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Comparing effects of valproic acid and L-DOPA on dopaminergic neuronal survival in a rat model of parkinson's disease

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Abstract

The main purpose of this study was to investigate the neuroprotective effect of Valproic acid (VPA) and compare it with L-DOPA in a 6-hydroxydopamine (6-OHDA) induced neurodegeneration. Male Wistar Albino rats received intranigral injection of 8µg 6-OHDA unilaterally. 12 days later they received either Saline, L-DOPA, VPA or L-DOPA+ VPA for 9 days sub acutely. In order to determine whether they had dopaminergic neuronal loss their turning behavior was measured after apomorphine injection. Brain samples were prepared for immunohistochemistry and molecular mechanisms. 6-OHDA injection showed significant damage of dopaminergic neurons. VPA treatment protected neurons in substantia nigra pars compacta. L-DOPA'S effect was synergistic. However, the effects on histone acetylation or phosphorylation of p90RSK and ribosomal S6 protein were not so clear.

Biography

Alev Cumbul has completed her PhD at the age of 15 years from Istanbul University, Turkey. She is an assist of professor of Histology and Embryology at Yeditepe University, Turkey.

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