EFFECT OF SOME CONVULSANTS ON THE PROTECTIVE ACTIVITY OF LORECLEZOLE AND ITS COMBINATIONS WITH VALPROATE OR CLONAZEPAM IN AMYGDALA-KINDLED RATS

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Loreclezole (5 mg/kg) exerted a significant protective action in amygdala-kindled rats, reducing both seizure and afterdischarge durations. The combinations of loreclezole (2.5 mg/kg) with valproate, clonazepam, or carbamazepine (applied at their subprotective doses) also exhibited antiseizure effect in this test. However, only two first combinations occurred to be of pharmacodynamic nature. Among several chemoconvulsants, bicuculline, N-methyl-D-aspartic acid and BAY k-8644 (the opener of L-type calcium channels) reversed the protective activity of loreclezole alone and its combination with valproate. On the other hand, bicuculline, aminophylline and BAY k-8644 inhibited the anticonvulsive action of loreclezole combined with clonazepam.

The results support the hypothesis that the protective activity of loreclezole and its combinations with other antiepileptics may involve potentiation of GABAergic neurotransmission and blockade of L-type of calcium channels.

Key words: loreclezole, valproate, clonazepam, chemoconvulsants, amygdala-kindled seizures