Other Reviews - - Other Review

Recombinant human growth hormone in the treatment of patients with cystic fibrosis

Code: DARE-12011000193 **Year:** 2010 **Date:** 17-Mar-2011 **Author:** Phung OJ

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

Randomized controlled trials, observational studies, systematic reviews/meta-analyses, or case reports were included if rhGH therapy was administered to patients with CF and data on prespecified harms, intermediate outcomes, or final health outcomes were reported. Studies were included if (1) they were studies of rhGH therapy, (2) they were conducted on patients with CF, (3) data on prespecified clinical or humanistic outcomes were reported, and (4) they were reports of new discovery (specifically, randomized controlled trials, observational trials, systematic reviews/metaanalyses, or case reports)

List of included studies (18)

Hardin 2001; Hutler 2002; Schibler 2003; Darmaun 2004; Hardin 2005; Hardin 2005; Hardin 2005; Hardin 2006; Schnabel 2007; Stalvey 2007

Participants

10 unique controlled trials and 8 observational studies were included

Interventions

There were no inclusion criteria relating to the intervention

Outcome measures

End points included pulmonary function, anthropometrics, exercise tolerance, intravenous antibiotic use, hospitalizations, health-related quality of life (HRQoL), bone mineralization, bone fracture or development of osteoporosis/osteopenia, mortality, glucose measures, and development of diabetes or malignancy.

Main results

There is insufficient evidence to determine the effect of rhGH on intravenous antibiotic use during therapy, pulmonary exacerbations, healthrelated quality-of-life, bone consequences, or total mortality, but moderate evidence suggests that rhGH therapy reduces the rate of hospitalization versus control

Authors' conclusions

rhGH improved almost all intermediate measures of pulmonary function, height, and weight in patients with CF. Improvements in bone mineral content are also promising. However, with the exception of hospitalizations, the benefits on final health outcomes cannot be directly determined at this time. - preliminary data suggest that pubertal/adolescent patients may derive more pulmonary benefits from rhGH therapy than prepubertal patients, although there are dissimilar increases in height. - individual patient data meta-analysis of completed trials that evaluated rhGH therapy in patients with CF; individual-patient data meta-analysis could allow the determination of the benefits of rhGH therapy in patients with varying levels of nutritional status, pubertal status, age, and concurrent medical therapy; large, multicenter, randomized, placebo-controlled trial to determine the impact of rhGH therapy on hospitalizations, mortality, bone fractures, and HRQoL; future trials be placebo controlled; trials with treatment durations of 6 or 12 months or longer

http://dx.doi.org/10.1542/peds.2010-2007

See also

Pediatrics YR: 2010 VL: 126 NO: 5 PG: e1211-e1226

Keywords

Child; Growth Hormone; Hormones; pharmacological_intervention; Recombinant Proteins;