

## **Surveyor's Report for a period from March 2002 to June 2002**

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During the aforesaid period there have been continued examination of children suffering from diabetes mellitus, collected additional clinical data for "placebo" group and performed comparative analysis of treatment results for two groups of patients. Total number of children under medical observation was 36. These children were at the age of four to fifteen. 18 children have been treated by RIKTA apparatus equipped with real emitter and 18 children – by RIKTA apparatus equipped with placebo-emitter (all equipment was of MILTA-PKP GIT manufacture).

Totally there have been 19 girls and 17 boys, suffering from the disease during a period from 1 month to 6 years. Twenty (20) children were in subcompensation stage, seven (7) children – in decompensation stage (ketoacidosis) and the others – in compensation stage. 70% of children had overburdened medical history. Diagnosis was verified by clinical-anamnestic and laboratory data. Glycemia daily monitoring was provided for all children, and serum and erythrocyte insulinase was determined using original method before and after the treatment. C-peptid level was also determined before and after the treatment.

Blood insulinase in healthy children was  $368 \pm 15$ . Blood insulinase in ill children was statistically significant reduced and equals  $233 \pm 18$ . There was not observed a dependence of insulinase activity of blood serum on duration of the disease. For example, in children with 1-year disease "history" insulinase was  $228 \pm 25,1$ ; in children with 1-3-year disease "history" it was  $228,9 \pm 35,2$ ; in children with more than 3-year disease "history" it was  $233,31 \pm 9,8$ .

It should be noted a certain dependence of insulinase activity on the disease stage. Thus, in children in subcompensation stage insulinase activity was  $242 \pm 16,8$  (80% of normal value), and in decompensation stage -  $204 \pm 18,05$ , i.e. 16% less in comparison with the first-mentioned stage.

Analysis of insulinase activity depending on premorbid background did not show evident dependence on anamnesis. Insulinase activity of erythrocytes in patients suffering from diabetes mellitus was statistically significant reduced and equals  $17,72 \pm 5,8$  in comparison with  $24,42 \pm 3,5$  in healthy children.

C-peptid level of blood serum is evidently depends on the disease duration. If during the first year of the disease C-peptid level is  $0,619 \pm 0,12$  ng/ml, then in children with more than 1-year disease history C-peptid level is  $0,311 \pm 0,07$  ng/ml and in children suffering from the disease longer than 3 years C-peptid level is  $0,102 \pm 0,003$  ng/ml. Overburdened anamnesis, i.e. medical history with often diseases, also influences on C-peptid level ( $0,418 \pm 0,05$  ng/ml versus  $0,612 \pm 0,12$  ng/ml normal value).

So, there is an evident pancreas functional deterioration depending on the disease duration and overburdened medical history.

Treatment performed with the help of RIKTA has provided the positive dynamics in 78% of children. Blood sugar became on average 24,06 6,5% less in 56% of patients and 3,8 0,5% less in 22% of patients. In other children glycemias didn't decrease, or even increased, after the treatment. C-peptide level in children after the treatment became 20-40% more in comparison with initial level and equals on average 0,419 0,08 ng/ml. Insulinase activity is 235 6,2 on average after the treatment.

Results of treatment using RIKTA with placebo-emitter were as follows: positive effect was observed in 44% of children, i.e. twice less than in the first-mentioned group. And blood sugar became 19% less only during the first week, and then became practically the same as before the treatment. Dose of insulin injection even increased by the end of the treatment course in comparison with initial dose. Negative effect after the treatment course was observed in 56% of children: blood sugar increase was 19% by the end of the treatment course and this caused increasing insulin dose. Insulinase activity in this group of children was less (233,38 ,2), C-peptide level by the end of treatment was 0,3830 ,04 ng/ml.

So, the performed preliminary comparative analysis of two groups of patients has testified significant effect of treatment using quantum therapy apparatus RIKTA, and lack of positive results when using placebo-emitter.