

## GROWTH AND DEVELOPMENT

ENDURING EFFECT OF  
GH THERAPY IN PWS

The metabolic effects of growth hormone (GH) therapy in patients with Prader–Willi syndrome (PWS) persist in adults after discontinuation of treatment in childhood or adolescence, report Muriel Coupaye and colleagues.

The percentage of children with PWS who have GH deficiency is estimated to be 80%, and this deficiency persists into adulthood in 30% of patients. GH is frequently prescribed to treat children and adolescents with PWS, and this treatment has been shown to improve growth and body composition. However, data about the long-term effects of GH treatment when therapy is discontinued after achievement of final height were lacking.

Coupaye and co-workers collected body composition and metabolic data for 64 adult patients with genetically confirmed PWS who were prospectively enrolled at two hospital units in France. Among these individuals, 20 patients had been treated with GH in childhood and/or adolescence (4.4 years on average), with treatment discontinued 7.0 years on average before the study; 44 patients had never received GH therapy.

BMI, percentage of fat mass (calculated after body composition evaluations by dual-energy X-ray absorptiometry) and HbA<sub>1c</sub> levels were significantly lower in patients who had received GH therapy than in those who had not. In patients without diabetes mellitus, insulinaemia and the degree of insulin resistance (as calculated with the homeostasis model assessment of insulin resistance [HOMA-IR]) were significantly lower in the treated group ( $n=18$ ) than in the nontreated group ( $n=32$ ). Therefore, “GH treatment in childhood and adolescence not only changes the phenotype of children and adolescents but may also contribute to decreased comorbidities in adults with PWS,” comments Coupaye.

In the future, “we would like to better understand the effects of GH on metabolism in patients with PWS,” says Coupaye, “particularly by studying its effects on adipose tissue”.

“All children with PWS and GH deficiency should receive treatment with GH to improve their health and quality of life at all ages of life,” concludes Coupaye.

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