

The impact of age at onset on clinical features of Parkinson's disease: a retrospective study

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Introduction: Age at onset of symptoms influences the course and long-term therapeutic response of Parkinson's disease (PD) patients. However, studies on the prevalence and initial course of symptoms in PD patients with different age at onset are scarce.

Objective: To evaluate the prevalence and progression of motor and non-motor symptoms over the first 5 years of illness in PD patients with different age at onset.

Methods: We retrospectively collected data on motor, non-motor and therapeutic features along the first 5 years of illness in 82 PD patients referring to our PD Center. Subjects evaluated at the time of diagnosis (T0) and followed-up for 5 years (T1) were included. They were divided into 3 groups according to the age at onset of motor symptoms as follows: ≤ 55 years old (29 patients, group A), 56-69 years old (20 patients, group B), and ≥ 70 years old (33 patients, group C). Motor symptoms were evaluated by the MDS-UPDRS-III scale, non-motor features by the NMSS and therapeutic regimen was expressed as LEDD.

Results: At T0, gastro-intestinal symptoms were significantly more frequent in group B patients (35%, $p=0.01$). At T1, postural instability (36%, $p=0.008$) gait disturbances (73%, $p=0.002$), and attention/memory symptoms (33%, $p=0.001$) were significantly more prevalent in group C patients, whereas miscellaneous symptoms domain was more frequent in group B patients (65%, $p=0.001$).

In the whole population, there were significant increases of prevalence of gait disorders ($p=0.001$), postural instability ($p=0.001$) and several NMSS domains between T0 and T1. Within group analysis showed that gait disorders significantly increased in B ($p=0.031$) and C ($p=0.001$) groups, and postural instability significantly increased in group C solely ($p=0.004$).

Conclusion: Our results suggest that PD patients with different age at onset may have a different motor and non-motor feature prevalence and progression in the first 5 years.