

EFFECT OF ADENOSINE RECEPTOR AGONISTS ON NEURODEGENERATIVE AND CONVULSIVE ACTIVITY OF MITOCHONDRIAL TOXIN, 3-NITROPROPIONIC ACID

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3-Nitropropionic acid (3-NPA) is a mitochondrial toxin inhibiting the activity of succinate dehydrogenase. Its experimental application in rodents causes lesions of the striatum resembling the course of Huntington's disease in humans. Recently, we have shown that 3-NPA is also a potent convulsive and proconvulsive agent. This study investigated the effects of adenosine receptor agonists on neurodegeneration and convulsions induced by 3-NPA. Adenosinergic agonists prevented seizures but not striatal neuronal loss evoked by 3-NPA, what suggests that different mechanisms might contribute to these pathologies associated with application of mitochondrial toxin.

Key words: *3-nitropropionic acid, mitochondrial toxin, seizures, neurodegeneration, adenosine*