Growth hormone safe for infants with chronic kidney failure

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Infants with chronic renal failure (CRF) grow slowly, a problem that usually improves with aggressive nutritional therapy. When it doesn't, growth hormone is a safe and effective treatment to promote growth, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society of Nephrology* (CJASN).

"Early treatment with growth hormone improves growth retardation and bone mineral density without short-term undesirable effects," comments Fernando Santos, MD, PhD (Hospital Universitario Central de Asturias, Oviedo, Spain).

The Spanish-Portuguese multicenter collaborative study included 16 infants with CRF who had continued growth retardation despite nutritional therapy. All infants were receiving dialysis or other conservative treatments for their chronic kidney disease.

One group of infants received growth hormone while the other did not. During the yearlong study, infants treated with growth hormone grew an average of 5.7 inches, compared to 3.7 inches in those who did not receive growth hormone.

Equally important, growth hormone caused no harmful effects such as early bone maturation, progression of kidney disease, or metabolic abnormalities. Several key indicators of nutrition and bone growth were similar between groups.

Some infants with CRF do not grow, despite receiving good nutrition and treatment to control other factors that can lead to growth problems. The new results show that, for these uncommon cases, growth hormone therapy can be effective. "Growth hormone is an additional tool to avoid aggravation of growth impairment in this group of patients," says Santos.

In some countries—including Spain and Portugal—growth hormone is not approved for use in children less than two years old. By that time, children with CRF may already have an important delay in growth, according to Santos.

Even in countries where growth hormone is approved for the treatment of growth failure in young children (including the United States), doctors and parents may be reluctant to use it. "Our study supports early treatment with GH in those infants with CRF who remain growth retarded after achieving good clinical, metabolic and nutritional control," Santos and coauthors conclude.

Santos adds that further follow-up would provide interesting data on the long-term evolution of growth and on the progression of kidney failure.

More information: "Improvement in Growth After 1 Year of Growth Hormone Therapy in Well-Nourished Infants with Growth Retardation Secondary to Chronic Renal Failure: Results of a Multicenter, Controlled, Randomized, Open Clinical Trial," doi:10.2215/CJN.07791109

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