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**Effect of Antioxidants against the Oxygen Radicals Induced by
Induced by Reactive Oxygen Species in Cultured Sensory
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It is suggested that reactive oxygen species(ROS) induce neuronal damage by the activation of lipid peroxidation through signal transduction of cell. Recent works have been reported that experimentally generated free radicals induce the release of excitatory amino acids(EAAs) from cultured rat hippocampal neurons. In order to investigate the mechanism of oxidant-mediated neurotoxicity in cultured mouse sensory neurons. Cultured cells were exposed to xanthine oxidase(XO) and hypoxanthine(HX) after 2 hours of preincubation with several oxygen radical scavengers. Cell viability was determined by colorimetric assay. XO/HX-induced neurotoxicity induced a significant cell death in a dose- or time-dependent manners on sensory neuron cultures. the neurotoxicity induced by ROS was inhibited by superoxide dismutase(SOD), catalase, vitamin E and TPEN. NMDA receptor antagonist, MK-801 or APV also showed positive effect against oxidative stress-induced neurotoxicity in these cultures. These results suggest that selective antioxidant and NMDA receptor antagonist were effective in the protection of ROS-induced neurotoxicity in mouse sensory neurons.

Keyword : Antioxidants, ROS, Sensory Neurons