

# Prevention of Peripheral Neuropathy in Streptozotocin Diabetic Rats by Methylcobalamin, Gliclazide and Combined Application of Both

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**【ABSTRACT】** AIM: To investigate the effects of methylcobalamin, gliclazide and combined application of both on diabetic peripheral neuropathy in streptozotocin diabetic rats. **METHOD:** Drugs were administrated orally for 8 weeks. Effects of drugs on pain threshold to mechanical stimulation, sciatic nerve conduction velocity, glycated hemoglobin and glycated serum protein content, rheologic parameters, aldose reductase activity and Na<sup>+</sup>, K<sup>+</sup>-ATPase activity of streptozotocin diabetic rats were determined. **RESULT:** Compared with diabetic group, pain threshold to stimulation was improved, sciatic nerve conduction velocity was increased, aldose reductase activity was depressed and Na<sup>+</sup>, K<sup>+</sup>-ATPase activity was increased in each administrated group. Glycated hemoglobin and glycated serum protein contents were decreased in gliclazide and combination group. In addition, erythrocyte maximal aggregation index was decreased in gliclazide group. Compared with methylcobalamin or gliclazide group, remarkable difference was not observed in combination group. **CONCLUSION:** Methylcobalamin, gliclazide and combined application of both could prevent peripheral neuropathy in streptozotocin diabetic rats. More effective action was not observed in drug combination group. **【KEY WORDS】** Methylcobalamin; Gliclazide; Diabetic; Peripheral neuropathy; Combined application

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