SHORT COMMUNICATION

INFLUENCE OF LY 300164, AN AMPA/KAINATE RECEPTOR ANTAGONIST UPON THE ANTICONVULSANT ACTION OF ANTIEPILEPTIC DRUGS AGAINST AMINOPHYLLINE-INDUCED SEIZURES IN MICE

Mariusz Świąder¹, Hubert Kuźniar¹, Zdzisław Kleinrok¹, Stanisław J. Czuczwar²,³,⁴

¹Department of Pharmacology and Toxicology, ²Department of Pathophysiology, Medical University, Łuckiego 8, Pl. 20-090 Lublin, ³Isotope Laboratory, Institute of Agricultural Medicine, Łuczyskiego 2, Pl. 20-950 Lublin, Poland


LY 300164 {7-acetyl-3-(4-aminophenyl)-8,9-dihydro-8-methyl-7H-1,3-dioxazolo[4,5-h][2,3]-benzodiazepine}, a novel AMPA/kainate receptor antagonist, administered intraperitoneally protected mice against aminophylline-induced seizures. At doses up to 0.5 mg/kg, which did not significantly affect the convulsant activity of aminophylline, it potentiated the protective activity of diazepam. On the other hand, LY 300164 used at the lowest protective dose of 1.0 mg/kg enhanced anticonvulsant activity of all antiepileptic drugs tested in this seizure model. However, LY 300164 neither alone nor combined with antiepileptic drugs, reduced aminophylline-induced mortality.

Key words: antiepileptic drugs, LY 300164, aminophylline-induced seizures

correspondence; e-mail: czuczwar@galen.imw.lublin.pl