



Effect of Tangeretin in STZ Induced Diabetic Neuropathic Pain Model in Rats

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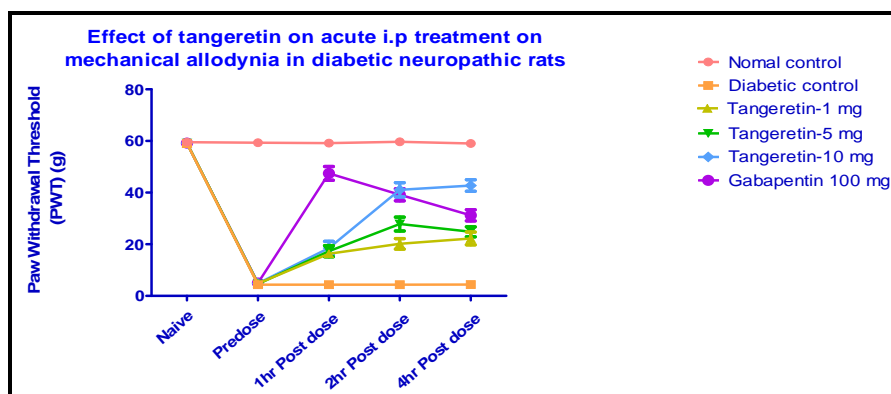
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ABSTRACT

The objective was to evaluate efficacy of Tangeretin in streptozotocin induced neuropathic pain in rat model. Diabetes mellitus was induced by an injection of streptozotocin at a dose of 45 mg kg^{-1} , i.v. into tail vein of male albino Wistar rats. Tangeretin was dosed at 1, 5 and 10 mg kg^{-1} by intraperitoneal administration in diabetic neuropathic rats. Mechanical hyperalgesia and allodynia was measured using Randle Selittoanalgesymeter and manual von Frey filaments of increasing weights respectively. Paw withdrawal threshold and percent Paw withdrawal threshold was determined with respect to both hyperalgesia and allodynia. Treatment of Tangeretin at three different levels of 1, 5 and 10 mg kg^{-1} had not significantly altered serum glucose levels throughout the treatment period. In hyperalgesia study, acute treatment with higher dose exhibited 19.93 % reversal of paw withdrawal threshold while with chronic treatment efficacy was raised to 51.56% reversal of Paw withdrawal threshold. In allodynia study, acute treatment reversed Paw withdrawal threshold by 66.69% while with chronic treatment, efficacy was raised to 80.63% reversal of Paw withdrawal threshold. Tangeretin demonstrated better efficacy in reversing mechanical allodynia than mechanical hyperalgesia. Tangeretin could be a good drug candidate for further studies to establish the mechanism of attenuation of neuropathic pain.

Graphical Abstract



Effect of Tangeretin on acute i.p treatment on mechanical allodynia in diabetic rats.

Keywords: Tangeretin, Hyperalgesia, Allodynia, Bioflavonoids, Gabapentin.
