

López-Siguero JP¹, Borrás-Pérez MV², Buero Fernández N³, A.M. García Miguel⁴, M. Álvarez Casano¹, M.J. Martínez-Aedo Ollero¹, Muñoz-Martínez P⁵.

¹Hospital Regional de Málaga. ²Hospital General de Granollers (Barcelona) ³Hospital Puerta del Mar (Cádiz), ⁴Hospital Francisc de Borja (Gandía), ⁵ Servicio Pediatría del Hospital General Universitario Santa Lucía (Cartagena)

Introduction

Published studies on pubertal growth of PEG patients about growth hormone therapy are scarce. Due to an earlier and shorter duration of puberty has been described, so it may be necessary to optimize the GH treatment.

Objectives

To analyze the evolution of height during puberty in PEG patients treated with GH. To assess the age of onset of puberty and its relationship to adult and target height.

Methods

It is a prospective analytical study. We analyzed 101 PEG patients that had received GH treatment since 2005 to date, according EMA criteria. The main variable analyzed was adult height and age of onset of puberty. Patients were treated with GH at doses of 0,036 mg/k/d (0,035-0,038). The dose was adjusted according to weight and growth response, maintaining IGF-I values below 2 DS. No adverse effects were observed, except a fast advance of bone age at the beginning of puberty.

Results



Puberty onset in boys was 0.6 y before reference spanish population ($p < 0.001$), Puberty onset in girls was 0.3 y before reference spanish population ($p > 0.05$).

	Boys (n=16)	Girls (n=28)	Total (n=44)
Adult height	-2.15 (1.2)	-1.8 (0.9)	-1.91 (1)
Target height	-1.23 (0.8)	-1.05 (0.9)	-1.12 (0.9)
Height increase from the onset of treatment to adult height	0.85 (1.1)	1.35 (1)	1.17 (1)
Increase height during puberty (cm)	21.7 (6)	19.7 (5)	20.4 (5.3)
Decrease of height during puberty	-0.95 (1.2)	-0.11 (0.9)	-0.4 (1.1)
Difference from adult to target height	0.9 (0.8)	0.74 (1.1)	0.8 (1)

♂ $p = 0.009$. ♀ $p > 0.05$

♂ y ♀ $p < 0.001$

* All data are expressed as means and sds

Conclusions

- PEG boys treated with GH show a decrease in height during puberty, as well as an earlier pubertal onset compared to the reference Spanish population.
- Adult height of PEG patients of both sexes treated with GH, was significantly lower than their target height.