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An orthostatic hypotension mimic: The inebriation-like syndrome in Parkinson disease

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LETTER: NEW OBSERVATIONS

We recently encountered three men with mild idiopathic Parkinson disease (PD), referred for autonomic work-up, who suffered chronic disabling orthostatic lightheadedness (**Table 1**). They further described their symptoms as an inebriation-like sensation, as “having had a few drinks” (**Video**). Symptoms were worse in the morning, and disappeared on lying down suggesting orthostatic hypotension (OH)¹. However, none of them had a fall in blood pressure (BP) on prolonged passive head up tilt, even though they reported symptoms when standing. None of them had post-prandial hypotension even following a carbohydrate-rich meal. Transcranial Doppler ultrasonography of the middle cerebral artery, at times patients were standing and symptomatic, showed no reduction in cerebral flow velocity. End-tidal CO₂ was also normal. Ambulatory BP monitoring further confirmed that BP was normal at times patients were standing and symptomatic and – of course – all three men denied drinking alcohol during the recording.

All patients had a L-dopa responsive asymmetric parkinsonian syndrome with no atypical features or significant bladder involvement. Neurological examination showed no signs of cerebellar or corticospinal involvement, peripheral neuropathy, or impaired proprioception. Patient #1 had normal laboratory vestibular testing, and in patients #2 and #3, clinical vestibular examination (including Dix-Hallpike maneuver) was unrevealing. Surface EMG ruled out orthostatic tremor/myoclonus². Ophthalmologic examination, including optical coherence tomography, disclosed no significant abnormalities. Brain MRI was normal in all patients. Patients were instructed to reduce or stop other medications (diltiazem in patient

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AUTHORS' ROLES:

JAP: Project conception and design, data collection, data analysis, review and critique of subsequent drafts.

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#1, amlodipine and escitalopram in #2, and lorazepam in #3), but this had no effect on their symptoms.

Lightheadedness is one of the most common non-motor symptoms of PD, described by 40% of patients³. Lightheadedness means an unpleasant sensation of dizziness and/or a feeling that one may faint. Questioning can sometimes distinguish dizziness due to vestibular dysfunction versus proprioceptive imbalance or blood flow-related deficits as the causes of reported lightheadedness

The cause of the inebriation-like sensation in our patients remains elusive, but we were able to rule out cerebral hypoperfusion, vestibular abnormalities, and orthostatic myoclonus/tremor. “Inebriation-like” symptoms have occasionally been reported in patients with cerebellar ataxia or spastic paraparesis, as well as in those receiving gamma-hydroxybutyrate, ketamine, dantrolene, barbiturates, nitrous oxide, halothane, morphine, cannabis, antineoplastics (e.g., obatoclax and lapatinib) and in serotonergic syndrome. Our patient were not receiving any of these agents.

We suggest the term “inebriation-like syndrome” as is highly descriptive and distinctive from other symptoms such as vertigo, feeling faint, or presyncope. We hypothesize that this syndrome is related to basal ganglia abnormalities leading to subjective balance/coordination impairment. Reports of improvement in chronic lightheadedness after stimulation in the subthalamic nucleus⁴ supports this hypothesis. The fact that, in our patients, orthostatic symptoms began at around the same time as the motor deficits is also in keeping with this hypothesis.

These cases emphasize the importance of determining whether symptoms that suggest OH are actually caused by OH. Relying only on symptoms when evaluating orthostatic intolerance can lead to unnecessary treatment with pressor agents (e.g., midodrine or droxidopa⁵), as was indeed the case in patient #3.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Patients' characteristics

	Patient #1	Patient #2	Patient #3
Age/gender	83/Male	80/Male	66/Male
Description of symptoms (Video)	Slight inebriation when walking that improves when sitting and abates upon lying down. Worse in the morning.	"Feeling spacey", "brain fog", or inebriated when walking, that improves upon sitting and disappears when lying down.	Extremely fatigued, as having had "two martinis", when standing or sitting, abating upon lying down. Worse in the morning.
Symptoms duration (years)	2	2.5	3
Disease duration (years)	2	2.5	3
L-dopa equivalent dose (mg)	400	300	100
Other medications	Diltiazem	Losartan Amlodipine Escitalopram	Lorazepam
UPDRS-III (ON)	11	16	12
MMSE	28	30	30
BP supine (mmHg)	161/68	148/72	123/68
HR supine (bpm)	47	68	82
BP after 3 min standing (mmHg)	167/80	142/78	109/66
HR after 3 min standing (bpm)	52	70	99
MCA velocity supine (cm/s)	56	62	54
MCA velocity after 3 min standing (cm/s)	58	61	57
End-tidal CO ₂ supine (mmHg)	34	42	35
End-tidal CO ₂ after 3-min standing (mmHg)	35	38	38
Surface EMG	Normal	Normal	Normal
Vestibular testing	Normal full laboratory vestibular evaluation	Normal clinical vestibular evaluation	Normal clinical vestibular evaluation
Ophthalmological evaluation	Normal	Normal	Normal
Brain MRI	Normal	Normal	Normal

UPDRS: United Parkinson Disease Rating Scale; MMSE: Mini Mental Status Examination; BP: blood pressure; HR: heart rate; MCA: middle cerebral artery; EMG: electromyography; MRI: magnetic resonance imaging.