

## **Fatigue in idiopathic Parkinson`s disease: clinical characteristics and risk factors**

**S. M. Kim**, Y. Yang, S. W. Ha, J.H.. Han, D.E. Kim

*Neurology, Veterans Health Service Medical Center, South Korea*

Background: Fatigue is common nonmotor symptom in patients with Parkinson`s disease (PD). Although it develops in every stage of PD and has a major impact on quality of life, fatigue is not fully studied. The purpose of this study was to elucidate the characteristics and risk factors of fatigue in PD. Methods: We studied 148 patients at an average of 3.6 years after the diagnosis of PD. The presence of fatigue was assessed using Parkinson Fatigue scale. A cut-off point of 3.3 was used for diagnosis of fatigue. The presence of other nonmotor symptoms including depression was also identified. The relationship among demographic characteristics, clinical features and fatigue was evaluated. Results: Fatigue was observed in 99 patients (66.9%). In univariate analysis, diabetes, history of stroke, disease duration, Hoehn-Yahr stage, presence of depression and constipation were significantly associated with fatigue. Multivariate analyses showed that history of stroke ( $P=0.044$ , OR 2.35) and presence of depression ( $P=0.012$ , OR=2.88) were independent factors related to fatigue. Conclusions: Fatigue is a fairly common nonmotor symptom in patients with PD. The presence of depression is the most important factor related to fatigue, followed by history of stroke. Strategies to improve the fatigue should be individualized according to the associated factors.