

CONTINUOUS VERSUS DISCONTINUOUS ADMINISTRATION OF GONADOTROPINS IN NEONATES WITH CONGENITAL HYPOGONADOTROPIC HYPOGONADISM

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INTRODUCTION

Newborns with Congenital hypogonadotropic hypogonadism (CHH) have an impaired postnatal activation of the gonadotropic axis. Substitutive therapy with recombinant gonadotropins can be proposed to mimic physiological male mini-puberty during the first months of life.

AIM

To retrospectively compare the clinical (penile size, volume and testicular descent) and biological efficacy (serum concentrations of testosterone, AMH and Inhibin B) of two treatment modalities of gonadotropins administration during mini-puberty in CHH neonates.

METHOD

CHH patients treated with gonadotropins between 2004 and 2019 were recorded from two Pediatric Endocrinology departments of the Assistance Publique-Hôpitaux de Paris: Bicêtre Hospital and Robert Debré Hospital.

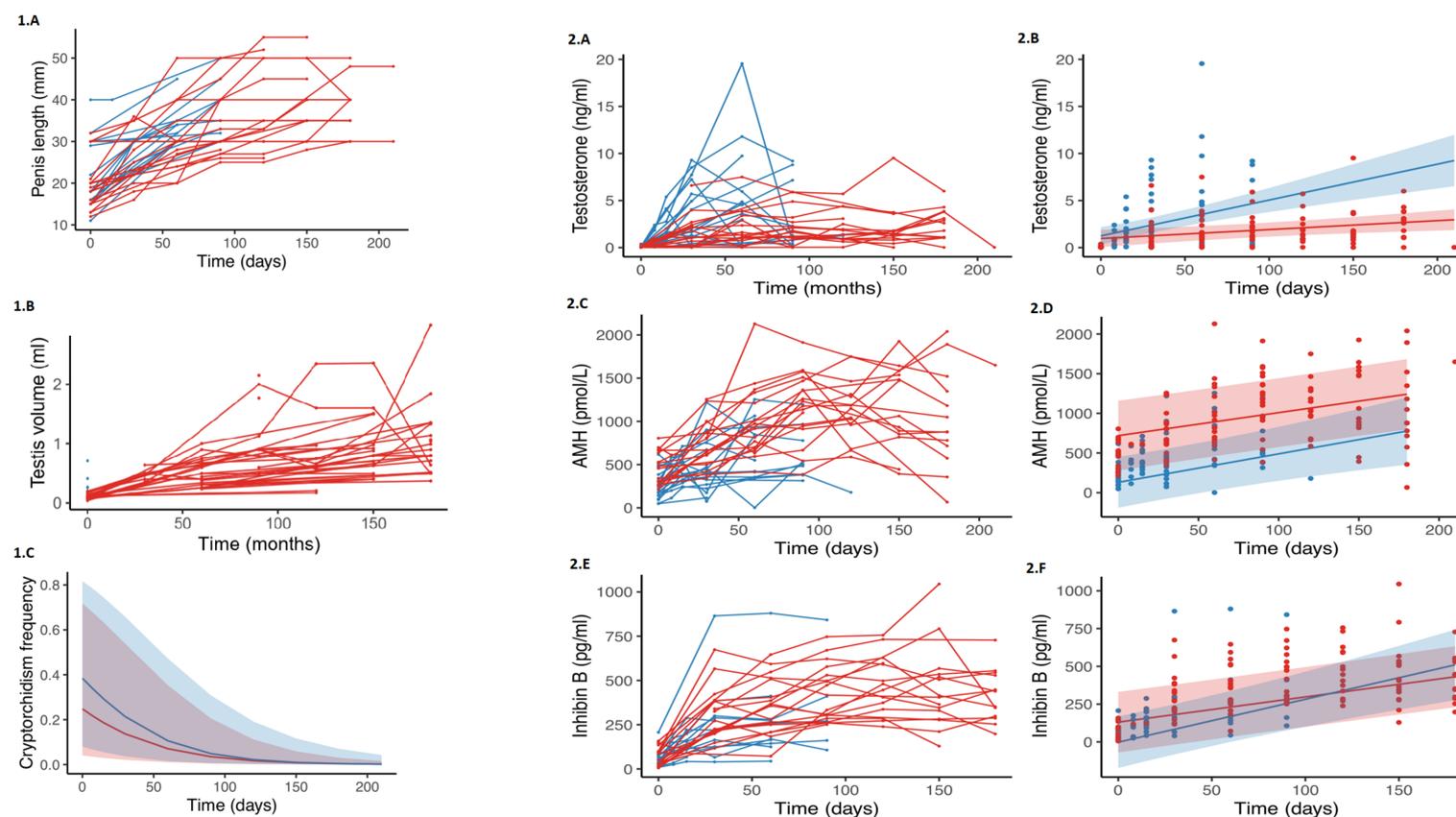
RESULTS

Thirty-five patients were included, 18 with continuous administration of recombinant gonadotropins by pump (during 6 months, P group, in red) and 17 with subcutaneous injections (during 3 months, I group, in blue).

A significantly higher increase in penile length and testosterone level were observed in the I group compared to the P group (+ 0.16 mm vs + 0.10 mm per day, and + 0.04 ng/ml vs + 0.01 ng/ml per day).

In both groups, significant increase in penile length (**1A**), sonographic testicular volume (P group, **1C**); Testosterone, AMH and Inhibin B levels were observed (**2A,B,C,D,E,F**), as well as an improved testicular descent (**1B**).

Treatment was very well tolerated without side effects.



CONCLUSIONS

Early postnatal administration of recombinant gonadotropins in CHH boys is effective in stimulating penile growth and testicular descent, and Sertoli cell proliferation, with both treatment modalities.

Based on our clinical and biological results the best option could be a 3 months continuous administration of optimized dosages of recombinant gonadotropins.

Long term follow-up of these newborns would be necessary during puberty.

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