

**Editor's Comment:** The authors recall several studies in which catch-up growth in pre-term infants has been stated to occur up until adolescence, and note that the patients in this study should be followed at least through school age. The data are intriguing however, for several other reasons. First, it is possible that these very young children (less than 30 weeks gestation) may respond with accelerated growth to recombinant growth hormone therapy in much the same way as do children with intrauterine growth retardation. Initiation of such therapy at a young age might significantly improve not only final

height, but developmental milestones as well. The discrepancy in head circumference in the very pre-term infant, although minimal, is nonetheless of considerable concern. Thus as the authors point out, it would be important to carefully record growth patterns, and developmental milestones over time in the attempt to define those children who might benefit most from earlier hormonal investigation and intervention. It would appear that the Swiss Minimal Neonatal Data Set is an excellent resource for the collection and analysis on such data.

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## Adult Height in Advanced Puberty with or without Gonadotropin Hormone Releasing Hormone Analog Treatment

The authors define "advanced puberty" as "the onset of puberty in girls between 8 and 10 years and in boys between 9 and 11 years." (Others might also use the term "early puberty" for such subjects.) In a retrospective assessment of the effect of a gonadotropin releasing hormone agonist (GnRHa - D-Trp<sup>6</sup>-GnRH) upon adult stature in children with "advanced puberty," the authors administered GnRHa for 2-2.4 years to 9 adolescent girls with serum estradiol concentrations in excess of 20 pg/mL, and 8 pubertal boys with testosterone values greater than 100 ng/dL who had a pubertal gonadotropin secretory response to GnRH. Mean adult height of treated subjects was compared to that of a control group of untreated subjects. In treated girls, mean adult stature (155.3 cm) was insignificantly different from pretreatment predicted height (151.9 cm). In control females (N=31), mean adult and predicted heights were also similar (157 cm and 156.7 cm, respectively). In both groups, adult heights were close to their target heights. In treated boys, mean adult height (164.1 cm) was less than mean predicted height (173.2 cm) and mean target height (170.4 cm). In untreated boys (N=9), adult height, predicted, and target heights were similar (169.1, 170.8, and 170.2 cm, respectively). The authors concluded: "These data suggest that advanced puberty decreases the growth potential by about 5 cm, and that GnRHa treatment does not prevent this."

Couto-Silva AC, et al. *J Pediatr Endocrinol Metab* 2002;15:297-305.

**Editor's Comment:** Luckily, GnRHa did not increase adult stature in girls with "advanced puberty" and may even have led to decreased stature in boys. While under specific and individual circumstances (such as major behavioral problems, disabling physical handicaps, or significant developmental delay), one might consider interruption of pubertal development in subjects of normal adolescent age, to do so for the purpose of achieving a greater adult stature is an unjustified use of agents such as GnRHa. Similarly, the use of recombinant human growth hormone (rhGH) to increase to a minimal extent adult stature in normal but short children is unjustified medically, psychosocially, or financially.<sup>1</sup> Unfortunately, we may shortly expect to read a manuscript in which both GnRHa and rhGH have been administered to children with "advanced puberty."<sup>2,3</sup> At what point did the pediatric endocrinologist cease being a physician-scientist and become a physician-cosmetologist?

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### References

1. Finkelstein BS, et al. *Arch Pediatr Adolesc Med* 2002;156:230-240.
2. Kamp GA, et al. *J Clin Endocrinol Metab* 2001;86:2969-2975.
3. Kaplowitz PB. *J Clin Endocrinol Metab* 2001;86:2965-2968.

## GH Anabolic Effects of GC-Dependent Children with IBD

This pilot study utilizing 6 boys and 4 girls was designed to determine whether rhGH could overcome some of the catabolic effects of chronic glucocorticoid (CG) treatment (24 months) of IBD. Subcutaneous rhGH (0.05 mg/kg/d) was given for a minimum of 6 months. Seven patients continued for 12 months. Body composition

changed favorably with increased fat free mass and decreased fat mass. Linear growth velocity increased from  $3.5 \pm 0.4$  cm/yr pre-rhGH to  $7.7 \pm 0.9$  cm/yr after 6 months. The GV persisted for the next 6 months in all 7 treated. Bone calcium accretion increased as did alkaline phosphate specific for bone [(a measure of bone