



# GROWTH RESPONSE AFTER 1 YEAR OF GROWTH HORMONE (GH) TREATMENT IN CHILDREN BORN SMALL FOR GESTATIONAL AGE (SGA) WITHOUT GH DEFICIENCY: OUR EXPERIENCE

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## Background

Many studies have shown that GH therapy can increase final height in children born SGA. Adult height and growth velocity can be improved in these subjects even if there is not a deficiency of endogenous GH (GHD).

## Objectives

We aimed to analyze growth response after 1 year of GH treatment in children born SGA without GH deficiency.

## Methods

10 patients (6 M, 4 F) born SGA (according to Gagliardi et al)

Treated with GH for 1 year (mean GH dose: 0.2 mg/kg/week)

8 patients were prepubertal, 2 patients were pubertal stage 2 (according to Tanner).

One patient showed clinical aspects suggestive for Silver-Russell syndrome.

Two patients were late preterm (34 and 35 GA).

GH stimulation tests excluded GH deficiency.

## Results

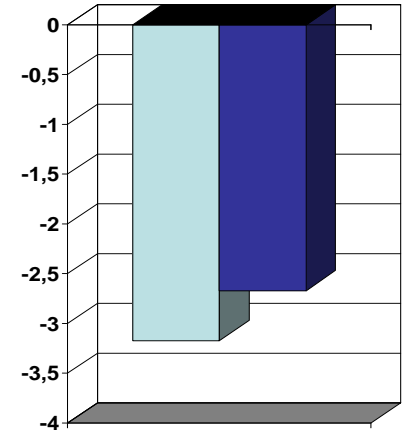
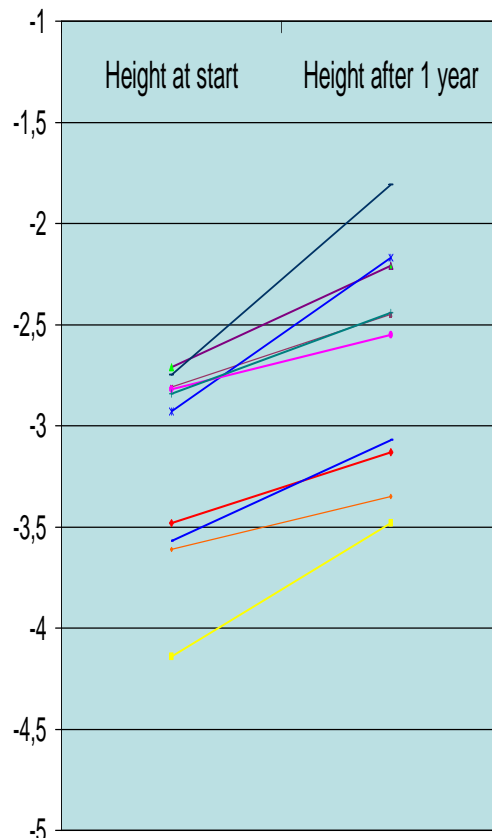
Mean age at start of treatment was  $8.5 \pm 3.4$  years.

Mean height at start was  $-3.17 \pm 0.49$  standard deviation score (SDS).

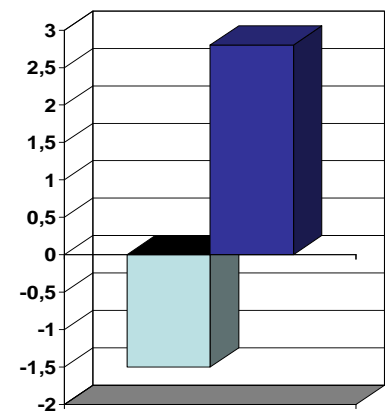
After 1 year of treatment, change in height SDS ( $\Delta$ HtSDS) was  $+0.50 \pm 0.22$  SDS.

Mean height velocity improved from  $-1.5 \pm 0.92$  SDS to  $+2.8 \pm 2.24$  SDS.

Mean height corrected for mid-parental height at start was  $-2.05 \pm 0.60$  SDS, after treatment it was  $-1.55 \pm 0.69$  SDS.



■ Mean height at start  
■ Mean height after 1 year



■ Mean height velocity at start  
■ Mean height velocity after 1 year

## Conclusions

GH treatment in children born SGA without GHD improves height and height velocity after 1 year.

When anamnestic and auxological data are suggestive of growth impairment in SGA, GH treatment must be started as soon as possible to optimize growth outcomes.