

Evaluation of antidiabetic activity of extract of *Buchanania Lanzas* in Diabetic Rats

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ABSTRACT

OBJECTIVE: The present study was designed to evaluate the effect of the methanolic extract of *Buchanania lanzan* in fructose induced diabetic rats.

MATERIALS AND METHODS: Albino wistar rats (250-300 gm) were given fructose (10%) to induce diabetes with normal diet. Thirty rats were randomly divided into 5 groups of six animals each. Metformin (500 mg/kg; p.o) was used as standard drug. Rats were given methanolic extract of *Buchanania lanzan* for the treatment of Type -2 diabetes. At the end of treatment period, the animals were evaluated for the various parameters like Body weight, glucose level, HDL, LDL, VLDL, serum triglyceride, total cholesterol, Plasma insulin and antioxidant parameter like SOD, GSH, Total protein, TBARS.

RESULTS: Administration of 10% solution of Fructose for 60 days significantly increase ($P < 0.01$) blood glucose level, VLDL, LDL, serum cholesterol and triglyceride level and decrease HDL level as compared to vehicle control.

Administration of methanolic extract of *Buchanania lanzan* (200 and 400 mg/kg, p.o) for 30 days in significantly decrease blood glucose level, serum cholesterol, triglyceride and LDL with increase HDL level in diabetic rats. The results were compared to those obtained with metformin standard drug for diabetes.

CONCLUSION: The present results provide clear evidence that treatment with methanolic extract of *Buchanania lanzan* enhance antioxidant defence, Hypolipidemia and antidiabetic action against fructose induced diabetes.

Key Word: Fructose, Diabetes, *Buchanania lanzan*, antioxidant activity