

Table S1—Change from baseline in non-motor symptoms in the three groups.

	6 MONTHS			12 MONTHS		
	OSA- (n=18)	OSA+CPAP+ (n=30)	OSA+CPAP- (n=11)	OSA- (n=17)	OSA+CPAP+ (n=21)	OSA+CPAP- (n=21)
ESS	2.6 (3.3) 0.005*	-0.2 (5.1) 0.86	-2.5 (4.7) 0.10	2.3 (4.1) 0.03*	-1.0 (3.3) 0.20	-0.4 (4.1) 0.62
MOCA	-0.6 (2.4) 0.35	0.9 (2.8) 0.09	-0.7 (4.9) 0.64	-0.1 (2.2) 0.91	1.7 (3.5) 0.04*	0.3 (3.6) 0.68
UPDRS 1	1.3 (4.3) 0.20	-2.7 (4.0) 0.001*	-1.2 (3.7) 0.32	-0.3 (7.9) 0.88	-4.1 (5.4) 0.002*	1.4 (4.6) 0.18
PDSS	-8.1 (10.7) 0.005*	7.9 (19.0) 0.03*	8.8 (18.0) 0.13	0.5 (16.7) 0.91	11.4 (24.4) 0.04*	-3.1 (13.8) 0.31
FSS	0.5 (1.2) 0.11	0.0 (1.2) 0.99	-0.7 (1.3) 0.09	0.2 (1.2) 0.46	-0.4 (1.2) 0.11	-0.1 (1.0) 0.67
Apathy	2.4 (5.2) 0.07	-0.3 (3.2) 0.62	0.2 (3.9) 0.88	1.4 (5.8) 0.33	-1.4 (4.4) 0.17	1.2 (4.0) 0.18
BDI	0.8 (5.8) 0.55	-1.1 (3.5) 0.09	-0.8 (3.3) 0.44	-0.9 (7.3) 0.63	-1.3 (5.8) 0.32	-0.3 (5.1) 0.80
HADS-D	1.2 (2.0) 0.03*	-0.1 (2.5) 0.89	-0.7 (2.7) 0.40	-0.2 (3.0) 0.75	-0.7 (3.3) 0.36	0.0 (1.9) 0.91
HADS-A	1.1 (2.0) 0.04*	-0.4 (3.3) 0.48	-0.9 (2.5) 0.26	0.5 (3.1) 0.55	-2.1 (3.8) 0.02*	0.7 (3.2) 0.34

Legend: Data as mean (SD), p for change from baseline (paired t-test). * : p<0.05. ESS: Epworth Sleepiness Scale, a higher score reflects greater sleepiness; MoCA: Montreal Cognitive Assessment, a lower score reflects worse cognition; UPDRS 1: Unified Parkinson’s Disease Rating Scale part 1, a higher score reflects greater non-motor symptoms; PDSS: Parkinson’s Disease Sleep Scale, a lower score reflects poorer sleep quality; FSS: Fatigue Severity Scale, a higher score reflects greater fatigue; Apathy score: a higher score reflects greater apathy; HADS-A: Hospital Anxiety and Depression Scale – Anxiety, a higher score reflect greater anxiety; HADS-D: Hospital Anxiety and Depression Scale – Depression, a higher score reflects more depressive tendency. BDI: Beck Depression Inventory, a higher score reflects more depressive tendency.

Table S2—Change in individual UPDRS part 1 items.

	6 MONTHS			12 MONTHS		
	OSA- (n=18)	OSA+CPAP+ (n=30)	OSA+CPAP- (n=11)	OSA- (n=17)	OSA+CPAP+ (n=21)	OSA+CPAP- (n=21)
1. Cognitive impairment	0.4 (1.2) 0.13	-0.3 (1.0) 0.36	-0.3 (0.9) 0.51	0.25 (1.1) 0.39	-0.3 (1.2) 0.20	-0.3 (1.0) 0.29
2. Hallucinations and Psychosis	0.2 (0.5) 0.10	-0.1 (0.6) 0.38	0.5 (0.8) 0.10	0.1 (0.6) 0.67	-0.2 (0.6) 0.16	0.0 (0.9) 0.80
3. Depressed Mood	0.3 (1.0) 0.62	-0.4 (1.0) 0.08	-0.4 (0.8) 0.59	-0.1 (1.4) 0.86	-0.5 (0.9) 0.02*	0.0 (0.7) 0.27
4. Anxious Mood	0.3 (1.5) 0.44	-0.6 (1.2) 0.03*	-0.3 (0.7) 0.20	-0.3 (1.3) 0.33	-0.9 (1.0) 0.001*	0.4 (0.9) 0.05*
5. Apathy	0.2 (1.3) 0.59	-0.3 (0.8) 0.13	-0.4 (0.7) 0.35	-0.1 (1.4) 0.86	-0.1 (1.0) 0.50	0.3 (0.8) 0.05*
6. Features of Dopamine Dysregulation Syndrome	-0.1 (0.9) 0.80	0.2 (0.8) 0.26	0.0 (0.9) 0.35	-0.2 (0.8) 0.38	0.1 (0.8) 0.42	0.0 (0.8) 1.0
7. Sleep Problems	-0.4 (1.3) 0.23	-0.5 (1.3) 0.13	-0.2 (0.9) 0.51	0.1 (1.4) 0.86	-0.2 (1.5) 0.49	0.3 (0.8) 0.09
8. Daytime Sleepiness	0.0 (0.9) 1.0	-0.4 (0.7) 0.009*	-0.5 (0.7) 0.10	-0.5 (0.8) 0.03*	-0.5 (1.1) 0.07	-0.1 (0.9) 0.82
9. Pain and Other Sensations	0.4 (1.4) 0.25	-0.2 (1.2) 0.46	-0.1 (1.2) 0.81	-0.2 (1.1) 0.41	-0.2 (1.8) 0.55	0.0 (1.0) 0.83
10. Urinary Problems	0.2 (0.9) 0.45	-0.1 (0.8) 0.50	-0.3 (1.1) 0.59	-0.2 (1.1) 0.39	-0.2 (0.8) 0.20	-0.1 (1.0) 0.82
11. Constipation Problems	0.2 (0.5) 0.10	0.2 (0.7) 0.11	0.0 (0.6) 0.59	0.2 (0.7) 0.16	0.1 (0.9) 0.48	0.0 (1.0) 0.65
12. Light-Headedness on Standing	-0.1 (1.1) 0.83	-0.4 (1.0) 0.04*	0.0 (0.6) 1.0	-0.2 (1.0) 0.33	-0.6 (0.9) 0.006*	0.1 (1.2) 0.72
13. Fatigue	-0.4 (0.8) 0.08	-0.3 (0.8) 0.06	-0.1 (0.8) 0.73	-0.4 (0.7) 0.03*	-0.6 (1.2) 0.04*	0.3 (0.8) 0.11

Legend: Data as mean (SD), p for change from baseline (paired t-test). * : p<0.05. P values are not corrected for multiple comparisons.