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Hypoglycaemic and hypolipidemic activity of *Cassia occidentalis* Linn. stem bark extract in streptozotocin induced diabetes

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Objective: *Cassia occidentalis* Linn. belongs to Family Caesalpiniaceae is a common weed scattered from the foothills of Himalayas to West Bengal, South India, Burma, and Sri Lanka. It is used widely in folklore medicine in India as laxative, expectorant, analgesic, anti-malarial, hepatoprotective, relaxant, anti-inflammatory and antidiabetic. The present study was carried out to investigate the hypoglycaemic and hypolipidemic activities of ethanolic extract of *Cassia occidentalis* stem bark.

Methods: Stem bark extract of *Cassia occidentalis* (SBCO) was administered orally at 250 and 500 mg/kg doses to normal and streptozotocin (STZ) induced type-2 diabetic mice. Various parameters like fasting blood glucose (FBG) level, serum cholesterol, high density lipoprotein (HDL) cholesterol, triglycerides (TG), total protein, urea, creatinine, serum glutamate oxaloacetate transaminase (SGOT), serum glutamate pyruvate transaminase (SGPT) levels and physical parameters like change in body weight, food intake, water intake were performed for the evaluation of antidiabetic effects.

Results: Both the doses of extract caused a marked decrease in FBG levels in STZ induced type 2 diabetic mice. Administration of SBCO led to the decrease in the blood glucose, food intake, water intake, organ weight, SGOT, SGPT levels with significant value and increased the levels of TG, HDL cholesterol, creatinine, cholesterol, total protein with a significant value ($p < 0.05-0.01$). The decrease in body weight induced by STZ was restored to normal with a significant value ($p < 0.01$) at both doses.

Conclusion: Present study reveals that SBCO possess potent hypoglycaemic and hypolipidemic activities and supports the folklore use of the stem bark of plant as antidiabetic agent.

Biography

Manjusha Choudhary is working as Assistant Professor in the Division of Pharmacology, in the Institute of Pharmaceutical Sciences, Kurukshetra University, Kurukshetra, Haryana, India. She has recently completed her PhD degree from Kurukshetra University. She has published over 35 academic papers. Her research interest mainly focus on pharmacological evaluation of plants for various activities like antidiabetic, antiarthritic, antifertility and many more.

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