Beneficial effect of *Momordica charantia*, *Emblica officinalis*, *Tribulus terrestris* and *Trigonella foenum graecum* extracts alone and in combination against STZ induced diabetic nephropathy

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Diabetes-related complications represent one of the most important health problems worldwide with dire projections. The aim of present study was directed to assess the possible beneficial effect, if any, of *Momordica charantia*, *Emblica officinalis*, *Tribulus terrestris* and *Trigonella foenum graecum* extracts alone and in combination against STZ induced diabetic nephropathy in rats. Diabetes mellitus (DM) was induced by a single intraperitoneal administration of streptozotocin (STZ) (50 mg/kg; i. p). Diabetic nephropathy was developed eight weeks after STZ administration. The herbal extracts of *Momordica charantia* (100 & 250 mg/kg), *Emblica officinalis* (100 & 250 mg/kg), *Tribulus terrestris* (100 & 250 mg/kg) and *Trigonella foenum graecum* (100 & 250 mg/kg) were administered orally. Diabetic nephropathy was assessed by measuring kidney weight/body weight ratio, blood urea nitrogen, serum creatinine, urinary albumin and oxidative stress (LPO, GSH and nitrite). STZ administration significantly altered kidney weight/body weight ratio, blood urea nitrogen, serum creatinine, urinary albumin and oxidative stress after eight weeks. Treatment with herbal extracts of *Momordica charantia* (100 & 250 mg/kg), *Emblica officinalis* (100 & 250 mg/kg), *Tribulus terrestris* (100 & 250 mg/kg) and *Trigonella foenum graecum* (100 & 250 mg/kg) alone and in combination significantly prevented the development of diabetic nephropathy. The present study highlights the significant role of herbal extracts in ameliorating the symptoms of diabetic nephropathy. Thus, it can be concluded that *Momordica charantia*, *Emblica officinalis*, *Tribulus terrestris* and *Trigonella foenum graecum* can be used as adjuvant or prophylactic therapy in the treatment of diabetic nephropathy.

Biography

Vir Vikram is an Assistant Manager in Dayanand Medical College & Hospital (Punjab). He has 13 years of teaching (undergraduate students) and research experience in various reputed companies. Previously, he served as an Assistant Professor and Head of the Department, Department of Pharmacy (DPharmacy) at ISF College of Pharmacy, Punjab. He is working on Diabetic Nephropathy and got two national awards for his research work. He got first prize for poster presentation at national conference on Innovations in Drug Discovery and Research organized by Department of Pharmaceutical Sciences and Drug Research, Punjab University, Patiala and first prize for poster presentation at AICTE sponsored national seminar on Emerging Trends in Pharmaceutical Sciences (Faculty of Pharmacy, Jamia Hamdard, New Delhi). He also got appreciation award in AICTE sponsored national seminar on “Rational Use and Clinical Trail of Drugs”. He is a Life Member of Indian Pharmacy Graduates Association (LM-4137).

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