

Low dose combination of *Syzygium cumini* seed extract and Acarbose attenuates the progression of diabetes induced nephropathy in rats

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Oxidative stress plays a vital role in the development of diabetes and persistent hyperglycemic state can induce secondary complication such as nephropathy. We investigated the combined effect of low dose of Acarbose with Cumini seed extract in high fat diet fed diabetic rats. OGTT, single and multiple dose studies were carried out. Male Sprague dawley rats were divided into several groups. Group I and II were used as normal control and diabetic control respectively. Group III – V were treated with *Syzygium cumini* seed extract, Acarbose and *Syzygium cumini* seed extract + Acarbose (low dose). The alteration in the biochemical parameters, lipid profile and anti-oxidative enzymes induced by diabetic nephropathy was assessed. Treatment schedule was started from the first day along with the diet. At the end of the treatment period, plasma glucose levels, body weight, and antioxidant enzymes were measured in kidney homogenate. Number of beta cells was evaluated in the pancreatic islets. The low dose combination of acarbose with *S. cumini* seed extract significantly restored the biochemical parameters in diabetes-induced nephropathy towards normal. The increase in the number of the beta cells in the treated groups shows preventive nature of *S. cumini* in diabetes induced nephropathy. Structural integrity of kidney and pancreas were preserved in group treated with the combination. Hence our study showed that the combined effect of Acarbose and *S. cumini* seed extract prevented the diabetes induced nephropathy.

Biography

Kedarinath, Research scholar has completed his B.Pharmacy from East point college of Pharmacy and M.Pharmacy from Krupanidhi college of Pharmacy. He presented a seminar on "The Potential for Interaction of Gliclazide and Ramipril with Garlic during Myocardial Damage in Diabetic Rats" in IPSCON 2011. He participated in two days' workshop on Regulatory affairs organized by IIPTA, Delhi. He attended many seminars on Nanotechnology, Standardization of herbal drugs, Drug counterfeiting and many more.