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## Hypoglycemic and hypolepidemic effects of the ethanolic extract of *Tinospora cordifolia* in streptozotocin induced diabetic rats

F F Ruchita, K K Nandy, S M N Haque, T Naznin, Z Chowdhury, A B M Faroque and J M A Hannan  
North South University, Bangladesh

*Tinospora cordifolia* is traditionally used as tonic and a remedy for diabetes. It was previously shown to have hypoglycemic effects in rats. The aim of this study is to investigate the effects of ethanolic extract of *T. cordifolia* on serum glucose, lipid profiles and hepatic glycogen content in type 2 diabetic rats. Extract of the *T. cordifolia* leaves was prepared by 80% ethanol. Hypoglycemic effects were evaluated in type 2 rats at fasting and postprandial states at different time points (0, 30, 60 and 120 min) by measuring serum glucose and insulin. Extract (500 mg/kg body wt) was administered orally to type 2 diabetic rats for 28 days and at the end of the experiment, serum glucose, serum insulin (using ELISA Rat insulin kit); lipid profiles (TG, cholesterol and HDL) were measured using commercial assay kits (CrystalChem, USA). Hepatic glycogen content was measured using Anthrone method. The extract reduced glucose level at 60 min ( $p < 0.05$ ) after glucose load without increase in serum insulin levels in acute study. In 28 days study, a significant reduction in blood glucose ( $p < 0.01$ ), Triglycerides ( $p < 0.05$ ) and total cholesterol ( $p < 0.05$ ), and significant increased ( $p < 0.01$ ) in HDL and hepatic glycogen content ( $p < 0.01$ ) were observed. No significant change was found in LDL level. It considerable increased body weight ( $p < 0.05$ ) in the chronic study. *Tinospora cordifolia* shows hypoglycemic effects in diabetic rats without significant change in insulin level. Isolation of pure compounds from *T. cordifolia* can be a novel promising drug in the treatment of diabetes.

### Biography

F F Ruchita is a senior student in the Department of Pharmaceutical Sciences pursuing BPharm (Professionals) degree at North South University. She has attended national and international conferences where she acknowledged many important things about her research work, which she is doing currently at Pharmacology Lab of North South University. She has interest in Pharmacology and wants to obtain her further degrees on that.

[ruchita\\_ssh@hotmail.com](mailto:ruchita_ssh@hotmail.com)

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