Nutritional Parameter Changes in Parkinson's Disease Patients Receiving Continuous Subcutaneous Infusion of Foslevodopa-Foscarbidopa

International Congress of Parkinson's Disease and Movement Disorders®
Honolulu, Hawaii, USA
October 5-9, 2025
International Parkinson and Movement Disorder Society

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Objective

This study aims to assess changes in nutritional parameters in patients with Parkinson's disease (PD) undergoing continuous subcutaneous infusion (CSCI) of foslevodopa-foscarbidopa.

Background

Device-aided therapies for advanced PD may influence nutritional status and body composition, potentially due to alterations in metabolism, muscle function, and physical performance. However, no data are currently available on the impact of CSCI of foslevodopa-foscarbidopa on nutritional parameters.

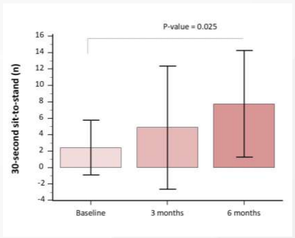
Methods

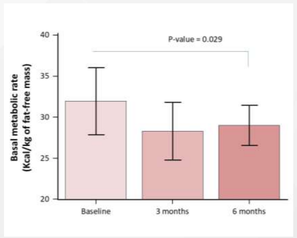
Fifteen consecutive PD patients (M:F, 5:10; age [mean±SD], 66.0±6.1 years; disease duration [mean±SD], 15.9±8.0 years) eligible for CSCI of foslevodopa-foscarbidopa underwent a comprehensive nutritional assessment at baseline and at 3 and 6 months post-treatment initiation. The protocol included anthropometric measurements, basal metabolic rate assessment (via indirect calorimetry), body composition analysis (via bioelectrical impedance), and evaluations of muscle function (handgrip strength) and physical performance (30-second sit-to-stand and 4-meter gait speed tests).

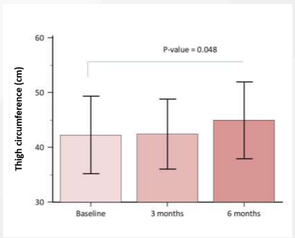
Results

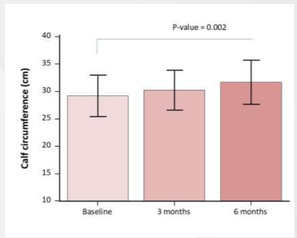
Pharmacological treatment led to significant improvements in the ON-state at both 3 and 6 months ($P < 0.001$ for all). While no significant changes were observed in body weight, body mass index, or overall body composition (fat mass, fat-free mass, and skeletal muscle mass) over time, a significant improvement in the chair stand test was evident at 6 months ($P = 0.025$). This was accompanied by a significant increase in thigh and calf circumferences ($P = 0.048$ and $P = 0.002$, respectively). Although total-body basal metabolic rate remained stable, a significant decrease in resting energy expenditure per kilogram of fat-free mass was noted ($P = 0.029$).

	TOTAL NUMBER: 15 PATIENTS
Female : Male	10 : 5
Age at treatment	66.0 ± 6.1 Y
Disease duration	15.9 ± 8.0 Y
Follow-up time	3 and 6 months
Pre-infusion LEDD	1140,2±322,2
Last daily infusion rate	0,31±0,11
Last night infusion rate	0,20±0,07
Reduction of UPDRS III	10,06±1,70









Conclusions

This preliminary evaluation suggests that CSCI of foslevodopa-foscarbidopa is an effective and safe treatment with minimal impact on nutritional parameters in patients with advanced PD. However, optimization of motor symptoms and complications led to improvements in parameters related to muscle function, anabolism, and energy expenditure.

This work was supported by «Brain and Malnutrition in Chronic Diseases Association» and «Fondazione Pezzoli per la Malattia di Parkinson.» **www.parkinson.it**