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Ultra-micronized Palmitoylethanolamide: An Efficacious Adjuvant Therapy for Parkinson's Disease

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Abstract

Background: Parkinson's disease (PD) is the subject of intense efforts to develop strategies that slow down or stop disease progression and disability. Substantial evidence points to a prominent role for neuroinflammation in the underlying dopaminergic cell death. Ultramicronized palmitoylethanolamide (um-PEA) is well-known for its ability to promote the resolution of neuroinflammation and exert neuroprotection. This study was designed to assess the efficacy of um-PEA as adjuvant therapy in patients with advanced PD.

Method: Thirty PD patients receiving levodopa were included in the study. The revised- Movement Disorder Society/Unified Parkinson's Disease Rating Scale (MDS-UPDRS) questionnaire was used to assess motor and non-motor symptoms. Clinical assessments were carried out before and after addition of um-PEA (600 mg). MDS-UPDRS questionnaire total score for parts I, II, III, and IV was analyzed using the Generalized Linear Mixed Model, followed by the Wilcoxon signed-rank test to evaluate the difference of each item's mean score between baseline and end of um-PEA treatment.

Results: Addition of um-PEA to PD patients receiving levodopa therapy elicited a significant and progressive reduction in the total MDS-UPDRS score (parts I, II, III and IV). For each item, the mean score difference between baseline and end of um-PEA treatment showed a significant reduction in most nonmotor and motor symptoms. The number of patients with symptoms at basal was reduced after one year of um-PEA treatment. None of the participants reported side effects attributable to the addition of um-PEA.

Conclusion: um-PEA slowed down disease progression and disability in PD patients, suggesting that um-PEA may be an efficacious adjuvant therapy for PD.

Keywords: Adjuvant therapy; Parkinson's disease; motor and non motor symptoms; neurodegeneration; neuroinflammation; ultra-micronized palmitoylethanolamide.

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