Gladkova I., Telnova L.

Analysis of the effectiveness of insulin therapy in children with type 1 diabetes.

  Kharkov National Medical University (Department of Pediatric № 1 and

Neonatology), Kharkov, Ukraine.

**Background.** The relevance of diabetes mellitus (DM) is defined by the rapid increase in the incidence, a high degree of disability of patients. Approximately 6% of patients with type I diabetes sick in childhood and adolescence, which leads to the severity of the disease, the early development of vascular complications. The basis of prevention of diabetes is to offset the disease, insulin-dependent rational.

**The aim** was to study the efficacy of genetically engineered human insulin and insulin analogues.

**Materials and methods.** The effectiveness of insulin therapy has been studied in 30 children with type 1 diabetes between the ages of 5 and 17 years who were treated in the children's endocrinology department of the regional children's hospital of Kharkov. Among the children studied were 14 girls and 16 boys.  Patients were divided into 2 groups. The children of the first group within 6 months received genetically engineered human insulin (Actrapid, Humulin R), the second group - insulin analogs (Novorapid, Lantus, Levemir).  Indication for the children of insulin analogues was: labile course of the disease, frequent hypoglycemic state. The children surveyed: the glycemic index and glycemic profile, HbA1C.

**Results.** The analysis of the study showed that children treated with insulin analogues, there was a better compensation of diabetes compared to children treated with genetically engineered human insulin. This was expressed by a decrease fasting blood glucose (I group - 9,15 ± 2,3 mmol / l, II group - 7,12 ± 1,9 mmol / l p <0.05), indicators of HbA1C (I group - 10 95 ± 1,4%, II group - 7,8 ± 1,2% p <0.05). In two thirds of children treated with insulin analogues, showed a decrease frequency of hypoglycaemia.

**Conclusions.** Thus, in children more effectively achieved through compensation diabetes insulin analogues.