

Ghrelin plasma levels in patients with idiopathic short stature

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Background: Novel molecular insights have suggested that ghrelin may be involved in the pathogenesis of some forms of short stature. Recently, growth hormone secretagogue receptor (GHSR) mutations that segregate with short stature have been reported. **Aim:** To study plasma ghrelin levels in prepubertal patients with idiopathic short stature (ISS). **Methods:** Fasting total plasma ghrelin levels (radioimmunoassay) in 41 prepubertal patients with ISS (18 females, age 7.9 ± 0.5 years) compared with 42 age- and sex-matched controls (27 females, age 8.0 ± 0.3 years) with normal height. In a subset of 28 patients, the ghrelin receptor was sequenced. **Results:** ISS patients exhibited a higher level of ghrelin ($1,458 \pm 137$ vs. 935 ± 55 pg/ml, $p < 0.01$) and similar IGF-I levels (-0.66 ± 1.29 vs. -0.32 ± 0.78 SDS) compared to controls. Ten patients with ISS had ghrelin levels greater than +2 SDS compared to controls. These patients did not differ in height, BMI or IGF-I SDS compared to ISS patients with