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CLINICAL STUDY ON OVERACTIVE BLADDER IN MALE PATIENTS WITH PARKINSON'S DISEASE AND ITS RELATED MOTOR AND NON-MOTOR SYMPTOMS

Hypothesis / aims of study
To assess which motor and non-motor symptoms are closely related to overactive bladder severity in male patients with Parkinson's disease.

Study design, materials and methods
A total of 160 male patients (mean age 71.4 ± 8.2 years) diagnosed with Parkinson's disease were included in the present study at Osaka University and affiliated hospitals. The severity of Parkinson's disease was classified as stage 3, 4 or 5 based on the Hoehn and Yahr staging system. Disease duration was 8.9 ± 5.1 years. Age, seven items from the Unified Parkinson's Disease Rating Scale motor section part III and three non-motor symptoms were assessed by multivariate analysis for their impact on the overactive bladder symptom score, a specific questionnaire for overactive bladder.

Results
Overactive bladder symptom score was significantly higher in the group with severe motor symptoms related to finger taps and gait than in the group with mild motor symptoms related to these two factors. Furthermore, overactive bladder symptom score of patients with erectile dysfunction and constipation was significantly higher than that in patients without these symptoms. Multivariate analysis identified only finger taps and constipation as factors independently associated with overactive bladder symptom score (Table below).

Interpretation of results
Although a study on a larger scale is required to further assess the association of Parkinson's disease symptoms with overactive bladder symptom score, information on finger taps and severity of constipation should be obtained when assessing urological patients with Parkinson's disease.

Concluding message
Finger taps and constipation are closely related to symptoms of overactive bladder in male patients with Parkinson's disease

Multiple classification analysis with symptoms of PD for OABSS

Clinical finding	Category	OABSS			Age-adjusted model	
		Mean ± SD	Regression coefficient	P-value	Regression coefficient	P-value
Resting tremor	Mild	5.7 ± 3.6	Reference	–	Reference	–
	Severe	5.1 ± 2.8	−1.022	NS	−0.896	NS
Finger taps	Mild	5.2 ± 3.3	Reference	–	Reference	–
	Severe	7.6 ± 3.6	1.961	0.020	1.830	0.027
Rigidity	Mild	5.5 ± 3.4	Reference	–	Reference	–
	Severe	5.9 ± 3.4	−0.614	NS	−0.524	NS
Arising from chair	Mild	5.3 ± 3.4	Reference	–	Reference	–
	Severe	6.3 ± 3.6	−0.615	NS	−0.795	NS
Gait	Mild	5.3 ± 3.4	Reference	–	Reference	–
	Severe	6.7 ± 3.3	1.229	NS	1.192	NS
Posture	Mild	5.4 ± 3.4	Reference	–	Reference	–
	Severe	6.5 ± 3.7	0.184	NS	0.208	NS
Postural stability	Mild	5.4 ± 3.4	Reference	–	Reference	–
	Severe	6.7 ± 3.5	−0.425	NS	−0.638	NS
Erectile dysfunction	Negative	5.1 ± 3.3	Reference	–	Reference	–
	Positive	6.7 ± 3.6	1.029	NS	0.833	NS
Constipation	Negative	4.6 ± 2.9	Reference	–	Reference	–
	Positive	6.3 ± 3.6	1.283	0.028	1.255	0.030
Syncope/blackout	Negative	5.3 ± 3.2	Reference	–	Reference	–
	Positive	6.8 ± 4.1	0.472	NS	0.555	NS

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