The clinical and the laboratory criteria used in the diagnosis of growth hormone deficiency (IGHD) have low sensitivity and specificity. The inadequacy of auxological and biochemical parameters, low reproducibility and high intra-individual variability of the stimulation tests are important problems in diagnosis. When evaluated at the end of the growth, 25-75% of the children who are treated for GHD have normal growth hormone (GH) levels. Repeat evaluation early in childhood in treatment may help detect cases with normal GH status earlier.

**METHODS**

One year after the onset of therapy, GH tests were repeated in 265 patients (104M/61 F). Multiple pituitary hormone deficiency (MPHD) was present in 35.8%, isolated growth hormone deficiency (IGHD) was present in 64.2%. Auxological data, puberal stage, IGF-1, IGFBP-3 levels, and imaging of the pituitary gland were analyzed.

We repeated stimulation tests in patients who were diagnosed as GHD and were receiving GH replacement therapy to detect patients with normal responses, and analyzed clinical and laboratory features in order to define the characteristic findings that may point to patients who require reassessment of GH status.

**RESULTS**

- The mean age, bone age, height SDS at diagnosis were 10.4±4.1, 7.4±3.9 and -2.8±1.1 respectively. At retest GH ≥ 10 ng/ml was observed in 69/265 (26%) patients. None of the patients with MPHD had GH ≥ 10 ng/ml. GH response was 210 ng/ml in 69/179 (40.6%) cases with IGHD.

**CONCLUSION**

- **Patients with MPHD do not need revaluation for GH status**
- **Patients with IGHD who have following features should be reevaluated**: Peak GH >5mg/ml at diagnosis
  - Normal/hypoplastic pituitary gland
  - Height gain <0.61SDS during the first year of therapy
- Our results indicate that reevaluation of patients with respect to GHD in the early period is reliable, given the similarity between the final heights in patients who did not continue treatment, and patients who continued treatment.

**REFERENCES**