

Clinical correlation of severe somnolence in Parkinson's disease: results from an international naturalistic non motor symptoms cohort

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OBJECTIVE

- To assess clinical features correlated with sleepiness in Parkinson's disease (PD) using cut-off values of the item 15 of the PD sleep scale (PDSS)

METHODS

- We classified 658 patients with PD into 3 subgroups based on PDSS item 15 scores, mild (>7), moderate (5-7), and severe (<5).

RESULTS

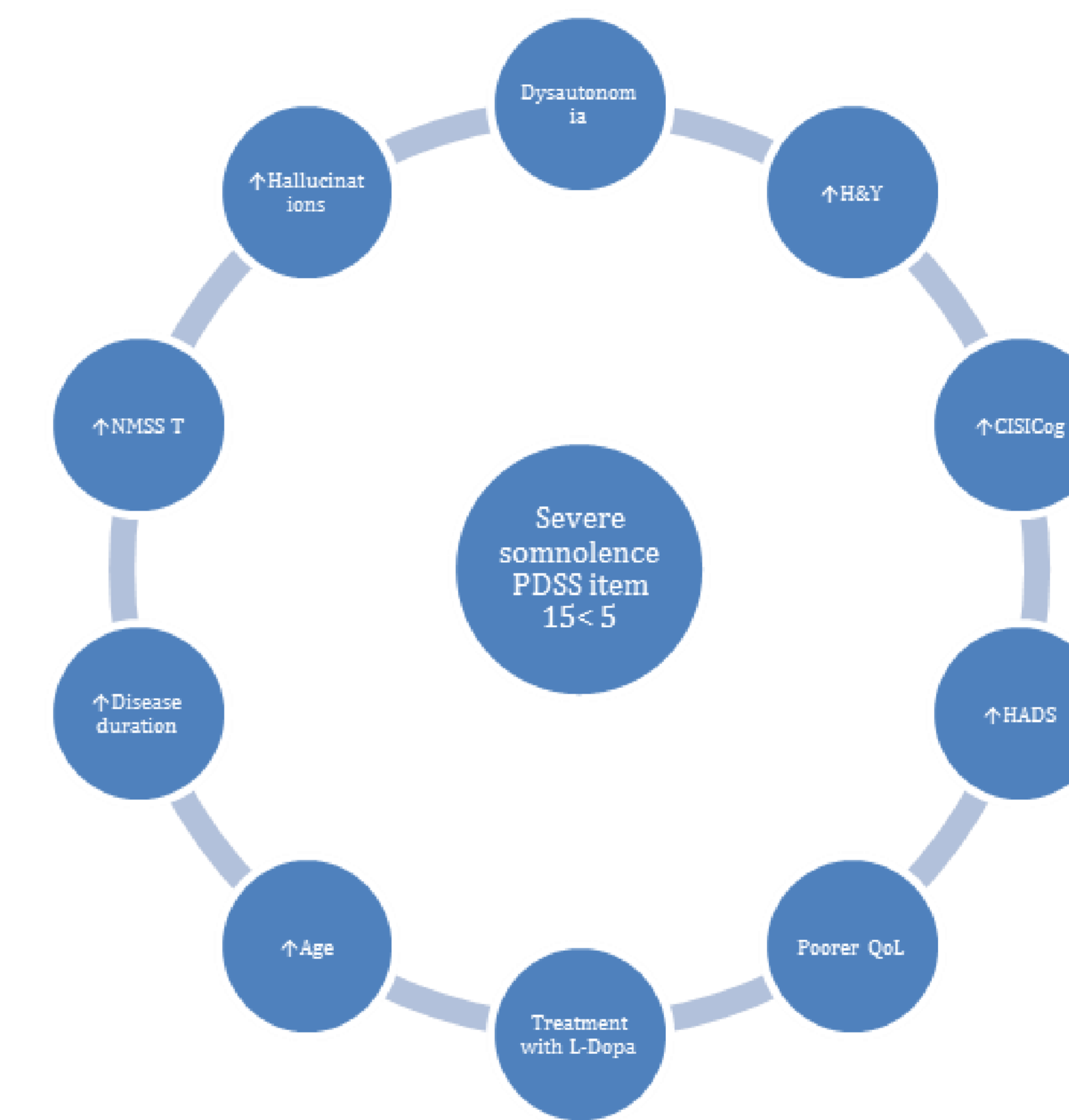
Severe sleepiness (PDSS <5) was present in 38.8% (N=255). Compared to patients with mild PDSS (PDSS >8) (N=360), those patients were of/had:

- older age (mean in years 68.5±10.15 versus 64.8±11.4),
- had a longer disease duration (mean in years 5.8±5.1 versus 4.9±5),
- higher Hoehn and Yahr state (median 3 (1-5) versus 2 (0-5)),
- higher non motor symptoms (NMS) scale total score (63±41.6 versus 39.1±31.3),
- higher rate of hallucinations on NMS scale (0.7±1.6 versus 0.2±1),
- more autonomic dysfunction on NMS scale (14±12.3 versus 9.4±9.4),
- higher clinical impression of severity index cognition (1±1.1 versus 0.4±0.7),
- higher Hospital anxiety and depression scale (13.4 ±8 versus 9.8±6.3),
- poorer quality of life (mean PDQ-8 total score 10.25±6.5 versus 6.6±5.5).

BACKGROUND

- Although risk factors for sudden onset of sleep (SoS) and somnolence in Parkinson's disease (PD) have been studied, large scale data is missing. We report data from an international cohort using cut off values from item 15 of PD sleep scale (PDSS) as an indicator of severe somnolence.

FIGURE 1: SUMMARY OF CORRELATION



Summary of the associated findings with severe somnolence (PDSS15 score <5) in our PD patients' cohort.

TABLE 2: SEVERE VS MILD SOMNOLENCE AND ASSOCIATED FEATURES

	PDSS15	Age	PD Disease duration	HY	PD onset	NMSS Hallucinations	NMSS Autonomic dysfunction	NMS Total	CISI-Cognition	NMS Quest	HADS total	PDQ total
PDSS <5	Number of patients	255	255	255	251	211	255	255	255	132	255	255
	Mean	71.820	10.204	2.539	62.598	.720	14.016	53.859	.965	11.780	13.420	10.247
	Median	72.000	9.000	3.000	64.000	0.000	12.000	43.000	1.000	11.000	13.000	9.000
	Std. Deviation	10.2603	9.1120	.9362	11.2968	1.6540	12.3480	37.9771	1.0844	5.0815	7.9690	6.4945
PDSS >8	Number of patients	360	360	360	357	309	360	360	358	192	360	360
	Mean	68.328	8.986	2.021	59.840	.249	9.411	35.292	.430	7.906	9.792	6.614
	Median	70.000	7.000	2.000	62.000	0.000	6.000	28.500	0.000	7.000	9.000	5.000
	Std. Deviation	11.6594	7.3456	.8793	12.0014	.9932	9.4157	30.2849	.7329	4.4910	6.2953	5.4852

PDSS cut-off values of severe (PDSS <5) and mild (PDSS >8) somnolence and comparison of different clinical features among both groups including age, disease duration, disease onset, disease severity, presence/absence of hallucinations and autonomic features (assessed by a combination of sub-scores of the NMSS), non-motor symptom scales, cognition and depression scores.

CONCLUSION

- Severe somnolence likely reflects a specific subtype (Park sleep) of PD (1)
- There is sensitivity to dopaminergic drugs and a higher NMS burden.
- These observations have clinical implications regarding personalised medication strategies in this subgroup.

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