appgar (61.6 and 50% under score 6) and the quality of use of break time (33.3 and 25.9% with optimal quality) and a more positive attitude towards sexual relations than LRT. The importance of these parameters to build up a risk indicator of early pregnancy is discussed.

ABNORMAL COLONIZATION OF THE SMALL INTESTINE IN SCHOOL AGE CHILDREN OF THE LOW (L) AND HIGH (H) SOCIOECONOMIC LEVEL.

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Environmental enteropathy and asymptomatic excretion of enteropathogens have been demonstrated in apparently healthy subjects. L and H socioeconomic level are associated with different degrees of environmental contamination. The expired H<sub>2</sub> excretion (EHE) was studied in fasted school age children 4 to 14 years old, aiming to quantitate the abnormal colonization of the small intestine by means of a noninvasive technique. Samples of EHE were obtained during fasting and every 15 minutes during 240 minutes after the ingestion of 150mg/kg of lactulose. H<sub>2</sub> was measured in a Quintron Microlyzer 121 chromatograph. In 39/156 (25.0%) of the L group children and in 55/155 (35.5%) of the H group children (55.7% males and 19.8% females) excreted more than 10 ppm of EHE during fasting. EHE increased more than 20 ppm during the first 90 minutes in 11/156 (7.1%) of L and 27/155 (17.4%) of H children ( $p < .005$ ). No differences related to age were found. The colonic peak was detected at 150 minutes.

Conclusions: Results suggest that both L and H school age children present microbiological contamination of the small bowel since early ages. The higher excretion of H<sub>2</sub> in H group could be explained by different fiber contents of diet ingested during the days prior to the test.

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CENTRAL NERVOUS SYSTEM (CNS) INVOLVEMENT IN CHILDREN WITH HIV INFECTION CEREBRAL COMPUTED TOMOGRAPHY (CCT) FINDINGS.

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CNS is one of the target organs in children with HIV infection. The aims of this work were to correlate the clinical-neurologic signs with CCT findings in symptomatic HIV+ children and to establish the predictive value of both parameters. Thirty eight patients infected with the human immunodeficiency virus and without specific treatment were evaluated (age range: 4 months to 8 years). Six patients had no abnormal neurological signs. They were the negative control group and their CCT were normal. Out of 32 patients with signs of neurologic injury, 28 (87%) had pathologic CCT. Twelve out of these 28 patients died (43%). The CCT findings were: (A) Cerebral atrophy (Cortical and/or central)=10/28 cases (35%); (B) Calcifications of basal ganglia + (A)=5/28 cases (18%); (C) Low density of white matter=3/28 cases (11%); (D) Damage secondary to opportunistic infection=4/28 cases (14%) (Histoplasmosis; Toxoplasmosis; Chagas Disease and Pneumococcal meningitis) and (E) Associated pathology findings=7/28 cases (25%) (Congenital infections; Congenital Hydrocephalus or Battered Child). The remaining four CCT=4/32 cases (13%) were normal and corresponded to patients with Static Encephalopathy; they were 3 to 5 years old. We conclude that: a) The main CCT findings were cerebral atrophy and calcifications of basal ganglia; b) We did not find any primary CNS lymphoma; c) Neurological signs were found prior to CCT abnormalities; d) CCT pathologic findings were associated to poor diagnosis.