

CEREBELLAR MOTOR LEARNING DEFICITS IN PATIENTS WITH RECENT-ONSET SCHIZOPHRENIA

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Introduction: The notion that cerebellar deficits may underlie clinical symptoms in schizophrenia is tested by evaluating two forms of cerebellar learning in recent-onset schizophrenia patients. A potential medication effect is evaluated by including patients with or without antipsychotics.

Methods: Saccadic eye movement adaptation and eyeblink-conditioning were assessed in 39 male patients with recent-onset schizophrenia who were on antipsychotic medication (clozapine n=10 haloperidol n=16) or antipsychotic-free (n=13), and in 29 age-matched male control subjects.

Results: All participants showed significant saccadic adaptation. Adaptation strength did not differ between healthy controls and schizophrenia patients. The speed of saccade-adaptation, however, was significantly lower in schizophrenia patients. Patients showed a significantly lower increase in the number of conditioned eyeblink responses (CR). Over all experiments no consistent effects of medication were observed.

These outcomes did not correlate with age, duration of education, psychopathology or dose of antipsychotics.

Conclusions: In this study we find several cerebellar learning deficits in patients with schizophrenia that we cannot attribute to the use of antipsychotics. Although this finding, combined with the fact that deficits are already present in recent-onset schizophrenia, could suggest that cerebellar impairments are a trait deficit in schizophrenia, this should be confirmed in longitudinal studies.