primary studies - published RCT

Effect of insulinlike growth factor-1 treatment in children with cystic fibrosis.

Code: PM11740232 **Year:** 2001 **Date:** 2001 **Author:** Bucuvalas JC

Study design (if review, criteria of inclusion for studies)

double-blind placebo-controlled crossover design.

Participants

7 prepubertal CF children aged 9.6 to 13 years (5 boys and 2 girls) .

Interventions

CF patients were treated with placebo or IGF-1 for 6 months. After a 6-month washout period, patients received the alternative therapy for 6 months

Outcome measures

The primary outcome measure was linear growth rate. Secondary outcome measures were changes in body mass index, body composition determined by dual energy x-ray absorptiometry, forced expiratory volume (FEV(1)), and the blood glucose/insulin ratio.

Main results

The mean height z score at baseline was -1.5 +/- 0.8. At entry, the mean serum IGF-1 level was 124 +/- 25 ng/mL (normal range, 110-771 ng/mL). With treatment, mean serum IGF-1 levels increased twofold to threefold for all patients. The half-life for IGF-1 was 10.3 hours. We observed no significant difference in linear growth rate, weight gain, rate of accretion of lean body mass, or mean FEV(1) during treatment with IGF-1 compared with placebo. The glucose/insulin ratio, an indirect index of insulin sensitivity, was significantly increased with IGF-1 treatment compared with placebo (P

Authors' conclusions

Treatment with IGF-1 for 6 months did not promote linear growth in prepubertal children with CF. However, the glucose/insulin ratio was increased without changing blood glucose levels with IGF-1 treatment suggesting increased insulin sensitivity.

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See also

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Keywords

Adolescent; Child; Insulin-Like Growth Factor Binding Protein 3; Insulin-Like Growth Factor I; Nutrition Disorders; pharmacological_intervention; Malnutrition; Hormones; Growth Hormone;