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Hypolipidemic activity of *Madhuca longifolia* in Triton-induced hyperlipidemic rats

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Objective: In the present study, an ethanolic extract from *Madhuca longifolia* bark was evaluated for its hypocholesterolemia and hypotriglyceridemic activities using Triton WR-1339 induced hyperlipidemic rats as experimental model.

Material & Method: Hyperlipidemia was induced by a single injection of Triton WR 1339 (400 mg/kg i.p.) in Sprague Dawley rats. Ethanolic extract of *Madhuca longifolia* bark (ML) (250, 500 and 750 mg/kg/day) was administered to hyperlipidemic rats for one week. Harvested serum was analyzed for lipid profile such as cholesterol, triglyceride and lipoproteins. Oxidative stress parameters like Superoxide Dismutase (SOD), Catalase (CAT), Glutathione Peroxidase (GPx) and glutathione reductase (GRh) and activity of lipolytic enzyme such as Lecithin-Cholesterol-Acyltransferase (LCAT) and Post-Heparin lipolytic activity (PHLA) were estimated in the liver tissues of hyperlipidemic rats.

Results: Result of the study suggested that treatment with ML 750 mg/kg/day significantly (p0.01) lowered the level of serum cholesterol, triglyceride phospholipids and increased in lecithin-cholesterol-acyltransferase activity and post-heparin lipolytic activity compared to Triton-treated rats. In addition, ML 750mg/kg/day significantly (p0.01) reduces oxidative stress and normalizes the activities of SOD, CAT, GPx and GRh compared to Triton-treated rats.

Conclusion: The current study provides strong evidence that intragastric administration of ML 750 mg/kg/day has a beneficial effect in treating dyslipidemia with decrease in oxidative stress.

Biography

Abhijit Shirao has completed his MPharmacy in Pharmacology from NMIMS University, Mumbai. He has an experience of 1.5 years in Clinical R&D and 6 years of academic experience. Currently, he is working as an Assistant Professor at P. Wadhvani College of Pharmacy, Yavatmal, India. He has interest in developing medicines from herbal origin which are cheap and having less adverse effects and is studying herbs for their possible antidiabetic and antihyperlipidemic activity.

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