Abstract:
The effect of $\alpha_1$- and $\alpha_2$-adrenoreceptor antagonists (prazosin and yohimbine, respectively) on streptozotocin (STZ)- and vincristine (VIN)-induced hyperalgesia in rats was studied. In two experimental models, yohimbine (1.0 mg/kg ip) completely abolished STZ- and VIN-induced hyperalgesia. This effect was markedly prolonged in diabetic rats. Prazosin (0.3 mg/kg ip) attenuated and delayed development of STZ-induced hyperalgesia. In VIN-elicited neuropathy, the administration of prazosin not only delayed hyperalgesia but also produced antinociception. After cessation of drug administration, a significant decrease in nociceptive threshold was observed. The obtained results seem to indicate that both $\alpha_1$- and $\alpha_2$-adrenoreceptors are engaged in diabetic (STZ) and toxic (VIN) neuropathy.

Key words:
adrenergic system, hyperalgesia, prazosin, rats, streptozotocin, vincristine, yohimbine