Final height in congenital adrenal hyperplasia: a retrospective study

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Introduction

• A compromised final height (FH) is a concern in patients diagnosed with congenital adrenal hyperplasia (CAH).
• The lack of achievement of the genetic target height (TH) can be attributed to treatment with high doses of corticosteroids or high levels of adrenal androgens.
• Despite the emergence of new therapeutic modalities such as the use of anti-androgens and growth hormone it has been shown that a favorable FH can be achieved with careful use of corticosteroids.

Objectives

Evaluate the FH in patients with CAH comparing it with the TH, using z-scores (zFH and zTH) from the World Health Organization height-for-age Child Growth Standards.

Methods

Retrospective study with review of clinical processes of pediatric patients followed in the Pediatric Endocrinology Unit of Hospital Pedro Hispano – Matosinhos, Portugal.

Inclusion criteria: patients who had achieved FH (growth velocity <0.5cm in the last year, estimated by 2 consecutive measures separated by a period of 6-12 months)

Methods: the patients heights were transformed in z-scores (standard deviations) using the 2007 WHO growth curves
• Final height (zFH)
• Target height (zTH)
• Corrected final height (zCFH): zFH - zTH

Results

23 patients: 8♂ 15♀
Salt losers: 7 Simple virilizing: 3

There was no significant difference in corrected final height between classical and non-classical forms

Patients who reached TH → mean height difference: +3.98 cm
Patients who do not reached TH → mean height difference: -3.69 cm

Conclusions

✓ The authors were able to conclude that, in their sample, although the FH was inferior to the average height in general population, the majority of patients achieved their genetic potential for height.
✓ Differences in bone age, time of diagnosis and early initiation of treatment can be key factors in the final height outcome, however the use of corticosteroid therapy alone allowed, in this sample, the achievement of the TH.