Poster Section

Hypoglycemic effect of Alloxan and Thymulin both diluted in Wistar rats with degeneration of beta cells islets of Langerhans

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ABSTRACT

Diabetic animals induced by alloxan show severe hyperglycemia and intense catabolism characterized by the absence of insulin. Therefore, the objective of this study is to assess whether the alloxan 6CH, is able to reverse or mitigate the changes promoted by diabetes mellitus, as well as assess the effects of thymulin. In biological tests male Wistar rats were used induced to experimental diabetes by the administration of alloxan (iv 42 mg / kg). The sample comprised four groups (n = 4): G1 – control without the induction of diabetes, G2 - diabetic without treatment, G3 - diabetic treated with thymulin 12CH and G4 - treated with alloxan 6CH. The data were statistically analyzed by ANOVA followed by Tukey-Kramer test ($p < 0.05$). After treatment for 40 days slight decrease of glucose in animals treated with alloxan (502 ± 28) mg/dl and thymulin (500 ± 10) mg/dl was observed compared with untreated animals (563 ± 23)mg/dl. Remained unchanged feed intake and water, however, significant decrease of body weight in diabetic group (96 ± 21)g was observed compared to animals treated with alloxan (27 ± 23)g and thymulin (20 ± 16)g, fact not observed when the last two groups are compared with the control (5.1 ± 3.9)g. Significant reduction in the percentage of lymphocytes in diabetic animals (44.8 ± 2.4)% and increase in the group treated with thymulin (12CH) (83.3 ± 4.5)% was checked, when compared to the others. Animals treated with alloxan and thymulin showed clinical improvement. Based on these findings it is concluded that alloxan and thymulin improve the general state of the animal, and suggest inhibition of strong catabolism observed in diabetic animals without treatment.

Keywords: Alloxan, Thymulin, Diabetes.

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