

Dysphagia as a poor outcome predictor in advanced Parkinson's disease patients treated with levodopa-carbidopa intestinal gel: a retrospective study

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Introduction: Dysphagia frequently occurs in advanced and late stages of Parkinson's disease (PD), and represent a significant risk factor for malnutrition and aspiration pneumonia. Some studies have highlighted the pivotal role of dysphagia in predicting disease progression; however, no one involved advanced PD patients treated with levodopa-carbidopa intestinal gel (LCIG).

Objective: To evaluate the impact of dysphagia on poor outcome measures in advanced PD patients under LCIG treatment.

Methods: We retrospectively collected records of 32 PD patients referring to our Movement Disorder Center who had started LCIG treatment between 2012 and 2022. The following records were collected: (I) demographic and clinical features; (II) detailed pharmacological therapy including LCIG dosage and total LEDD; (III) presence of dysphagia evaluated with a score >1 in UPDRS-2.3. We considered a primary composed endpoint, including the outcomes of "death", "HY=5," and "hospitalization". Secondary endpoints were the outcomes of "death" and "HY=5".

Results: There were 17 dysphagic (53%), and 15 non-dysphagic patients (47%). These groups were similar in terms of age, gender, disease duration, age and H&Y score at the time of LCIG implantation, treatment duration with LCIG, cognitive impairment, visual hallucinations. 10/17 dysphagic patients (59%) and 2/15 non-dysphagic patients (13%) met the primary endpoint ($p = 0.022$, LogOR 2.228). 8/17 dysphagic patients (47%) and 1/15 non-dysphagic patients (7%) met the secondary endpoint of "death" ($p = 0.032$, LogOR 2.521). 7/17 dysphagic patients (41%) and 1/15 non-dysphagic patients (7%) met the secondary endpoint of "H&Y=5" ($p = 0.066$, LogOR 4.529). 5/7 dysphagic patients (71%) who present H&Y=5, have presented an H&Y score <5 before the occurrence of dysphagia.

Conclusion: Our study demonstrates that dysphagia represents a poor outcome predictor in terms of occurrence of death, high functional impairment, and hospitalization in advanced PD patients treated with LCIG, highlighting the importance of prioritizing its management.