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Heterogeneous determinants of quality of life in different phenotypes of Parkinson's disease

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Background: Health-related quality of life (HRQoL) is an important outcome in patients with Parkinson's disease (PD). A broad list of motor and non-motor features affect quality of life, however, there is a dearth of information about the complexity of interrelationships between its determinants in different phenotypes.

Objective: We aimed to find independent determinates and the best structural model for HRQoL, and investigate the heterogeneity between PD patients with different phenotypes regarding onset-age, progression rate and dominant symptom.

Patients and methods: A broad spectrum of demographic, motor and non-motor characteristics were investigated in 157 idiopathic PD patients namely comorbidity profile, nutritional status, UPDRS, psychiatric symptoms, fatigue, psychosocial functioning and PD severity index using Parkinson's Disease Questionnaire-39. Structural equation model and multivariate regressions were applied.

Results: Female sex, anxiety, depression and UPDRS-part II scores were the significant independent determinants of PD severity index. A model consisted of global motor, non-motor and co-morbidity components was able to explain 89% of the variance in HRQoL. In older-onset and slow-progression phenotypes, motor domain showed smaller contribution and the majority of its effects was mediated through non-motor features. Comorbidity component was a significant determinant only among older-onset and non-tremor-dominant patients. Fatigue was not a significant indicator of non-motor component to affect quality of life in rapid-progression PD.

Conclusion: Our findings showed outstanding heterogeneities in the pattern and determinants of HRQoL in different PD phenotypes, which should be considered during the assessments and developing personalized interventions to improve life quality in PD patients with different prominent features.

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Outcome of autosomal recessive early onset Parkinson's disease patients with PINK1 gene-5 year follow-up (2010–2015)

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Background: In 2009 a new complex homozygous large rearrangement of the pink1 gene in a Sudanese family with early onset Parkinson's disease was reported. The members of this family were followed-up for the last 5 years; we here report their clinical progression, management modalities and outcomes

Case report: This family was first seen in 2005 at OPD for adult neurology at Soba University Hospital (one of the Khartoum University hospitals). Four members of the family presented with progressive difficulty in initiating movement, resting tremors and shuffling gait. A provisional diagnosis of early onset Parkinson's disease (EOPD) was made and genetic workup revealed a mutation in the PINK1 gene. Symptoms started as early as 9 years in one patient and at 1–14 years in others. All family members developed motor symptoms including bradykinesia, resting tremors, postural instability and rigidity. Two patients have severe non motor symptoms including depression, cognitive impairment, and sleep disorders. Two patients had severe side effects to levodopa and in spite of being given small frequent doses they are still suffering from severe rigidity and bradykinesia and getting severe dyskinesia at the onset of medication.

Conclusion and recommendation: For the last 5 years the patients have shown progression in their symptoms and have started developing impaired cognitive functions. Is there any management option that gives hope for these patients to improve their quality life?

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Neuropsychological assessment in a Chilean cohort of patients with Parkinson's disease

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