

Gender differences in non-motor fluctuations in Parkinson's disease

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Background: Non-motor symptoms (NMS) and Non-motor fluctuations (NMF) in Parkinson's disease (PD) are common, involving several domains and affecting quality of life [1].

Objectives: To estimate the burden of NMF in PD patients and to evaluate the possible gender effect.

Methods: PD patients fulfilling the MDS-PD diagnostic criteria attending the “Parkinson's Disease and Movement Disorders Centre” of the University of Catania were evaluated using the Non-Motor Fluctuations Assessment (NoMoFA) Questionnaire [2]. NoMoFA items were also grouped into the following domains: cognitive, mood, sleep/fatigue, dysautonomia, hallucination/perception and miscellaneous domains were identified.

Results: One-hundred and twenty-one patients with PD (67 men, 55.4%; mean age 70.2 ± 8.9 years, disease duration 8.3 ± 4.6 years) were evaluated. All PD patients reported at least one NMS, whereas 87 (71.9%) also reported NMF. “Feel sluggish or had low energy levels” (47.2%) along with “Feel excessively sleepy during the day” (40.0%) were the most common NMF reported in the whole sample. The majority of PD patients reported presence NMF during the OFF state (79, 65.3%). At multivariate analysis, NMF were positively associated with the female gender (adjusted OR 3.13; 95%CI 1.21-8.11 p-value 0.01). Women with PD had higher NMF scores especially in depression/anxiety, sleep/fatigue and dysautonomia domains.

Conclusions: Our study reported the presence of a gender-related pattern in the frequency of NMS and NMF in PD patients, with female gender associated with a higher risk of developing NMF, highlighting the need for personalized treatment strategies when addressing NMF.

References:

- [1] Kim HS, Cheon SM, Seo JW, Ryu HJ, Park KW, Kim JW. Nonmotor symptoms more closely related to Parkinson's disease: Comparison with normal elderly. *J Neurol Sci* 2013; 324: 70–73.
- [2] Kleiner G, Fernandez HH, Chou KL, et al; PSG NoMoFA Study Group. Non-Motor Fluctuations in Parkinson's Disease: Validation of the Non-Motor Fluctuation Assessment Questionnaire. *Mov Disord* 2021; 36: 1392-1400.