

Combined effect of *Emblica officinalis* gaertn fruit extract with glipizide in diabetes induced neuropathy in rats

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Diabetic neuropathy is the most important microvascular complication. The aim of the present investigation was to evaluate the antinociceptive activity of *Emblica officinalis*(EO) fruit extract in combination with low dose of glipizide in type II diabetes induced diabetic neuropathy in male Sprague dawley rats. Hot plate test was used to evaluate the neuropathic pain. OGTT, single and multiple dose study was carried out. Rats were divided into different groups. Group I was used as control and group II was considered as diabetic control. Group III to V were treated with EO,glipizide and EO with glipizide (low dose) respectively. Treatment schedule started one week after STZ injection and continued treatment for 8 weeks. Histopathology and anti-oxidative enzymes were also determined to assess the effect of oxidative stress on sciatic nerve. Combination therapy of glipizide and EO showed extremely significant antinociceptive activity when compared to the groups treated alone. Diabetic rats showed decreased levels of antioxidative enzymes in sciatic nerve. The beneficial effect of this combination was also proved by restoration of histopathology and antioxidant enzymes in the sciatic nerve towards normal. Normally oral hypoglycaemic agents produce hypoglycaemia but in our study we have shown that by combined use of EO and low dose of glipizide prevented hypoglycaemia. Since, EO is already in clinical use for diabetic patients; care should be taken while using oral hypoglycaemic agents.

Biography

Srujan Kumar V has completed his BPharm from Dr. Samuel George Institute of Pharmaceutical Sciences, Markapur, Andhra Pradesh and pursuing his M.Pharm from Krupanidhi College of Pharmacy, Karnataka. He attended many workshops like Workshop on Patents organised by IIPTA in the 2012. He participated in many seminars like Seminar on Standardisation of Drugs, organised by RGUHS, Karnataka.