

Combined therapy of Quercetin with Pioglitazone attenuated high fat diet fed/low dose STZ induced diabetic nephropathy in rats

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Persistent hyperglycaemia generates intracellular reactive oxygen species (ROS) and is involved in the pathogenesis of development of diabetes and microvascular complication such as diabetic nephropathy. The present study investigated the combined effect of Quercetin with pioglitazone in type II diabetes induced nephropathy. Diabetes was induced in male Sprague-Dawley rats with high fat diet fed/low dose STZ injection which induced the renal oxidative stress, altered lipid profile and subsequently produced nephropathy by elevating serum creatinine, blood urea nitrogen, proteinuria and inducing glomerular damage. In addition, the lipid profile and renal oxidative stress were assessed. Quercetin was administered alone as well as with Pioglitazone for 8 weeks. Plasma glucose levels and body weights were measured at the start, 4th week and at the end of the treatment period. Renal oxidative stress markers and the anti-oxidant enzymes were measured in kidney homogenate. Combined therapy of Quercetin and pioglitazone significantly attenuated the oxidative stress and renal dysfunction in diabetic rats compared to the groups treated alone.

Biography

N Karthik, research scholar from Krupanidhi College of pharmacy has completed his B.Pharmacy from CMR college of Pharmacy and M.Pharmacy from Krupanidhi College of pharmacy. He did his one month industrial training as a part of academic curriculum in Micro labs pvt Ltd. Bangalore in SEP 2010. He attended many national seminars like National seminar on Drug Delivery – The Recent Advances in July 2010. Participated in workshop on “Role of Intellectual Property Rights in Pharmaceutical Industry” in association with IIPTA on 30th & 31st March 2012. He Attended and presented poster in National seminar on Standardization of Herbal Drugs, Organised by RGUHS, Karnataka.