LONGITUDINAL CHANGES IN COGNITION IN PARKINSON DISEASE WITH AND WITHOUT DEMENTIA

J.E. Galvin\textsuperscript{1,2}, D.K. Johnson\textsuperscript{3}

\textsuperscript{1}Neurology, New York University Langone Medical Center, New York, NY, \textsuperscript{2}Washington University, St Louis, MO, \textsuperscript{3}Psychology, University of Kansas, Lawrence, KS, USA

Background/aims: The longitudinal cognitive course in Parkinson's disease (PD) with and without dementia remains undefined.

Methods: Previously validated models of cognitive performance in Alzheimer's disease (AD) and nondemented aging were extended to individuals with PD (with dementia, \(n = 71\); without dementia, \(n = 47\)). Confirmatory factor analysis and piecewise regression was used to compare the longitudinal course of participants with PD with 191 cognitively healthy people and 115 individuals with autopsy-confirmed AD.

Results: At study entry, the autopsy-confirmed AD group (mean age= 78.3 ± 10.2 yrs) was oldest and the PDND group (mean age= 71.1 ± 8 yrs) was youngest. Both PD groups were predominantly men (75%). The healthy aging and AD groups were predominantly women (61% and 53%). Longitudinally, PDD was similar to AD in that an accelerating cognitive decline across 4 cognitive domains begins at least 2 years prior to the clinical diagnosis; however they differed from AD in that there was a unique pattern to longitudinal decline that was pronounced in the specific factors. PDD declined more rapidly on Visuospatial and Verbal Memory tasks than AD. The visuospatial decline was also observed in the PD group suggesting that PD takes a heavy toll on visuospatial abilities, regardless of status in other cognitive domains.

Conclusions: Both specific and global cognitive changes are witnessed in PD and AD. Longitudinal profiles of cognitive decline in PD and AD differed. Parkinson’s disease with or without dementia has a core feature of longitudinal decline in visuospatial abilities.