

Motor function and psychotic symptoms in patients with schizophrenia

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Abstract

Introduction:

Emerging evidence indicates that motor abnormalities are associated with progression of psychotic symptoms in individuals at the prodromal stage and can predict onset of full-blown psychosis. It is proposed that because of shared neurological malfunction in basal ganglia, motor abnormalities and psychotic symptoms are connected. To date little is known about whether the association between different types of motor function and psychotic symptoms exists in patients with full-blown schizophrenia.

Objectives:

This study was to examine the association of fine motor, muscle strength, and balance to psychotic symptoms in schizophrenia patients only treated with second-generation antipsychotics.

Methods:

Seventy schizophrenia patients (42 men and 28 women) were recruited. The McCarron Assessment of Neuromuscular Development was used to evaluate fine motor, muscle strength, and balance. The Positive and Negative Syndrome Scale was used to assess severity of psychotic symptoms. Considering gender differences, correlations between muscle strength and psychotic symptoms were analyzed separately by gender.

Results:

Poorer fine motor and balance were correlated to more severe negative symptoms ($r = -.46$, $p < .001$) and positive symptoms ($r = -.28$, $p = .02$), respectively. Weaker muscle strength was correlated to more severe negative symptoms ($r = -.53$, $p < .001$), but increased muscle strength was correlated to more severe positive symptoms ($r = .42$, $p = .006$) in men.

Conclusions:

Motor function keeps association with psychosis in patients with full-blown schizophrenia, supporting the hypothesis of shared basal ganglia dysfunction. Future research to examine whether compensatory mechanisms in cortical regions affect muscle strength is warranted.