



POSTER PRESENTATION

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Influence of growth hormone receptor exon 3 polymorphism on growth response in children with growth hormone deficiency

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Aims

Pharmacogenetic effects of recombinant human growth hormone according to growth hormone receptor (GHR) exon 3 polymorphism (fl vs. d3) were controversial. We investigated growth hormone response in children with growth hormone deficiency (GHD).

Methods

Total 58 prepubertal children (31 boys and 27 girls) with GHD were enrolled in this study. Subjects were divided to 2 groups according polymorphism (fl/fl, n=48; fl/d3 and d3/d3, n=10), and compared baseline phenotypes and the first year growth response to growth hormone treatment.

Results

The distribution of GHR exon 3 isoforms in children with GHD demonstrated that the frequency of fl/fl (82.8%) is higher than that in most of European studies. There was no significant difference in baseline height SDS between 2 groups. Height velocity during the first year of growth hormone replacement therapy tended to be higher in subjects who have d3 allele (fl/d3 and d3/d3), but there was no statistical difference according to genotype.

Conclusion

It seemed that d3 allele of GHR exon 3 had no impact on the baseline phenotype and growth hormone response in patients with GHD. Relationship between GH dose and IGF-1% to help fully elucidate the value of IGF-1 testing in GH treatment.

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