

Abstract

Diabetes mellitus is a complex disease. In Most of diabetics , the disease causes a new life method and affects their relationships even eating and physical 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. In 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. Researches carried out on plants in the past few decades have shown that many of these herbs are effective in treating diabetes because of their anti-diabetic properties. This study aimed to evaluate and compare different doses of pistachio leaf alcoholic extract on blood glucose and serum lipids in diabetic adult male 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 assess serum metabolites. Changes in blood glucose and serum lipids were compared between groups. The results showed that glucose levels were significantly lower in groups 3 and 4 compared with diabetic group and this reduction was higher in group 3. Pistachio leaf extract was unable to decrease BUN concentrations in diabetic rats. Creatinine concentrations were not affected by treatments. All doses of extract reduced triglyceride levels compared to diabetic group and no differences were observed in control and extract treated groups. Cholesterol concentration decreased in extract treated groups compared with diabetic group. According to these results, it can be concluded that pistachio leaf extract has a positive effect on decreasing blood sugar and treating diabetes.

Keywords: pistachio plant leaf / diabetes / blood sugar / rat



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