THE GENETIC BASIS OF NEUROPSYCHIATRIC SYMPTOMS IN PARKINSON'S DISEASE

K. Moore¹, J.A. Johnston¹, F.A. O'Neill¹, A.P. Passmore¹, O.A. Ross², T. Lynch³, R. Mulcahy⁴, K. Roberts³, D. Craig¹, The Gael-Psych Consortium

¹Centre for Public Health, Queen's University Belfast, Belfast, UK, ²Division of Neurogenetics, Mayo Clinic, Florida, FL, USA, ³The Dublin Neurological Institute, Mater Misericordiae University Hospital, Dublin, ⁴Department of Medicine, Waterford Regional Hospital, Waterford, Ireland

Introduction: Awareness of the negative effect of non-motor symptoms (NMS) on quality of life in idiopathic Parkinson's disease (iPD) has increased in recent years. The aetiology of NMS is likely to be multifactorial. Several symptoms may have a genetic basis.

Aims: The study aims to phenotype key non-motor neuropsychiatric symptoms and analyse relationships between symptoms and disease severity, and functional and cognitive state in approximately 400 patients. Genotypic and haplotypic variation within influential and putatively relevant genes will be analysed.

Methods: An assessment consisting of the Mini-Mental State Examination, the Unified Parkinson's Disease Rating Scale and the Neuropsychiatric Inventory with care-giver distress (NPI-D) is followed by sampling and DNA extraction. Descriptive statistics along with tests of correlation and association will be employed.

Results: Forty assessed patients had a mean age of 69.5 (62.5% were male). The mean age of onset of PD was 58 and the mean duration 11.5 years. The subjects had a mean MMSE of 26.5 and a median total NPI-D score of 23/144 (inter-quartile range 1.5-31.8). Anxiety (67.5%), appetite disturbance (e.g. loss of appetite)(67.5%) and sleep (62.5%) were the most common neuropsychiatric symptoms; hallucinations and depression had been experienced at some stage in over half of those interviewed. Delusions, agitation, apathy, disinhibition, irritability and aberrant motor behaviour had also been identified in at least one third of the group.

Conclusions: A wide range of non-motor neuropsychiatric symptoms are present in Parkinson's disease patients. In this initial sample, anxiety and appetite disturbance was seen to be most common.