

Protective effect of aqueous extract of seed of *Psoralea corylifolia* (Somraji) and seed of *Trigonella foenum-graecum* L. (Methi) in streptozotocin-induced diabetic rat: A comparative evaluation

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ABSTRACT

Background *Psoralea corylifolia* (Somraji) and *Trigonella foenum-graecum* L. (Methi), important medicinal plants widely used in India as folk medicine. Local people of West Bengal traditionally used the seeds of these plants to cure diabetes. **Objective** Present study was designed to investigate the antidiabetic efficacy of aqueous extract of seeds of these plants in separate or in composite manner in streptozotocin (STZ)-induced diabetic rat. **Materials and Methods** Diabetes was induced by intramuscular injection of STZ at the dose of 40 mg/ml of citrate buffer/kg body weight. Fasting blood glucose (FBG), glycolated hemoglobin (HbA1C) and activities of hexokinase, glucose-6-phosphate dehydrogenase and glucose-6-phosphatase of liver in experimental animals were assessed. Hyperlipidemic state developed in the experimental diabetic rat was assessed by measuring the levels of total cholesterol, triglyceride, and lipoproteins in serum. **Results** There was significant increased in the levels of FBG, HbA1C and lipid profiles along with diminution ($P < 0.001$) in the activities of hepatic hexokinase, glucose-6-phosphate dehydrogenase and elevation in glucose-6-phosphatase in diabetic control animals in respect to the untreated control. Significant recovery ($P < 0.05$) in the activities of above mentioned enzymes along with the correction in the levels of FBG, HbA1C and serum lipid profiles were noted towards the control level after the treatment of composite extract (i.e. 100 mg of Somraji: 100 mg of Methi, total 200 mg/kg body weight) than the individual extract (i.e. 200 mg of Somraji or 200 mg of Methi, per kg body weight) treatment. **Conclusion** Results suggest that composite extract of above plant parts has more potent antidiabetic efficacy than the individual extract.

KEYWORDS

Carbohydrate metabolic enzymes . glycogen . lipid profiles . streptozotocin

REFERENCES