Abstract

Title

Global Long-Term Registry on Efficacy and Safety of DUODOPA in Patients with Advanced Parkinson's Disease in Routine Care (GLORIA)

Keywords

Advanced Parkinson's disease (PD), long-term duodenal levodopa-carbidopa infusion, levodopa-carbidopa intestinal gel, motor symptoms, non-motor symptoms, health care resource utilization, quality of life, routine patient care

Rationale and Background

To collect consistent clinical data in a large population of patients with advanced PD across Europe and Australia.

The LCIG System is currently approved in 48 countries for the treatment of levodopa-responsive advanced PD, and used as a continuous infusion into the jejunum via percutaneous endoscopic gastrostomy (PEG) using a portable pump.

Research Question and Objectives

To collect long-term efficacy and safety, outcomes on health care resource utilization, and patient's quality of life during LCIG treatment in routine patient care.

Study Design

Multi-country Registry according to national regulatory guidelines and reimbursement regulations

Variables and Data Sources

- Demographics and Medical History
- Disease stage (UPDRS V)

- Activities of daily living (UPDRS II)
- Motor examination (UPDRS III)
- Complications of therapy (UPDRS IV)
- Non-motor symptom scale (NMSS)
- LCIG treatment
- Adverse Drug Reactions (ADR), vital signs, and concomitant diseases and therapies
- Patient quality of life: Parkinson's Disease Questionnaire (PDQ-8) and EuroQoL – 5 Dimensions Quality of Life Questionnaire (EQ-5D)
- Healthcare resource utilization (HCRU)
- Product quality complaints (PQC)

Results

Participants

375 patients, enrolled in 75 movement disorders centers in 18 countries, were allocated to the All Subjects Consented (ASC) population, and 258 (68.8%) patients completed the registry.

Demography and History of PD

The mean age of patients was 66.4 (8.8) years, 220 (58.7%) patients were males. The majority of patients lived at home (93.9%). The mean duration since diagnosis of PD at V1* was 12.7 (6.3) years.

** V1 represents the first set of data collected before start of LCIG.*

LCIG Treatment

The mean total daily LCIG doses using PEG-J at V2* was 70.6 (30.3) mL**, and remained unchanged to M24.

** V2 represents the second set of clinical data collected at start of LCIG treatment with a PEG-J.*

*** Dosing data were recorded and analyzed in "mL." Conversion factor: 1 mL equals 20 mg levodopa.*

Health Care Resource Utilization

The majority of patients (83.2%) were retired, and 42.3% of retirements were due to PD. The proportion of patients with hospitalization was 32.8% at V1, 28.4% at M6, 20.1% at M12, and 25.7% at M24.

Clinical Efficacy

The mean duration of "OFF" time* reached a maximum reduction of 70% at M6 ($P < 0.0001$), and remained decreased to M24 ($P < 0.0001$). The mean duration of dyskinesia* reached a maximum reduction of 40% at M12 ($P < 0.0001$), and remained decreased to M24 ($P = 0.0064$).

The mean UPDRS III score reached a maximum reduction of 18% at V2 ($P < 0.0001$) and remained decreased to M24 ($P = 0.0259$). The mean UPDRS II reached a maximum reduction of 21% at V2 ($P < 0.0001$) and remained reduced to M18 ($P = 0.0072$).

* *UPDRS IV modified Items 39 (OFF time) and 32 (dyskinesia).*

The mean NMSS score reached a maximum reduction of 31% at M12 ($P < 0.0001$), and remained decreased to M24 ($P < 0.0001$).

Quality of Life

The mean PDQ-8 score reached a maximum reduction of 22% at M12 ($P < 0.0001$) and remained decreased to M24 ($P < 0.0001$). The EQ-5D VAS score increased to M24 ($P < 0.0001$) and EQ-5D descriptive score increased to M18 ($P = 0.0253$).

Safety

Overall, 194 (54.5%) patients experienced ADRs, 109 (30.6%) patients experienced Serious ADRs, and 24 (6.7%) patients experienced ADRs leading to treatment discontinuation. During the study, 29 deaths were recorded. No causality to drug or device was reported in 23 cases. One death was rated probably related to the device system, 1 death rated possibly related to device, and 4 deaths rated possibly related to

drug. There was no new pattern or trend in the causes of death in patients receiving LCIG therapy.

Discussion

The population included in this registry represents a cohort of advanced PD patients with pronounced motor fluctuations similar to cohorts described in other studies.

The analysis revealed improvements on motor complications as well as on non-motor symptoms and QoL confirming the previously published results. The safety profile was consistent with published DUODOPA data throughout the treatment period of 24 months.

In conclusion, consistent significant and clinically-relevant improvements in motor and non-motor symptoms, HCRU and QoL of patients were evident over a 24-month treatment period at stable LCIG doses. The benefits of previously reported effectiveness and the established safety profile of LCIG has been confirmed on a large patient collective treated in medical routine care, complement to the existing evidence of LCIG treatment in advanced PD patients and supports the consideration of LCIG as a long-term treatment strategy in patients with advanced PD.

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