Aetiology and different clinical conditions of GHD in children in a region of North Africa

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P2-274

Background

Growth hormone deficiency (GHD) is defined as a total or partial deficiency in the secretion of growth hormone (GH) by the somatotropic cells of the anterior pituitary. The exact prevalence of this condition is unknown in Algeria. In Europe and the United States, it is variously estimated and varies between 1/4000 and 1/10000. This large variation in prevalence is explained by clinical polymorphism, the limits of pharmacological stimulation tests for GH stimulation, problems in interpreting the diagnosis threshold value which varies from one country to another, the poor reproducibility of the tests, and the absence of clinical criteria for certainty.

Aims of study

The objective of our study is to to determine the clinical features and evolution of childhood GHD in our centre, and to evaluate our practices.

Methods

It is a retrospective, descriptive study, spanning the period 2010 to 2020; were eligible for the study all GHD patients, several parameters were evaluated, age, sex, size, diagnostic elements, etiology, dose of treatment. We compared the height gain according to the etiology and the dose, pre-pubertal and pubertal, and the severity of the height delay.and we analyzed the results of the reassessment.

Results

We collected 123 patients. The mean age was 7 ± 1 year, with a child in the neonatal period, the sex ratio is 1.1. The average height was -3.03 SDS. The diagnosis of GHD was made at a mean age of 8 ± 0.5 years, diagnosis delay was 3 ± 0.6 years. 47% had pathological MRI. GHD was associated with other pituitary deficits at diagnosis in 10%. The mean dose of GH was 0.030 mg / Kg / d, it was greater in partial GHD 0.035 mg / Kg / d vs 0.025 mg / Kg / d in GHD with malformation or associated with other deficits. The mean height gain was 8.9 ± 2.6 cm in the 1st year (> 1 SDS) for patients with malformative or multiple deficit GHD, and patients who started treatment before the age of 5 in comparison with diopathic and partial GHD (8.7 ± 2.2 cm vs 5.2 ± 0.8 cm, P <0.01), An indication for reassessment was asked in 19 patients (23.4%), IGF1 was > - 2 SDS in 58% for isolated GHD, versus 21% in GHD with malformation or associated with other deficits (P <0.01)

Comments

GH deficiency is a rare pathology, the diagnosis is made on a set of arguments. Our work joins the data in the literature on the criteria of good response to treatment, which are precocity and association with other deficits.

During 10 years of rhGH therapy, significant improvement in height was confirmed in our series patients with GHD

Conclusion

When the growth response to rhGH is less than predicted,we have to consider poor compliance, faulty injection techniques, other deficit associated and the dose according to the etiology

References

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GH and IGFs
Bouferoua Fadila

P2-274