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Effect of flaxseed on biochemical markers

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Background and Aims: flaxseed is a famous herbal medicine that widely used for treatment of some diseases such as atherosclerosis and diabetes mellitus. In the present study, we investigated effects of flaxseed on serum on lipid profiles, blood glucose, HbA1c, superoxide dismutase (SOD), and malondialdehyde (MDA) in diabetic rat.
Methods: Male rats were randomly divided in three groups (n=8); group1: diabetic rats + normal diet, group2: diabetic rats + normal diet supplemented with 4% of flaxseed group3: received normal diet (control). After 4 weeks of treatment, blood samples were collected from heart of each rats and serum level of lipid profiles and glucose were measured using enzymatic methods. SOD, MDA activity and HbA1C percent were assayed according to the manufacturer's instructions kits.
Results: compared with diabetic rats, treatment with flaxseed resulted in a significant decrease of triglycerides, total cholesterol, VLDL-C, and LDL-C levels ($P<0.05$). Levels of HDL-C, blood glucose, HbA1c and were not significantly changed in the flaxseed treated group with respect to the diabetic rats.
Conclusions: flaxseed contains effective compounds which are useful for treatment of diabetes mellitus and atherosclerosis.

Keywords: Flaxseed; Diabetes mellitus; Atherosclerosis