Abstract

Diabetes mellitus is a complex disease. In Most of diabetics , the disease causes a new life method and affects their relationships even eating andphysical behaviors. If blood sugar remains in high level for a the long time, it can negatively affect heart, eyes, kidneys, nerves and other parts of the body. Diabetes mellitus is one of the major concerns of the global health community. In treatment diabetes, the goal is to help people to control blood sugar levels along with minimizing the risk of its future side effects. , Herbs have been used as an important source of medicines since ancient times. Many of the plants have been suggested as natural and non-synthetic antioxidants, and it has been shown that the various parts of plants contain antioxidants. In this study, the aim of this study was to compare and compare the different doses of superoxide dismutase enzyme extracts and total antioxidant capacity and malondialdehyde in adult male diabetic rats. Thirty two male Wistar rats were randomly assigned to 4 groups (8 rats per each group) Treatments were as follows: (1) healthy controls, (2) diabetic without treatment, (3) diabetic and treated with 1 ml pistachios leaf extract and (4), diabetes and treated with 1.5 ml of pistachios leaf extract. Alloxan was injected intraperitoneally in order to induce diabetes. After 72 hours of injection, blood samples were taken from tail vein of all rats to determine blood sugar level. . After confirmation of the disease, rats were orally treated with the extract for 30 days. After the end of the experiment, rats were anesthetized by ether and cardiac puncture was performed to study the oxidative stress parameters. Changes in superoxide dismutase were compared between groups. The results showed that the amount of superoxide dismutase increased in groups 3 and 4 compared to the diabetic group, and this increase was significant in group 3. All doses of extract were able to increase the serum total antioxidant capacity of rats to diabetic group significantly. Also, in the case of malondialdehyde, the extract has been able to reduce the MDA in different groups in comparison to the diabetic group. The decrease was related to 1 cc treatment. According to these results, it can be concluded that the hydroalcoholic extract of pistachio leaves as an antioxidant agent can contribute to reducing the damage caused by oxidative stresses of diabetes.

Key words: Pistachio leaf / Diabetic / Oxidative stress / Rat

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