

Preventive and curative effect of Methanolic leaves extract of *Ocimum sanctum* with Metformin in diabetes induced neuropathy in rats

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Several studies suggest that persistent hyperglycemia induced glucose toxicity plays a vital role in the development, progression of diabetes and its secondary complication such as diabetic nephropathy. We investigated the combined effect of methanolic leaf extract of *Ocimum sanctum* (OS) with metformin in attenuating diabetic neuropathic pain. Eddy's hot plate was used to assess antinociceptive action. OGTT, single and repeated dose studies were carried out. Male Sprague Dawley rats were divided into several groups. Preventive and curative therapy included in the treatment protocol. At the end of treatment protocol OGTT and anti-oxidant enzyme levels of sciatic nerve were estimated. The combined therapy of OS and metformin showed extremely significant antinociceptive than the group treated alone. Significant antinociceptive was seen both in preventive and curative therapy. Histopathological study of the sciatic nerve was carried out. Preventive therapy attenuated the progression of neuropathy when compared with curative therapy. The sciatic nerve integrity was deranged in untreated diabetic rats when compared to control and this derangement was prevented by preventive therapy but not with curative therapy. This was proven by an increase in antioxidant levels in the sciatic nerve.

Biography

Sumit Kumar, 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 J&S Pvt Ltd. Bangalore in Feb 2011. 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. Presented Poster in IPSCON-2011, Manipal.