NEONATAL 5-HYDROXYTRYPTAMINE DEPLETION INDUCES DEPRESSIVE-LIKE BEHAVIOR IN ADULT RATS

Wojciech Kostowski¹,²,#, Paweł Krząścik²

¹Department of Pharmacology and Physiology of the Nervous System, Institute of Psychiatry and Neurology, Sobieskiego 9, PL 02-957 Warszawa, Poland; ²Department of Experimental and Clinical Pharmacology, Medical University of Warsaw, Krakowskie Przedmieście 26/28, PL 00-927 Warszawa, Poland


The influence of neonatal serotonergic lesion on adult behavior in locomotor and depression models was studied in male Wistar rats. When 3-day-old rats were injected intracisternally with 5,7-dihydroxytryptamine (5,7-DHT), a marked depletion of brain 5-HT was observed when animals were killed 3 months after the treatment. Brain catecholamine content was generally not changed by neurotoxin treatment. The behavioral consequence of intracisternal 5,7-DHT administration to developing rats consisted in reduction of adult rats’ activity in the forced swimming test. Both desipramine, and, to the lesser extent, fluoxetine, reversed 5,7-DHT-induced immobility of animals.

Key words: 5-hydroxytryptamine, 5,7-dihydroxytryptamine, neonatal lesion, depression

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