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161 TESTICULAR BIOPSY DURING ORCHIOPEXY IS THE MOST IMPORTANT VARIABLE IN PREDICTING FERTILITY OF CRYPTORCHID PATIENTS.

26, previously cryptorchid,adult patients were divided into two groups according to their spermiograms. Group A (n = 15) had patients with good or moderate spermiograms, while group B (n = 11) had only azoospermic or severely oligozoospermic patients. Following variables were analyzed by Alloc 80 discriminant analysis package (multigroup discriminant analysis based on non-parametric density estimation) : age, height, weight, education, age at surgery, year of surgery, testicular position at surgery, recent testicular volume and penis size, hormonal treatment prior to surgery, LH, FSH, T, E_2, as well as number oi germ cells at surgery and puberty rating.
The most determinant variable in predicting fertility outcome was the number of germ cells. All other variables had a very minor predictability, while T had no predictability at all.
In conclusion : Biopsy has important prognostic value and should routinely be performed during orchiopexy.

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EFFECTS OF TESTOSTERONE (T) REPLACEMENT ON MALE SEXUALITY IN HYPOGONADOTROPIC HYPOGONADISM (HH).

While T pharmacodynamics disclose subnormal serum T 3-4 weeks after an i.m. dose of T, many of our HH patients deny a decline in sexuality so soon. To evaluate the effects of T replacement, 9 patients with HH, 18-30 years of age, were studied. Following an i.m. dose of 250 ng T propionate/enanthate they were studied at the 2nd, 4th, 6th and 8 weeks, then received a placebo dose and were reevaluated 1 week later. At each overnight study, they underwent a set of penile tumescence (PT) recordings during a pornographic film and slides, self-induced erotic fantasy and nocturnal PT, as well as self-report of a 10-point questionnaire. Results were compared to those of 10 volunteers. Serum T declined to subnormal levels by the 4th week. On the self-report, sexual drive and fantasies were comparable to controls, but rating of sexual relations, erection time and ejaculations were significantly lower ($p<0.01$). Self-rating of erection strength showed a gradual decline ($p<0.05$) and became subnormal by the 8th week. Nocturnal PT and erotic-response PT were normal throughout the 9 weeks of the study and did not drop to subnormal values. It is concluded that the stimulatory effects of T replacement in HH involve mainly libido factors and extend beyond the period of normal serum T. Therapy must be evaluated by these criteria and can be administered bimonthly.

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NOCTURNAL PULSATILE LH SECRETION IN PREPUBERTY AND HYPOGONADOTROPHIC HYPOGONADISM ASSESSED BY A HIGHLY SENSITIVE IMMUNORADIOMETRIC ASSAY (IRMA)

The accurate assessment of LH in the peripubertal period is essential for studying the ontogeny of gonadotrophin secretion during the initiation of puberty and may also improve the differentiation between constitutional delayed puberty (CDP) and isolated hypogonadism (IHH). Given the characteristically low levels of LH in these situations conventional radioimmunoassays do not have the requisite sensitivity or precision. Our aim was to study the pattern of nocturnal pulsatile LH secretion in a group of prepubertal subjects using a highly sensitive and precise LH IRMA. Fourteen patients (12M + 2F) aged 8.0-15.4 yr with delayed puberty or growth and/or short stature, and four males aged 15.2-19.8 with IHH or Kallmann's syndrome were studied by multiple blood sampling at 10 minute intervals for 12 hours between 20.00-08.00h. Pre-pubertal patients showed a wide spectrum of LH secretion from an apulsatile pattern at assay sensitivity (0.14 mU/ml) in the most immature to 4-9 pulses/12h with mean nocturnal LH concentrations approaching the adult range in the late prepubertal subjects. Cross-sectionally, these 14 prepubertal subjects showed a gradual increase in nocturnal LH pulse frequency and pulse amplitude. In the 4 IHH/Kallmann's patients, 0,0,1 & 6 small amplitude (< 0.30 mU/ml) LH pulses were observed overnight with mean nocturnal LH concentrations similar to that in the most immature of the prepubertal subjects. Despite this overlap, the improved precision in defining pulsatile LH secretion at concentrations below 1 mU/ml may facilitate the differentiation between late prepuberty and IHH/Kallmann's patients.

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164 FACTORS AFFECTING THE INTELLECTUAL PROGNOSIS IN CONGENITAL HYPOTHYROIDISM (C.H.).

40 girls and 12 boys with C.H. (8 athyreosis, 33 ectopics, 11 anatomically normal gland) whose treatment began at day : 29 $\pm$ 12 (mean $\pm$ SD) were followed for at least 4 years and in 13 cases for 7 years. The results of the Brunet-Lezine test at 0.5, 1, and 2 years ; the Termann-Merill at 4 years and the WICSR test at 7 years, were all within the normal range but with a wide scatter : range 85-145 at 4 years, 95-133 at 7 years. The factors involved in this scatter were investigated.

The following factors had no influence : clinical evidence of hypothyroidism at diagnosis, the presence and duration of neonatal jaundice, the initial levels of T4 and TSH, the etiology after 2 years, the date of starting treatment provided that this occured within the 2 first months of life.

The following factors had a positive influence on the outcome : the presence of the 2 epiphysis of the knee ($p < .025$), socio-economic level of parents (Graffar) : high medium vs medium ($p < .05$), vs low medium ($p < .005$) and good hormonal control during the first year ($p < .025$) and the following years ($p < .05$). The presence of psychological problems were predictive of a comparatively poor outcome : mild problems ($p < .005$) and severe problems ($p < .0005$) mild vs severe ($p < .05$). The development of psychological problems are associated with an initial hospitalization ($p < .001$) and the duration of it ($p < .025$).

Postnatal factors are predominant which emphasises the need for good medical and familial care.

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165 AN EIGHT-YEAR STUDY OF THE MENTAL AND PSYCHOMOTOR DEVELOPMENT OF HYPOTHYROID CHILDREN DETECTED BY NEONATAL SCREENING.

Neonatal screening for hypothyroidism was instituted in our region of France in 1977 and since then 52 cases have been detected.

Study of psychomotor development was carried out using Griffith's last from 1 to 5 years and the wisc from 6 years onwards in the hypothyroid children and 110 control subjects. In the hypothyroid group, the global development quotients (GDQ) were normal : 96.6 $\pm$ 1.2 at 1 yr (n=42), 100.9 $\pm$ 2.2 at 3 yrs (n=29) and 98.7 $\pm$2.9 at 5 yrs (n=21). There was no significant difference with the control group. Analysis of partial DQ showed that scores were stable for posture, coordination, sociability and performance, but there was a transitory decline in language at 2 yrs. Between 6 and 8 yrs, mean IQ was 101.7 at 6 yrs (n=13). The results were within the norm for the test. A neurological examination assessed using TOUWEN'S criteria was carried out at 6 months, 1, 2, 4 and 6 years of age. The result showed a lower level of coordination and precise movement control which was significant as compared to the control group. These results were confirmed by Lincoln-Oseretsky's test carried out at the age 7 years.

The overall results were analyzed to discover any correlation with the gravity or duration of the condition (blood thyroid hormone levels, etiology, epiphyseal area). There was a good correlation between the DQ at 6 months, 2 and 3 years of age, and the epiphysis area at the time the condition was detected, whereas there was no difference between athyrosis and ectopic thyroid cases.

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CONGENITAL HYPOTHYROIDISM (CH) IN ONE UK HEALTH REGION.

From Nov 1981 to Feb 1987, 289697 infants survived to be eligible for CH screening from one UK health region from which 100 infants were positive by TSH assay. The incidence was 1/3392 for whites and 1/917 for Asians (P=0.0001). The female:male ratio was 3.08:1. There was one transient and one missed case. There was a 9 fold variation in incidence amongst whites in the 19 health districts within the region. 91/100 CH infants received a technetium scan. 41% were aplastic, 42% ectopic, 3% hypoplastic, and 13% enlarged or normal (EN). The EN group was 4.78 (P=0.02) times commoner amongst consanguinous couples. Thyroid Aplasia was 2.2 times commoner in mothers of 25 years or greater (P=0.06) There was a 10% complication rate amongst CH infants. 2% had hyaline membrane disease in isolation, 8% a variety of renal and cardiac anomalies plus 1 trisomy 21. This sub group was screened later (50% screened in last quintile, greater than 19 days, P=0.05) but did not receive treatment later than non-complicated group (100% of those alive treated by 29 days versus 88% of non complicated group). There was a greatly increased mortality (5.7%) amongst CH infants when compared to the region (P=0.0001).
Race, maternal age and consanguinity may determine incidence and scan type of CH. The excess congenital anomalies and mortality are confirmed.