

Continuous subcutaneous infusion of recombinant LH and FSH during early infancy promotes testicular descent in congenital hypogonadotropic hypogonadism.

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CONTEXT

Cryptorchidism, a common consequence of HH, is treated with orchiopexy.

We previously observed that continuous subcutaneous infusion of gonadotropins restored normal serum testosterone and inhibin B concentrations in

two infants with hypogonadotropic hypogonadism (HH) and was associated with testicular descent in one.

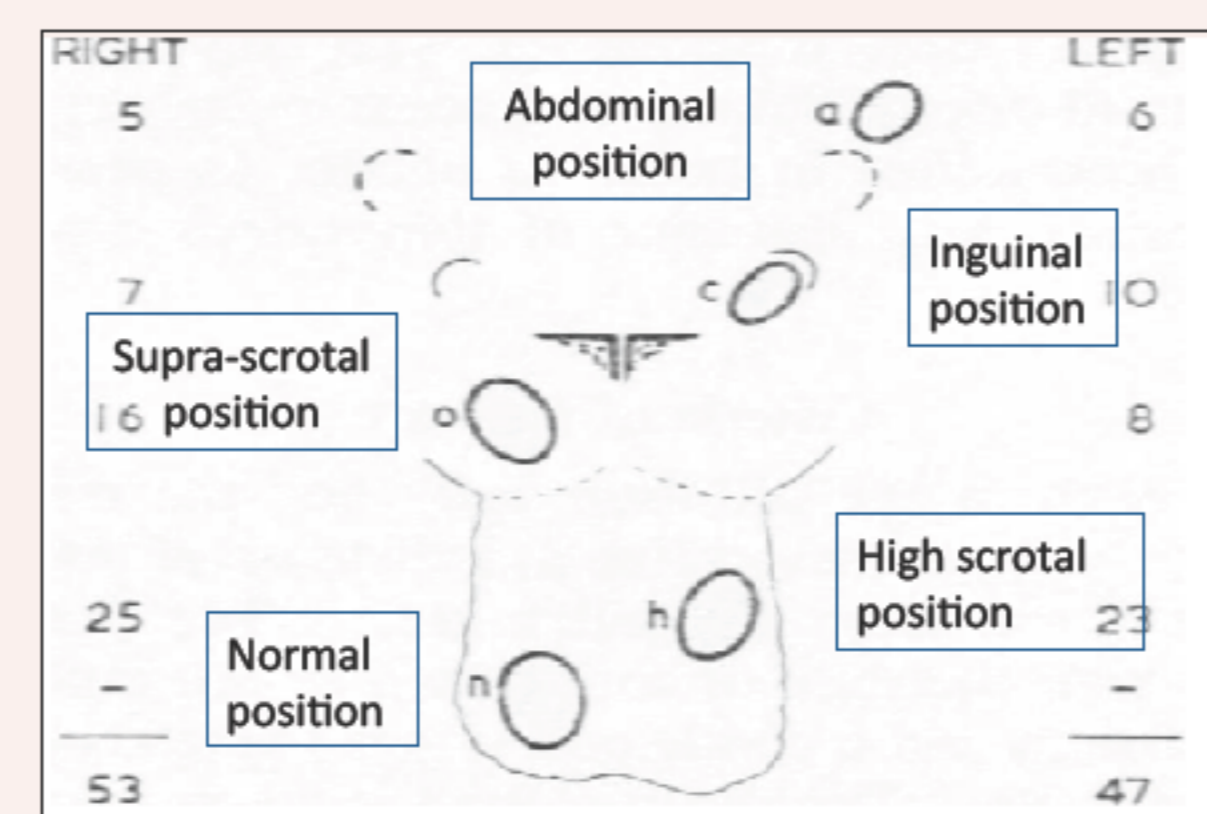


Figure 1: Scorer Classification

OBJECTIVE

Test if subcutaneous gonadotropin infusion within the first year of life can allow testicular descent in 8 boys with HH and bilateral cryptorchidism, aged 0.25-11 months.

METHODS

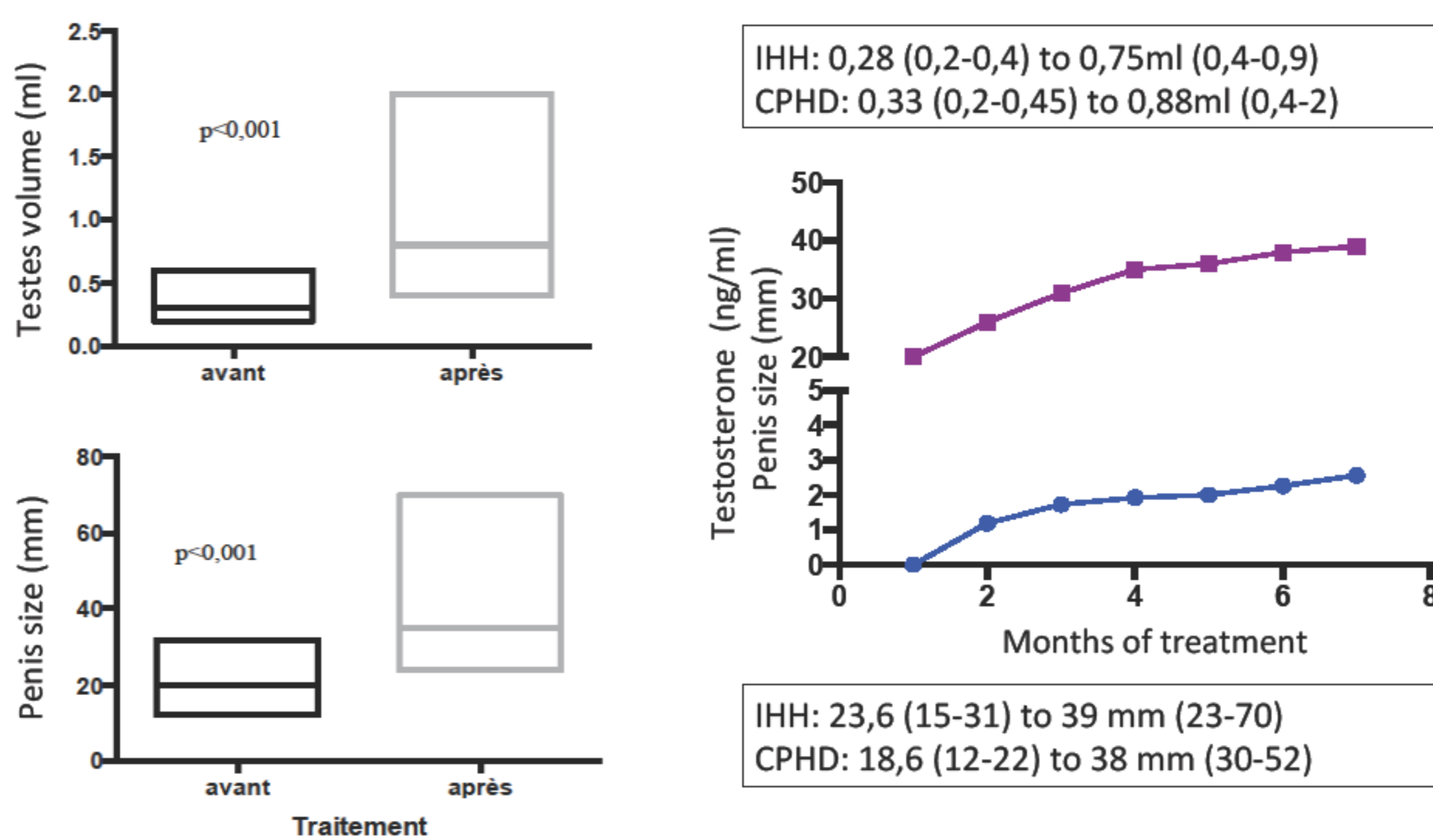
Continuous subcutaneous infusion (CSI) of rhLH and rhFSH at a daily rate of 50 and 75-150 UI, respectively, aiming at AMH and inhibin B (INB) levels normally observed during postnatal mini-puberty.

RESULTS

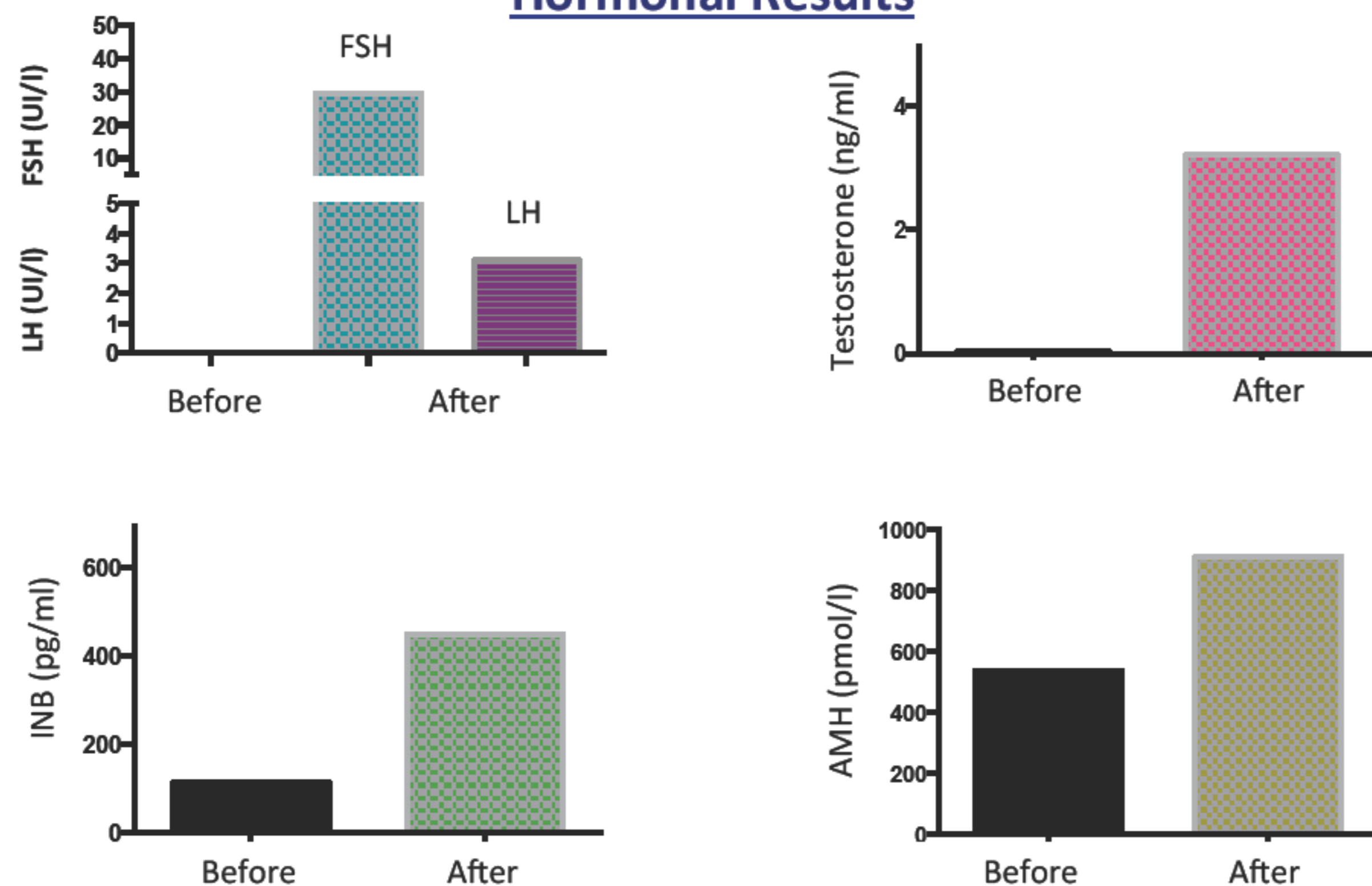
8 patients :

- CPHD (3 of 8)
- Isolated gonadotropin deficiency (IHH, 5 of 8)

Increase of testicular volume and stretched penile length



Hormonal Results



Testicular descent

	Testes Before CSI	Testes After CSI	Time to descent (months)	Penis Size (mm)	Testes Volume (ml) (L/R)	Evolution
1	Non-palpable	Bilateral high scrotal position	1	23	0.4/ 0.4	Stop recently
2	Non-palpable	Bilateral normal position	4	33	2/2	Stop recently
3	Bilateral high scrotal position	Bilateral normal position	1	70	0.8/0.7	2 years: bilateral intra-scrotal position
4	Bilateral high scrotal position	Bilateral normal position	4	52	0.8/0.8	16 months: bilateral intra-scrotal position
5	Non-palpable	Bilateral normal position	4	30	0.4/0.4	Bilateral inguinal position at 1.5 years and non-palpable at 2.5 years => surgery
6	Bilateral high scrotal position	Bilateral normal position	5	30	0.7/0.8	4 years: bilateral intra-scrotal position
7	Non-palpable	normal position (L) / high scrotal position (R)	6	35	0.4(L)	Surgery at 3 years for the right testis
8	Non-palpable	Bilateral normal position	4	40	0.8/0.7	4 years: bilateral intra-scrotal position

- Complete descent in 5 patients
- Incomplete descent in 2 patients (Patient 1: bilateral ; Patient 7: unilateral)
- Orchiopexy was realised in 2/8 patients

L=left
R=Right

CONCLUSION :

Gonadotropin infusion in early infancy seems able to induce complete testicular descent in most cases of cryptorchidism due to HH. If confirmed, this may allow infants to avoid surgical correction.

Bibliographie:

1. Bougnères et al. Effects of an early postnatal treatment of hypogonadotropic hypogonadism with a continuous subcutaneous infusion of recombinant follicle-stimulating hormone and luteinizing hormone. JCEM 2008 Jun;93(6):2202-5.

