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Effects of green tea extract on some blood profiles in type 1 diabetic rats

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Background: Diabetic mellitus (DM) is a chronic disease characterized by high glucose levels, lipoprotein abnormalities and altered intermediary metabolism of major food substrates. In this study, we have investigated effects of green tea extract (GTE) on some blood profiles like serum glucose, hemoglobin *A1c* (*HbA1C*), triglyceride (TG), low density cholesterol (LDL-c), high density cholesterol (HDL-C) and total cholesterol (TC) in type 1 diabetic rats.

Methods: Diabetes was induced by injection of alloxan (45 mg/kg) to male Wistar rats (180-220 g). Animals showing glucosuria more than 2% or blood glucose level (>140 mg/dl) 48 h after alloxan injection were selected for experiment. Sixty animals divided into two groups (n=30): Diabetic group without green tea extract (GTE) and diabetic group with 100 mg/kg body weight GTE for eight weeks. Some blood profiles like serum glucose, *HbA1C*, TG, LDL-c, HDL-C and TC were measured before the experiment and by the end of period (8 weeks) in all groups.

Results: We did not find significant effects of consumption of green tea extract in decrease of levels of serum glucose, hemoglobin *A1c*, TG, LDL-c and TC and increase of HDL-C in comparison with those of diabetic rats without GTE.

Conclusion: The results of this study did not show beneficial effects of this dose of green tea extract on some blood factors of diabetes rats. There might be beneficial effects in use of higher doses of GTE on some blood factors.

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The investigation of changes some blood profiles with oral Green Tea Extract intake in type 1 diabetic rats

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