Interaction Study of Acetylcholinesterase Inhibitors on -Pharmacokinetics of Memantine in Rat Plasma by HPLC Fluorescence Method

Mohamed G. Hassan, Rie Ikeda, Mitsuhiro Wada, Naotaka Kuroda, Hanaa M. Abdel-Wadood, Horria A. Mohamed, Kenichiro Nakashima

Abstract:

The present study aims to investigate the possibility of interaction of donepezil (DP) and galantamine (GAL) as acetylcholinesterase inhibitors, on memantine (MT) hydrochloride in rat plasma by HPLC-fluorescence detection. The separation of MT was achieved within 12 min without interference of DP and GAL on the chromatogram. MT levels in rat plasma with a single administration of MT (2.5 mg/kg, i.p.) and those with a co-administration of DP (5.0 mg/kg, i.p.) and GAL (3 mg/kg, i.p.) were monitored. MT concentrations determined in rat plasma ranged from 10.0 to 245.6 ng/mL. Significant difference was observed in the behavior of MT with a co-administration of DP, while no significant difference was observed with a co-administration of GAL.

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