SUMMARY

In our paper we were interested in abnormalities of glycide metabolism. The experiments were performed in normotensive male and female rats of Wistar strain as well as male and female rats of Koletsky strain. Glucose intolerance was induced in both of strains by brain ischemia (4 hours of occlusion of both common carotid arteries followed by 44-hour-reperfusion). Brain water content was used as a marker of brain edema. The effect of terguride (trans-dihydrolisuride) was tested. Brain ischemia induced glucose intolerance and brain edema in both strains of rats.

Basal glycaemia was not changed by the brain ischemia in male and female rats of Koletsky strain, except female rats of the age from 5-6 months. Basal glycaemia was changed by the brain ischemia in female rats of Wistar strain, except female rats of the age of 5-6 months and in male rats of Wistar strain it was not changed, except animals of the age from 7-8 months. When we compared the effect of brain ischemia on "area under the glucose tolerance curve", we found statistically significant increase of AUC in both sexes of both strains.

Long lasting terguride treatment of glycide metabolic abnormalities shows ambivalent effect. Terguride decreased statistically significant glycaemia in male rats of Wistar strain by 42,32% and in females of this strain decreased glycaemia by 24,16%. Terguride neared basal glycaemia of males of Wistar strain with brain ischemia to basal glycaemia in the group of animals without brain ischemia.

Glycaemia was decreased in both sexes of Koletsky strain, except one group of females. Statistically significant decrease was not found in males of Koletsky strain but it was found in females of Koletsky strain, except the last mentioned group of females. Terguride decreased a level of glycaemia in males by 26,07% and in females by 20,65%. Terguride neared basal glycaemia neither males nor females of Koletsky strain with brain ischemia to basal glycaemia in the group of animals without brain ischemia.

Only in males of Wistar strain there was found statistically significant decrease of brain water content by long lasting terguride treatment. When we compared males and females both of strain we found that in males of Wistar strain had the highest a level of glycaemia induced by brain ischemia and the highest mortality and the highest decrease of glycaemia by terguride treatment as well.