Erythropoietin and Granulocyte Macrophage colony stimulating factor levels in Growth Hormone deficient children after 1 year of Growth Hormone therapy

Maria Pankratova¹; Maria Vorontsova¹; Alexander Yusipovich²; Tatyana Shiryaeva¹; Valentina Peterkova¹

¹Endocrinology Research Centre, Moscow, Russian Federation
²Lomonosov Moscow State University, Faculty of Biology, Moscow, Russian Federation

BACKGROUND
An increase in growth rate in children suffering from growth hormone deficiency (GHD) subjected to recombinant growth hormone treatment (rGHT) was shown to be accompanied by acceleration of metabolic processes that may stimulate hematopoiesis.

RESULTS
As expected, over the whole period of rGHT treatment we observed a significant increase in all anthropometric parameters. IGF-1 and IGFBP-3 values and RBC count also increased. Three months into rGHT we observed a slight increase in EPO and GM-CSF levels (median 17.8 mU/ml and 3.3 pg/ml, respectively), which was however statistically insignificant. Further, by the end of rGHT both parameters did not differ significantly from their initial values (for EPO median 14.7 & 10.9 mU/ml and for GM-CSF median 2.2 & 1.6 pg/ml, respectively). Also, we did not observe any correlation between EPO, GM-CSF levels and other measured blood parameters.

CONCLUSIONS
This work demonstrates that one year rGHT in GHD children does not lead to an increase of hematopoiesis-stimulating factors EPO and GM-SCF, suggesting that haematopoiesis is not increased during the treatment period.

Authors have nothing to disclose.