IMPACT OF SLEEP QUALITY ON HEALTH-RELATED QUALITY OF LIFE IN PARKINSON'S DISEASE

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Abstract. *To investigate the relationship between sleep disturbances and health-related quality of life (HRQoL) in patients with Parkinson's disease (PD) and to determine how subjective sleep quality influences overall patient well-being.*

Keywords: *Parkinson's disease, sleep disturbance, health-related quality of life, subjective sleep quality, PSQI, PDQ-39*

Introduction

Parkinson's disease (PD) is a progressive neurodegenerative disorder characterized by motor symptoms such as bradykinesia, rigidity, and tremor. Beyond motor manifestations, non-motor symptoms, including sleep disturbances, significantly affect patients' quality of life (Chaudhuri et al., 2006). Sleep problems in PD include insomnia, fragmented sleep, restless legs syndrome, rapid eye movement sleep behavior disorder (RBD), and excessive daytime sleepiness. These disturbances are observed in up to 70–90% of PD patients and are often underdiagnosed (Breen et al., 2014).

Health-related quality of life (HRQoL) is an important measure reflecting the impact of disease on daily functioning, emotional well-being, social participation, and overall life satisfaction. Several studies have suggested that sleep quality is a critical determinant of HRQoL in PD, with poor sleep contributing to cognitive decline, mood disturbances, and reduced physical functioning (Barone et al., 2009).

Despite increasing recognition of the importance of sleep in PD, the relationship between subjective sleep quality and HRQoL has not been fully quantified. This study aims to systematically examine how sleep disturbances relate to HRQoL in PD patients, highlighting the need for early assessment and intervention to improve overall well-being.

Methods: Sixty PD patients (mean age 66 ± 7 years) were recruited from a neurology outpatient clinic. Subjective sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI), and daytime sleepiness was measured by the Epworth Sleepiness Scale (ESS). Health-related quality of life was evaluated using the Parkinson's Disease Questionnaire-39 (PDQ-39). Correlations between sleep parameters and HRQoL scores were analyzed using Pearson correlation coefficients, with significance set at $p < 0.05$.

Results: PD patients exhibited significant sleep disturbances, with a mean PSQI score of 9.2 ± 3.1. Higher PSQI scores, indicating poorer sleep quality, were strongly correlated

with reduced HRQoL ($r = 0.61$, $p < 0.001$). Excessive daytime sleepiness (ESS > 10) was present in 40% of patients and was associated with lower scores in the mobility, emotional well-being, and social support domains of the PDQ-39. Patients with better subjective sleep quality reported significantly higher HRQoL scores across all domains.

Conclusion: Sleep disturbances are common in Parkinson's disease and are closely associated with reduced health-related quality of life. Assessment and management of sleep problems should be an integral part of comprehensive care in PD, as improving sleep may positively impact overall patient well-being.

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