EFFECTS OF GABAPENTIN AND ANTIDEPRESSANT DRUG COMBINATIONS ON CONVULSIONS AND MEMORY IN MICE

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In epileptic patients, neurobehavioral problems such as cognitive impairment, depression, and psychosocial impairments have been described, which may have a pathological and/or iatrogenic basis. For this reason additional treatment is required, beside antiepileptic drug (AED) therapy, to correct the accompanying neurological deficits. However, the rationale behind use of antidepressants along with antiepileptics has been questioned due to proconvulsant effects of the former. In the present study, the effect of gabapentin (GBP) on seizure score and memory is evaluated when it is given alone and in combination with some antidepressants, such as sertraline (SERTR) and alprazolam (ALP). Pentetrazole (PTZ)-induced convulsion and spontaneous alternation behavior (SAB) models were used to study the anticonvulsant effect and effect on memory, respectively. Results showed that addition of SERT to GBP or ALP resulted in reduction of anticonvulsant efficacy of these drugs. However, the combination of GBP + SERT + ALP was superior as far as effect on seizure severity and memory was concerned.

Key words: gabapentin, sertraline, alprazolam, anticonvulsant, memory

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