Cardiovascular risk factors and metabolic parameters in Growth Hormone deficient patients

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Methods

Twenty-four patients diagnosed with GHD (13 male), with a mean (SD) age of 54.3(2.7), were compared to 15 age, sex and body mass index (BMI) matched, controls.

Diagnosis of GHD had been made with an insulin tolerance test (peak GH<3ng/ml), unless the patient had been diagnosed with at least another two pituitary hormone deficiencies and had known structural pituitary pathology.

Anthropometric characteristics: BMI and waist-to-hip ratio (WHR)

Haemodynamic parameters: Blood pressure

Metabolic parameters: After an overnight fast plasma glucose, insulin, haemoglobin A1c (HaA1c), lipid levels (T-Chol, Trigs, HDL-Chol, Lp(a)), lipoproteins ApoA1 and ApoB

Surrogate measures of insulin resistance/sensitivity and beta-cell function: HOMA-IR, HOMA-B, QUICKI model and Matsouda ISI

Inflammatory and coagulation indices: High sensitivity-CRP (hs-CRP) fibrinogen, PAI-1, t-PA and circulating thrombomodulin levels

Conclusions

A considerable number of cardiovascular risk factors including lipid and lipoprotein levels and insulin sensitivity, irrespective of BMI, are affected in GH deficient adults. Studies addressing whether GH substitution results in decreased CVD morbidity and mortality are needed so therapy could be more vigorously implemented in such patients.