

عنوان مقاله:

Effects of Different Psychotropic Agents on the Central Nerve Growth Factor Protein

محل انتشار:

مجله علوم پایه پزشکی ایران، دوره 13، شماره 1 (سال: 1389)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Parichehr Hassanzadeh - *Neuropsychopharmacology Research Center, AJA University of Medical Sciences, Tehran, Iran*

Anna Hassanzadeh - *Department of Molecular Biology, Faculty of Molecular & Cellular Sciences, Islamic Azad University, Parand, Tehran, Iran*

خلاصه مقاله:

Objective(s) Psychotropic medications produce their effects, in part, through increasing neurotrophin levels in the brain. Since studies concerning nerve growth factor (NGF) analysis have been limited in scope, in the current experiments we investigated the effects of diverse psychotropic agents on NGF protein levels in various brain regions of rat. Materials and Methods Male Wistar rats received acute and chronic administration of drugs and electroconvulsive shock (ECS). Twenty four hr after the last treatment, NGF quantification was performed using sandwich ELISA kit. Results Acute administration of desipramine, phenelzine, fluoxetine, chlordiazepoxide (10 mg/kg, each), haloperidol (1 mg/kg), or clozapine (20 mg/kg) failed to alter NGF protein in any brain structure investigated. However, a single ECS treatment significantly elevated NGF protein in the hippocampus. Chronic administration (21 days) of desipramine, fluoxetine, phenelzine, haloperidol and clozapine led to a reliable enhancement of NGF protein in the frontal cortex. In addition desipramine, fluoxetine, phenelzine, and clozapine significantly increased NGF protein in the hippocampus. In the olfactory bulb, chronic injections of desipramine and fluoxetine elevated NGF level, however, phenelzine and haloperidol decreased NGF. Repeated applications of ECS (10 days) led to a remarkable augmentation of NGF protein in the frontal cortex, hippocampus, amygdala, and olfactory bulb. Neither acute nor chronic treatment with the benzodiazepine chlordiazepoxide altered NGF level in the examined brain regions. Conclusion These findings suggest that diverse psychotropic treatments may regulate NGF protein level in a brain .region-specific fashion which may be indicative of their therapeutic properties

کلمات کلیدی:

Brain, Electroconvulsive shock, Nerve growth factor, Psychotropic agents, Rat

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1295991>

