

Studying the effect of Suaeda aegyptiaca extract in comparison to the metformin on streptozotocin-nicotinamide induced type 2 diabetes rats

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Background: Type 2 diabetes mellitus is a complicated metabolic disease which affects energy balance of the cell and consequently the body. With 422 million affected individuals diabetes is one of the most prevalent disorders. Various medicinal properties have been counted for *Suaeda aegyptiaca* in traditional medicine. This study was conducted to comprise the effect of metformin and *S. aegyptiaca* extract on some physiological factors in diabetic rats.

Method: Streptozotocin-induced diabetic rats were administrated with 100, 200 and 400 mg/kg of *S. aegyptiaca* extract or metformin for period of 4 weeks. Blood was taken from animals, and levels of factors including Insulin, FBS, Amylase, proteins, albumin, LDH, ALK, CPK, Fe, Na, K, TSH, and MDA were evaluated.

Results: Our results indicate that with increasing the concentration of *S. aegyptiaca* extract, the FBS and amylase amount of sugar decrease significantly. The mean volume of proteins in the T2 group was significantly higher than other groups and the albumin volume in T1 group was significantly higher than other groups. The CPK volume in the T3 group is approximately same to the negative control group. The rats treated by *S. aegyptiaca* extract had approximately same MDA concentration and which were higher than the metformin group.

Discussion: *S. aegyptiaca* extract can be a suitable candidate for subsequent studies to define a new therapeutic agent for treatment of diabetes.