

ETIOLOGIC DIAGNOSIS OF TRUE PRECOCIOUS PUBERTY (TPP) BY COMPUTED TOMOGRAPHY (CT) AND MAGNETIC RESONANCE (MR). S. Domenice; AC. Latronico; MCC. Albano; BB. Mendonca; IJP. Arnhold; LS. Lo; AC., Magalhaes, W. Bloise. Unidade de Gonadas e Intersexo- Disciplina de Endocrinologia HCFMUSP e Dep. de Radiologia HCFMUSP, Sao Paulo, Brasil.

Improvement in imaging techniques over the last 15 years, high resolution CT scan and more recently MR, permit detection of small lesions of the central nervous system. CT and/or MR were performed in 28 children with TPP (5M, 23 F) and the findings compared to the literature. Percentage of organic lesions are shown in the table.

Authors	Jolly	Thamdrup	Wilkins	Job Kaplan	Peskovitz	Present study
Year	1955	1961	1965	1981	1981	1983
Nocase	43	56	95	121	205	96
% OTTP	21	32	16	23	35	47
M (%)	57	64	44	44	67	94
F (%)	14	24	7	16	27	37

Both CT and MR were performed in 18 patients and identified organic lesions (OTTP) in 4 patients (3M 1F 1 hamartoma, 2 germinomas and 1 post-traumatic sequelae). In 10 cases only MR was performed and 1 girl with an expanding hypothalamic lesion (hamartoma) was detected. We conclude that despite improved techniques the incidence of organic lesions in females with TPP has not changed. We suggest MR should be the imaging technique of choice in the diagnosis of TPP because it gives a better image without radiation exposure.

MATERNAL AND CORD BLOOD LEVELS OF CATECHOLAMINES DURING 20 BIRTHS. PLM Dahia, MFP Flcury, CM Strunz, IM Badin, CY Hayashida, MCL Ezabella, NMA Abelin, SPA Toledo. Endocrine Genetics Unit, University of Sao Paulo School of Medicine.

With the aim of determining maternal and newborn levels of catecholamines during birth, we measured simultaneously samples from mother's peripheral vein and umbilical cord in 20 cases. Fifteen births resulted from cesarean sections and 5 had vaginal delivery. Maternal age ranged from 20 to 42 years and gestational age varied from 35 weeks. Maternal and newborn outcomes were uneventful. Mean levels of catecholamines (and SD) are shown in the Table below:

	NOREPINEPHRINE	EPINEPHRINE	DOPAMINE
MOTHER	237.60 ± 116.56	91.66 ± 108.51	24.31 ± 16.85
CORD BLOOD	3880.55 ± 7184.46	398.12 ± 684.14	126.66 ± 182.7

(controls*) (40-268) (0-75) (0-83)

Obs: Catecholamines were measured by HPLC. * reference range for normal adult controls. According to literature and our own findings, we may conclude that:

- 1) Fetal sympathoadrenal system is fully mature by birth;
- 2) The high levels of cord catecholamines sometimes found are the result of adaptative stress to extrauterine life. Instead of representing maternal transfer of catecholamines.

The authors acknowledge Hospital Fernando Mauro Pires da Rocha and Hospital e Maternidade Leonor Mendes de Barros for providing the samples.

UTPF AN UNIVERSAL MARKER OF GESTATION?. G. Iñiguez, MA. Boric, F. Beas. IDIMI, Facultad de Medicina, Universidad de Chile.

The uterotrophic placental factor (UTPF) has been described in human placental extracts and in placental extracts of other species such as mice, dogs, pigs, and cows. In this work we compare physicochemical characteristics (PAGE, SDS and blotting) and plasmatic levels (immunoassays) of UTPF in human (hUTPF) and bovine (bUTPF). The purification methodology used has been described by us. By PAGE, SDS, bUTPF presented a molecular weight of 230 Kd and hUTPF 270 the antibody against hUTPF recognized the 230 Kd bovine line (by blotting). The plasmatic levels of bUTPF were measured by an EIA, showing a peak at about the third week of gestation, similar to the previously described for hUTPF (9 - 18 days post-transference). These results suggest, if they are confirmed in other species, that UTPF could be an early universal marker of mammalian gestation.

This work was supported by Grants Fondecyt 91-1009 and WHO 89004.

OBESITY AMONG SCHOOL CHILDREN FROM URBAN CONCEPCION (CHILE) S. Asenjo, M. Núñez, V. Wilhelm, A. Gleisner. Dept. Pediatr., Endocrinol. Unit, Faculty of Medicine, U. Concepción, Chile.

We determine the prevalence of obesity among school children aged 6 to 14 years attending Municipal schools + private state subsidized schools (M+PSS) and private school (P) in urban Concepción. Conditioning obesity factors were analysed. 2302 school children were randomly selected by conglomerate. Obesity was diagnosed by the ratio Weight / height > 120% (NCHS reference data). Obesity among parents and relatives was assessed by means of a questionnaire. Data analysed by SAS sta package. Test X2 of independence and homogeneity. Overall prevalence in school children sampled: 21%. No differences between sexes. 12% Obesity at 14 years of age in males and 23.4% in females. (p<0.015). Males from P 25.6% and M+PSS 14.8% (p<0.001). Among girls, only at 14 years of age there are differences between M+PSS (28,7%) versus P (15,7) (p<0.04). Obesity prevalence among parents of obese children: a single parent 22.2%, both parents 4.7%; control group 10.3% and 1.1% respectively (p<0.001). 27% Obesity among brothers and sisters of obese children and 11.9% in controls (p<0.001). No difference was found between obese and non obese children concerning divorced parent, a single child, parents schooling, School marks, physical activity, daily calorie intake were similar for both groups. The prevalence of obesity in our sample: 21%. Clustered by age and sex, girls are more obese at age 14. It was more prevalent among males attending P. Among girls there is only a difference at age 14, being more prevalent in M+PSS schools. Family background was the only conditioning factor. This study allows us to identify the groups at risk among school children and start preventive measures.

THERAPY OF IDIOPATHIC SHORT STATURE WITH LONG-ACTING GnRH ANALOG: EFFECTS ON GROWTH HORMONE (GH), GROWTH HORMONE-BINDING PROTEIN (GHP) AND FINAL HEIGHT PREDICTION. SB. Oliveira; M. Donnadieu. and JL. Chaussain. Hôpital Saint-Vicent-de-Paul, Service d'Endocrinologie Pédiatrique-Paris, France.

We studied 12 children (11 F, 1M) with idiopathic short stature, aged 11.5±0.35 years (9.6-12.7 yr), height age 9.9±0.21yr (9.0-11.2yr), bone age 11.17±0.24yr (10.0-13.0yr) and height standard deviation for age -1.8 ± 0.33 SD. All were pubertal at start (3 Tanner II, 9 Tanner III) and had a short final height prediction according to the Bayley Pinneau method: 148.84±1.05 cm (142.59-153.56 cm, 11F) and 162.1 cm (1M) and a growth velocity (GV) of 5.76 ± 0.49 cm/yr (4.0-10.2 cm/yr). Puberty was temporarily blocked with a long-acting GnRH analog (DTrp6-LHRH, Decapeptyl), 60 µg/Kg/month, im). Hormonal data were obtained before and after 6 months (m) of therapy and auxological data after 6m, 12m and 18m. The 125 I-hGH was incubated with 150 µl of serum, bound and free GH were separated by gel filtration, and the ratio of bound (bound+free) labelled GH was considered as GHP. Pretreatment GHP (25.94±1.68%) was not different from the control group (27.0±0.8%) and did not change after 6mo of therapy (26.7±2.3%). There was a significant decrease in peak GH levels the ornithine stimulation test (p<0.002) and during sleep (p<0.002) after 6m of therapy. The bone age maturation was already slower by 6mo (p<0.002) and more significantly by 18mo (p<0.001). The GV diminished by 12m (p<0.05) and 18m (p<0.005). The improvement in final height prediction was 2.23±0.91 (p<0.05) by 6m and 3.28±0.78 cm (p<0.002) by 18m of therapy. A follow-up to final height is necessary to confirm the possible beneficial effects of this therapy.

EARLY DETECTION OF MEDULLARY THYROID CARCINOMA (MTC) AND PREVENTIVE TOTAL THYROIDECTOMY IN PREPUBERTAL AND PUBERTAL CASES. N. Abelin, M. Ezabella, PML. Dahia, CY. Hayashida, SPA. Toledo. Endocrine Genetic Unit, University of Sao Paulo School of Med.

MTC should be screened in all children over 4y-old born from affected cases, since MTC may present as an inherited tumor. In our experience, a combined test injecting pentagastrin (Pg) 0.5 UI/Kg and calcium (Ca++) 2mg/Kg, with serum calcitonin (CT) measurements (0.25 and 10 min), has been proved to be a reliable screening test for occult MTC in children. In this study 12 prepubertal and pubertal individuals (M:4, F:8) were tested, they belonged to two sibships with an affected pattern. Five of these cases showed CT hyperresponsiveness (>350 pg/ml) during Pg+Ca++ tests, all were females. At least two abnormal tests were detected in each case in order to establish the biochemical diagnosis of MTC and/or "C" cell hyperplasia, that precedes the familial form of MTC. Three of the affected cases had no palpable thyroid nodules whereas it was palpable in two. Total thyroidectomy associated with preventive lymphnode resection was performed in all affected cases. Pathological findings confirmed the presence of MTC in all. After surgery, basal CT levels dropped to normal values and the exaggerated response to Pg+Ca++ disappeared in the cases without palpable nodules. In those cases with palpable thyroid nodules, basal CT remained high despite a significant reduction after surgery, augmented CT responsiveness was also present in these latter cases. It is concluded that 1) In prepubertal and pubertal cases early detection of MTC usually leads to definitive cure after surgery. 2) cases with palpable thyroid nodules (late detection) due to MTC frequently do not achieve cure, as revealed by persistently high serum levels of the tumor marker CT.