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1: J Endocrinol Invest. 1996 Sep;19(8):563-6. Related Articles, Links

Recombinant human growth hormone treatment at low doses does not significantly change thyroid function in growth hormone deficient adults.

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Pituitary-thyroid changes have been reported during recombinant human growth hormone (rhGH) therapy at the dose commonly used in prepuberty. We have previously demonstrated that low doses of rhGH were able to normalize body composition and both cardiac structure and function in growth hormone deficient adults (GHDA), without causing any of the side effects described when the GHDA were treated with doses commonly employed in the GHD children. The aim of this study was to evaluate the behaviour of pituitary-thyroid parameters in GHDA undergoing such a low dose of rhGH treatment. We studied 9 (2 females and 7 males, 25-34 yr) GHDA, 7 congenital and 2 acquired GH deficiency, before, during and after a 12-month rhGH treatment of dose of 10 micrograms/kg/day (= 70 micrograms/kg/week) divided in 3 injections, administered sc at 20:00 h on Monday, Wednesday and Friday, respectively. Thyroid deficiency and other hormonal deficiencies, when present, had been adequately corrected with replacement therapy. Serum IGF1, T3, T4, free-T3, free-T4, TSH, reverse-T3, T3/T4 and FT3/FT4 ratios were studied basally, every 3 months during the 12-month rhGH treatment and every 3 months for a period of 12 months off therapy. Analysis of variance (ANOVA) was performed as statistical method. All parameters (except IGF1) did not show any variation during and after rhGH treatment at low doses. The alterations of T3 and T4 metabolism, in the sense of a T3 increase and a T4 reduction, caused sometimes by rhGH treatment, could be due to the higher doses used and therefore should be considered another side effect, like artrhalgia, fluid retention, carpal tunnel syndrome, etc.

Publication Types:
- Clinical Trial

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