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CLINICAL USES OF THE TRH/TSH TEST IN CHILDREN. Péres de Rubio G.; Muñoz L.
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Objetives: Analysis of the hypothalamus-hypophysial-thyroid axis in 79 children with different pathologies: Retarded growth, Goiter, and G.H. insufficiency, and its relation with thyroid hormones to detect states of subclinical hypothyroidism.
Group 1:Retarded Growth:34 children, 12 girls and 22 boys. Mean (X) Chronological age (CA) 8.08±4.25 and 9.14±4.82, respectively. All were under 2SD of the normal range for size according to sex and age. Group 2:Goiter: 31 children, 24 girls and 7 boys. C.A.(X) 10.71±3.51 and 9.86±1.46, respect. The majority of them was submitted to Ant. antithyroid, gamma C and/or thyroid Echog. Group 3:GH insuffic.: 14 children, 10 girls and 4 boys. C.A.(X) 7.90±3.28 and 9.25±2.75, respectively.

Results	T3 ng/dl	TSH uUI/ml	T4 ug/dl
Retarded Growth (X)	153.2	3.02	10.41
Goiter (X)	184.2	4.39	9.55
GH defic. (X)	143.5	3.42	8.14

Relation T3/T4 1. did not show significant differences. T3:X G.2 X G.3 ($p \angle 0.01$)
TSH: X G.2 $\triangle$ X G.1 ($p \angle 0.01$)- T4:X G.1 $\triangle$ X G.3 ($p \angle 0.05$).

TRH/TSH test	0'	30'	60'	90'	0/30'
Retarded Growth (X)	2.75	16.26	12.32	8.54	13.516
Goiter(X)	4.57	23.68	17.29	12.74	19.11
GH defic. (X)	4.01	20.90	20.51	18.80	16.89

4 insufficient responses of TSH to TRH were not considered in G.3. No significant differences are observed in basal values. At 30' X G.2 $\triangle$ X G.1 ($p \angle 0.01$). No significant differences between G.2 and G.3. At 60' X G.2 and X G.3 $\triangle$ X G.1 ($p \angle 0.01$)
No significant differences between G.2 and G.3. At 90' X G.3 $\triangle$ X G.2 ($p \angle 0.01$ X G.2 $\triangle$ X G.1 ($p \angle 0.05$).

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TESTICULAR GROWTH AND HORMONAL PARAMETERS BEFORE AND AFTER SURGICAL CORRECTION OF CHILDREN AND ADOLESCENTS WITH VARICOCELE. Gottlieb S.;Rodestá M.;Madel R.;Chemes H.;Ropelato G.;Quesada E.;Bergadá C.
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In a previous communication we described the changes in testicular volume (T.Vol.) and the gonadotropin response before and after the Gn-RH test in children and adolescents with varicocele. In this study we will be analyzing the T. Vol. and the hormonal parameters of 16 patients who underwent surgical correction of the varicocele. Pubertal changes in these patients were classified according to the criteria of Marshall and Tanner: 5, Grade I;6 Grade 2-3 and 5, Grade 4-5.
Testicular volume (T.Vol) before and after surgery (ml):

	BEFORE	AFTER		BEFORE	AFTER
Grade 1:	RT: 2.50±0.70	3.20±1.44	LT:	1.70±0.44	3.20±1.30
Grade 2-3:	RT: 7.41±2.20	12.3±2.58	LT:	4.90±0.54	9.66±1.96
Grade 4-5:	RT: 19.0±4.18	20.0±3.53	LT:	14.0±4.41	19.0±4.18

Serum Testosterone (T) before and after surgery (ng/dl):

Grade 1:	35.7±12.5	56.8±23.6
Grade 2-3:	232±128	522±158
Grade 4-5:	513±162	626±223

Basal and Mx. LH response to Gn-RH before and after surgery (mUI/ml):

Grade 1: before	1.32±0.50	8.18±5.56	after	1.74±0.88	9.40±4.64
Grade 2-3:before	1.75±0.72	18.5±11.2	after	1.95±0.98	19.6±10.7
Grade 4-5:before	2.60±0.80	23.7±7.55	after	3.44±1.79	15.9±6.13

Surgical treatment of the varicocele leads to an improvement of testicular volume and testosterone, specially in Tanner's stage (2-3), as well as a decrease in the response of LH after the administration of Gn-RH in higher Tanner's stage (4-5). Although the outcome of fertility of children and adolescents with a varicocele in adulthood is unknown, the normalization of the T.Vol. and the integrity of the hypothalamic pituitary-testicular axis in our patients after surgery of varicocele suggests the importance of this early procedure.

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FINAL HEIGHT IN PATIENTS TREATED WITH HUMAN GROWTH HORMONE. Martínez A.;Keselman A.;Heinrich J.J.;Bergadá C.
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The effect of the human growth hormone therapy on short-term growth in growth hormone deficient children is well established, but only a few studies have been published about patient's final height. In the present study the final height of 73 hypopituitary patients treated with human growth hormone (dose 0.2-0.4 IU/Kg/week) for a period ranging from 1.04 to 17.19 years were analyzed.

FINAL HEIGHT

	IGHD (male)	IGHD (female)	MPHD (male)	MPHD (female)
cm	149.6 +10.3	140.2 +9.57	154.2 +5.97	143.8 +6.39
SDS	-3.78 +1.53	-3.65 +1.58	-3.08 +0.90	-3.06 +1.06

Our patients started treatment at a median age of 13 years with a height deficit of more than -4DS and received a relatively low dose of hGH enough to mantain a normal growth rate but no for recovering finally a normal height.
The importance of early diagnosis and treatment is emphasized in order to prevent a greater lost of stature and to obtain a better effect on final height.

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HYPOTHALAMO-PITUITARY-OVARIAN FUNCTION IN PREPUBERTAL GIRLS WITH CHRONIC RENAL FAILURE (CRF). Castellano M.;Turconi A.;Charler E.;Maceiras M.;Rivarola M.A.;Belgorosky A.
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There is a little information on hypothalamo-pituitary function in prepubertal girls with CRF. Seven prepubertal girls with CRF(3 slight or moderate and 4 in chronic dyalisis), with a mean±SD chronological age (CA) of 7.61±3.13 years (y) and 7 control (C) girls with a CA of 8.59±2.01 y, were studied. An acute standard LH-RH test as well as a prolonged one using 2 doses of 100 ug of a LH-RH (Buserelin) every 24 hours (hs). Serum LH and FSH were determined basally and at 20 and 60' after LH-RH while serum LH, FSH and Estradiol (E_2) were measured basally 24 after the first dose of a LH-RH and 4, 6 and 24 hs after the second dose. The ovarian response was considered positive when serum E_2 was $\geq$ 55 pmol/L in at least 1 sample. Basal and post acute LH-RH levels of LH and FSH were not different from C. Serum FSH, but not LH, was significantly lower than C ($p \angle 0.02$) at 4 and 6 hs after the second a LH-RH dose (LH, IRC:0.62±0.57, 1.11±1.16, 2.49±2.94, 2.16±1.7 and 1.68±1.46; C: 0.54±0.10, 0.60±0.177, 4.06±2.29, 2.36±1.59 and 0.88±0.86; FSH, IRC:2.62±1.59, 5.34±4.13, 4.98±3.86, 4.81±3.33 and 4.21±1.86, C:2.01±0.84, 5.88±2.34, 15.3±6.17, 13.7±5.86 and 2.88±1.47 U/l). A positive E_2 response was significantly less frequent than in C (4/7 and 6/7), $p \angle 0.02$. In C, there was a significantly positive correlation between FSH and E_2 ($r=0.49$, $p \angle 0.02$) but not between LH and E_2 while in IRC it was significant between LH and E_2 ($r=0.54$, $p \angle 0.01$). The data suggest that girls with IRC have an alteration in FSH secretion as well as in ovarian aromatase activity as shown by the lack of E_2 response and the lack of correlation between FSH and E_2, which was present between LH and E_2. These alterations might be expressed clinically during puberty.

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DIFFERENT THYROID INFILTRATING CELLS AND IMMUNOLOGICAL EXPRESSION IN JUVENILE CHRONIC LYMPHOCYTIC THYROIDITIS (CLT) AND GRAVES'DISEASE. Herzovich V.;Goldberg J.;Rossi J. and Iorcansky Sonia.
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Since Hashimoto's description of "struma lymphomatosa" in 1912, immunological disorders were imputed to many thyroid diseases. Close relation between this condition (whose juvenile form is CLT) and Graves' disease were proposed, but it is not clear if they could be or not expressions of a single entity. To elucidate this aspect, thyroid infiltrating cells and immunological markers as well as citological studies, were performed on thyroid tissue obtained by means of thyroid fine needle aspiration biopsies (TFNAB) in 20 patients (CLT n=10 and GD, n=10). Material and methods: Samples were analyzed according to Hayry and Von Willebrand's method of Corrected Increment (CI). Morphology as well as HLA-DR expression in follicular cells. Interleukine-2 receptor (IL-2/R) B and T cell markers were performed on cytospin smears, either by immunoperoxidase or indirect immunofluoresecence. TFNAB were divided in 2 groups, according to patient's thyroid status:Group 1) CLT, n=12 and Group 2) GD, n=14. Results:(in %±SD): Group 1:CI:6.9±1.09;B-cells 34.9±12.6;T-cells 60±12.2;CD4:62.7±5.2;CD8:33.2±5.6;ratio:1.9±0.34.HLA-DR was present in 56.4±22.6 of the follicular thyroid cells. IL-2 was present in 11/12 specimens. Group 2:CI:4.5±1.3 (group 2 vs 1, $p \angle 0.001$);B-cells:59.2±16.0 ($p \angle 0.001$);T-cells 41.9±16.2($p \angle 0.001$);CD4:56.4±8.4($p \angle 0.05$);CD8:41.4±7.8 ($p \angle 0.02$), ratio:1.44±0.5($p \angle 0.02$).HLA-DR was expressed in 18.8±18 ($p \angle 0.001$) of the follicular thyroid cells. IL-2 was present in 3/14. Comments:Significative differences were found between both groups.a)CI was significantly higher in group 1:CI above 5.3 result to be a sensible indicator of CLT. b)HLA-DR on epithelial thyroid cells as well as IL-2/R were significantly higher in CLT. c)Infiltrating lymphocites showed that 60% were T-cells in CLT while in GD about 60% expressed B-cell markers. These results would suggest a different impact of humoral and cellular immunoresponse in each of these autoimmune thyroid diseases in juvenile patients.

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MOLECULAR STUDIES OF SEX CHROMOSOMES ALTERATIONS IN GONADAL DYSGENESIS PATIENTS. Capelli S.;Targovnik H.;del Rey G.;Corah D.;Coco R.;Bergadá C.
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Sex chromosome numerical and structural alterations not always can be detectable or evaluated by cytogenetic means. The aim was to study the sex chromosomes with X-Y DNA probes by Southern blot and SRY gene (sex region of Y chromosome) by PCR (Polymerase chain reaction). EDP 34 and pDP 105 probes were used for DNA hybridization genomic DNA from patients and female and male controls were studied by both techniques. Five patients were analyzed: a)2 Turner's Syndrome, XO/Xr(X o Y?), b)1 XX male, c)1 X,idic (Yq12) male, d)1 dysgenetic male pseudohermaphrodite XO/XY/Xr(Y?)/Xr(Y?)r(Y?).
Molecular data are shown in the following table:

	Probe	Locus				
Southern	pDP 34	i(4A)Yp	-	-	+	+
		Xq13-Xp21	+	+	+	+
	pDP 105	i(3)Yp	-	-	+	+
		i(6)Yq	-	-	+	+
PCR		SRY	-	+	+	+

These results suggest the advantage to perform techniques to identify sex chromosome specific sequences in uncertain cytogenetic diagnosis in order to obtain a better clinical management in gonadal dysgenesis.