Supplementary Material

Effects of Continuous Dopaminergic Stimulation on Parkinson's Disease Gait: A Longitudinal Prospective Study with Levodopa Intestinal Gel Infusion

Supplementary Table 1. Spearman rank correlation coefficients for associations between improvement from T0 to T2 of motor complications with improvement of gait outcomes and of Freezing of Gait

		Δ NFoG-Q Total score	Δ 2MWT Gait speed	Δ 2MWT Stride length	Δ TUG Total duration	Δ TUG Sit to Stand duration
Δ MDS-UPDRS IV	**p**	0.560	0.505	0.403	0.336	0.121
	Rho	0.187	-0.214	-0.266	-0.305	-0.473
	95% CI	-0.449 – 0.697	-0.711 – 0.427	-0.738 – 0.380	-0.756 – 0.343	-0.829 – 0.158
Δ MDS-UPDRS IV – Motor fluctuations	**p**	0.329	0.487	0.669	0.055	0.126
	Rho	0.308	-0.223	-0.138	0.565	0.466
	95% CI	-0.340 – 0.758	-0.716 – 0.419	-0.670 – 0.488	-0.032 – 0.865	-0.166 – 0.827

We calculated the percentage improvement between baseline (T0) and last follow-up (T2) assessments. As an example, the improvement in NFoG-Q was determined using the formula: ΔNFoG-Q = (NFOG-Q at T2 - NFoG-Q at T0)/NFoG-Q at T0).
MDS-UPDRS, Movement Disorder Society - Unified Parkinson's Disease Rating Scale; NFoG-Q, New Freezing of Gait Questionnaire; 2MWT, Two minute walking test; TUG, Timed Up and GO; CI, Confidence Interval

Supplementary Table 2. Clinical and kinematic prospective assessment of subgroup of the 9 patients with long-term follow-up

	T0 - Baseline	T1 - 3 months	T2 - 6 months	T3 - long-term follow-up	p
N-FoG-Q - Total score	19.7 ± 5.2 *^°	12..7 ± 8.2 ^	8.1 ± 7.9 *	13.1 ± 10.5°	***0.002***
Number of falls (last month)	0.8 ± 1.1	0	0.11 ± 0.33	0.11 ± 0.33	0.052
2MWT - Gait speed (m/s) *Normative 1.04 — 1.64 m/s*	0.7 ± 0.26 *	0.73 ± 0.15	0.82 ± 0.17 *	0.68 ± 0.26	***0.031***
2MWT - Step duration (s) *Normative 0.450 — 0.580 s*	0.63 ± 0.08	0.61 ± 0.06	0.59 ± 0.06	0.63 ± 0.06	0.14
2MWT - Stride Length (m) *Normative 1.11 — 1.66 m*	0.84 ± 0.24 *°	0.88 ± 0.16	0.97 ± 0.17 *	0.88 ± 0.28°	***0.014***
2MWT - Double support (%GCT) *Normative 12.4 — 24.6 %*	26.3 ± 7.5	25.1 ± 5.1	23.9 ± 4.7	27.9 ± 8.2	***0.036***
TUG - Duration (s) *Normative 6.28 — 11.6 s*	17.5 ± 4.8 *°	16.0 ± 3.0	14.3 ± 2.2 *	17.3 ± 13.3°	***0.04***
TUG - Turn velocity (degree/s) *Normative 158 — 322 degree/s*	145.8 ± 35.8	147.7 ± 30	159.4 ± 35.5	141.9 ± 58.9	0.447
TUG - Turn duration (s) *Normative 1.42 — 2.53 s*	2.64 ± 0.92	2.59 ± 0.58	2.43 ± 0.61	2.32 ± 0.59	0.212
TUG – Sit To Stand duration (s) *Normative 0.69 — 1.27 s*	1.17 ± 0.17	1.09 ± 0.25	0.96 ± 0.25	1.01 ± 0.22	0.102
360° - Turn duration (s) *Normative 1.86 — 3.80 s*	4.64 ± 1.5	4.53 ± 1.19	4.3 ± 1.29	5.66 ± 1.98	0.352
360° - Turn velocity (degree/s) *Normative 146 — 359 degree/s*	133.4 ± 73	139.8 ± 45.7	145.2 ± 20.1	157.4 ± 125.5	0.678
Sway - Area (m²/s⁴) *Normative 0.248 — 1.59 m²/s⁴*	8.71 ± 7.73	9.08 ± 7.59	8.12 ± 5.73	12.3 ± 17.5	0.855
RMS Sway (m/s²) *Normative 0.231 — 0.661 m/s²*	1.2 ± 0.67	1.21 ± 0.44	1.19 ± 0.36	0.77 ± 1.19	0.165

Results are reported as mean ± standard deviation.

Normative values reported on Mobility lab software are reported for each gait or balance evaluation conducted.

Statistical difference at post-hoc analysis between two evaluations is reported with * (if between assessment at T0 and T2) or ^ (if between assessment at T0 and T1) or ° (if between T0 and T3)

N-FoG-Q, New Freezing of Gait Questionnaire; LCIG, Levodopa-Carbidopa Intestinal Gel; 2MWT, 2 Minute Walking Test; TUG, Timed Up and GO; GCT, Gait Cycle Time; RMS, Root Mean Square