THE RELATION BETWEEN GAIT AND COGNITION IN NEWLY DIAGNOSED PD

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Introduction: Recent studies report cognitive decline to be common already in the early phase of Parkinson's disease (PD). Changes in executive functions and attention, similar to those seen in PD, have been shown in elderly fallers. Pathological deviations in executive functions and attention have also been linked to postural instability and gait disturbances (PIGD) phenotype of PD. The relationship between cognitive function and motor performance in newly diagnosed drug-naive patients is unknown.

Aim: The aim of the present study is to investigate the relation between motor signs and cognitive performance in the early stages of PD prior to the intake of dopaminergic medication.

Methods: Patients with PD were identified in a population-based study of incident cases with idiopathic parkinsonism. Partial correlations were performed between motor and cognitive variables with age as a covariate.

Results: The Trail Making Test Parts A and B were the neuropsychological tests that correlated with measures of bradykinesia and gait and balance. Tremor and rigidity did not correlate with any of the cognitive variables.

Conclusions: Tests measuring attention and mental flexibility show the strongest connection to measures of gait and balance but also to bradykinesia. An explanation for this relation could be that both bradykinesia and executive dysfunction is linked to slowness due to the nigrostriatal dopaminergic deficit in PD.