

# Antinociceptive interaction of gabapentin with minocycline in murine diabetic neuropathy

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© 2017, Springer International Publishing. Objective: Diabetic neuropathy (DN) is the most common complication of diabetes and pain is one of the main symptoms of diabetic neuropathy, however, currently available drugs are often ineffective and complicated by adverse events. The purpose of this research was to evaluate the antinociceptive interaction between gabapentin and minocycline in a mice experimental model of DN by streptozocin (STZ). Methods: The interaction of gabapentin with minocycline was evaluated by the writhing and hot plate tests at 3 and 7 days after STZ injection or vehicle in male CF1 mice. Results: STZ (150 mg/kg, i.p.) produced a marked increase in plasma glucose levels on day 7 ( $397.46 \pm 29.65$  mg/dL) than on day 3 ( $341.12 \pm 35.50$  mg/dL) and also developed neuropathic pain measured by algesiometric assays. Gabapentin produced similar antinociceptive activity in both writhing and hot plate tests in mice pretreated with STZ. However, minocycline was more potent in th