Non motor symptoms profiles in black and south Asian minority ethnic subjects compared to white Caucasians with Parkinson’s disease: a prospective multicentre comparative study between London South and India.

Sauerbier A1, Barretto M2, Singhal B3, Zis P1, Brown R4, Inniss R1, Naidu Y5, Gallagher L1, Martin A1, Rizos A6, Parry M6, Klingelhofer L1, Bhattacharyya KB7, Martinez-Martin P8, Ray Chaudhuri K3, and on behalf of the IPMDS Non Motor PD Study Group.

1King's College Hospital, London, United Kingdom; 2Parkinson's Disease and Movement Disorder Society, Mumbai, India; 3Department of Neurology, Bombay; Hospital Institute of Medical Sciences, Mumbai, India; 4Institute of Psychiatry, King’s College Hospital, London, United Kingdom; 5Institute of Neurology, University College London and University of West London, London, United Kingdom; 6University Hospital Lewisham, London, United Kingdom; 7Bangur Institute of Neurology, Kolkata, India; 8National Center of Epidemiology and CIBERNED, Carlos III Institute of Health, Madrid Spain and 9King’s College London, King’s College Hospital, University Hospital Lewisham, London, United Kingdom

OBJECTIVE

To compare non motor symptoms (NMS) profiles in black and south Asian communities with Parkinson’s disease (PD) with white Caucasian cohort.

BACKGROUND

We have shown previously that non white PD cases in London are more likely to have:

- an atypical response to Levodopa (hyporesponsiveness)1,2,3
- a greater/ atypical cognitive burden3,4
- an abnormal surrogate imaging3
- an atypical natural history in terms of progression of PD5

METHODS

In this ongoing study, cases assigned as black/ south Asian as well as white Caucasian ethnicity with PD (OPCS, UK) from a London and Indian (Mumbai) database were included.

- Each patient underwent clinical interview and neurological examination.
- In particular the total scores as well as the scores of each domain of the Non–Motor Symptom Scale (NMSS) were analysed.

RESULTS

Cross sectional data is presented:

- 33 black/ south Asian (BSA) (mean age 64.8±11.1 years, mean age at diagnosis 59.4±11.6 years, mean duration of disease 5.4±3.5 years, median Hoehn and Yahr (HY) stage 3 (range 1-4)).
- 33 matched white Caucasians (WC) (mean age 68.1±11.2 years, mean age at diagnosis 60.5±11.8 years, mean duration of disease 7.6±6.7 years, median HY stage 3 (range 1-4)).
- 60 PD patients from Mumbai (India) (IndPD) (mean age 67.3±9.1 years, mean age at diagnosis 60.0±10.7 years, mean duration of disease 7.2±4.6 years, median HY stage 3 (range 1-4)) were compared.

- Observed NMS differences:
  - There was a trend of statistically significant difference (p=0.054) in NMSS Total score between IndPD (mean 71.0) and WC (mean 52.4).
  - Pain score was higher in WC compared to IndPD (p<0.001) and BSA UK (p<0.05).
  - Scores of cardiovascular NMS domain and sexual domain were different in WC compared to IndPD (p<0.05).
  - Cognitive, depression and anxiety impairment was similar across all racial groups.

CONCLUSIONS: Preliminary results from this international ethnicity NMS study suggest that NMS profiles may be different in WC PD versus south Asian PD subjects, possibly regardless of any migration related factors. In particular, aspects of NMS such as pain and dysautonomia are overrepresented in the WC PD.