Effects of L-dopa in autism

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Abstract A study was designed to determine if blood serotonin concentrations could be lowered in autistic children by the administration of L-dopa and, if so, to observe possible clinical or physiological changes. Following a 17-day placebo period, four hospitalized autistic boys (3, 4, 9, and 13 years of age) received L-dopa for 6 months. Results indicated a significant decrease of blood serotonin concentrations in the three youngest patients, a significant increase in platelet counts in the youngest patient, and a similar trend in others. Urinary excretion of 5HIAA decreased significantly in the 4-year-old patient and a similar trend was noted in others. No changes were observed in the clinical course of the disorder, the amount of motility disturbances (hand-flapping), percent of REM sleep time, or in measures of endocrine function (FSH and LH). Possible mechanisms by which L-dopa lowered blood serotonin concentrations, increased platelet counts, and yet failed to produce other changes are discussed.

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