Data on response to growth hormone (GH) treatment in the very young with GH deficiency is scarce. The aim of this study was to evaluate the growth response in such children in a national multicentre study and to analyze the factors affecting the growth response.

MATERIALS and METHODS

In this study, we retrospectively evaluated the files of GH-deficient patients who had started GH treatment between 0-3 years of age who were being followed in 14 different centres from different regions of Turkey between 19 February 2014 and 23 October 2014. The study was approved by the Clinical Studies Ethics Committee. All collected data were obtained from patient hospital records. An electronic case recording form (CRF) was created. The CRF covered demographic features, as well as clinical and laboratory findings of the patients. The CRF was uploaded to the website of FAVOR Web Registry System (www.favorsci.org). Data entered in the registry were checked for consistency by one of the authors (SC). The time given for patient enrollment was eight months. By the end of the deadline the collected patient record data were entered to Microsoft Excel database and subsequently transferred to SPSS for Windows statistical software for statistical analysis.

The duration of GH treatment was accepted to be at least 12 mo. The patients were further subdivided according to isolated vs multiple pituitary hormone deficiency (MPHD) and age at onset of therapy: 0-12 mo vs 12-36 mo. Results of GH therapy over one year are shown in Table 1.

RESULTS

There were 42 patients with GH deficiency (23M, 19F) with a peak GH response (after GH stimulation test or at hypoglycemia) of 0.69±0.14 ng/ml. 30 had MPHD and 12 had isolated GH deficiency. The mean age at onset of GH therapy was 11.2±1.03 mo. Mean GH dose used was 31.7±1.4µg/kg/day. Results of GH therapy over one year are shown in Table 1.

In MPHD Group 1st year response was significantly higher (16.5±4.2cm) than in the isolated GH deficiency group (12±3.3cm)(p<0.014) (Table 2).

CONCLUSION

There was no difference between girls and boys with respect to the growth response. Neither was a difference in growth response between those with mimipuberty or normal pubertal development. Multiple regression analysis did not reveal a significant parameter to explain the differences in growth response.

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