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Anti-obesity effect of a polyherbal formulation in cafeteria and atherogenic diet induced obesity in rats

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Obesity is associated with many diseases, particularly diabetes, hypertension, osteoarthritis and heart disease. The obesity incidence has increased at an alarming rate in recent years, becoming a worldwide health problem, with incalculable social costs yet it lacks adequate treatment. Most of the drugs have failed either due to ineffectiveness (or) adverse effects. For this reason, a wide variety of natural materials have been explored for their obesity treatment potential. Complementary and alternative system of medicine is being used since ancient times. However, many of them have not been tested for efficacy and safety using modern scientific methods therefore, the anti-obesity effect of *Anogeissus Latifolia* (Bark), *Trichodesma amplexicaule* (Whole plant) and *Holostemma annularis* (Roots) a polyherbal formulation (PHF), was evaluated in a 6-week trial in Wistar rats were fed cafeteria diet (highly palatable, energy rich animal diet that includes a variety of human snack foods) and atherogenic diet. Animals weighing 100-150 g were divided into six groups (n=6) i.e. control diet, polyherbal formulation (PHF), cafeteria diet, cafeteria diet plus PHF, atherogenic diet and atherogenic diet plus PHF. The polyherbal formulation were administered orally at a dose 300 mg/kg/p. o/day for six weeks. At the end of the study, cafeteria and atherogenic diet significantly increased bodyweight, serum glucose and lipid profile (cholesterol and triglycerides), as compared to controlled diet. Six weeks after treatment with PHF significantly prevented the increase in bodyweight, serum glucose and lipid profile (cholesterol and triglycerides) as compared to cafeteria and atherogenic diet control group. Polyherbal formulation has no adverse effects on behavioral studies. The Polyherbal formulation helped to reduce body weight by approx 15-20% in animal fed on cafeteria and atherogenic diets.

Biography

Sudharshan Reddy had done his PhD in Pharmacology from Jawaharlal Nehru Technological University Hyderabad, A. P. in year 2014. He had published 12 national and international papers in journals. Currently he is working in Smt. Sarojini Ramulamma College of Pharmacy, Mahaboobnagar. A. P. as Associate professor.

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