

Supplementary Table 1. Review of the literature with WEBINO in PSP

	Flint et al. (2005) ¹	Matsumoto et al. (2008) ²	Park et al. (2013) ³	de Souza et al. (2017) ⁴	Matsumoto et al. (2019) ⁵	Yazdi et al. (2020) ⁶	Gupta et al. (2020) ⁷	Sherstyuk et al. (2022) ⁸
Age at onset (yr)/Sex	71/M	61/M	71/F	60/F	78/M	52/M	79/M	58/M
Disease duration at initial examination, yr	2	5	7	4	2	5	5	6
First symptom	Unprovoked fall, dysarthria	Freezing of gait, akinesia, recurrent falls	Postural instability, bradykinesia	Unsteadiness and recurrent falls	Postural instability when walking	Gait disturbance with falls, low-tone speech, drooling	Slowness, difficult turning, dysphonia, drooling	Dysarthria, gait instability
Parkinsonism	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Initial oculomotor abnormality	Up and down gaze impairment, absent saccades, WEBINO	Downward gaze limitation	WEBINO, vertical gaze limitation, impaired vestibulo-ocular reflex	WEBINO, vertical gaze impairment (worse upgaze), absent convergence, normal oculocephalic reflex, dissociated nystagmus in the optokinetic reflex	Downward gaze limitation, loss of eye convergence	WEBINO	WEBINO, square-wave jerks, impaired up gaze, slow vertical saccade	WEBINO, vertical gaze limitation, prolonged vertical saccadic latency, impaired vertical smooth pursuit, impaired vestibulo-ocular reflex suppression
Cognitive impairment	N/A	Yes (15/30 on MMSE)	Yes (16/30 on MMSE, 1/3 on CDR)	Mild executive deficits: Yes (26/30 on MMSE)	Yes (slowing of cognition, frontal release signs)	N/A	Yes (23/30 on MoCA)	Yes (23/30 on MoCA, 14/18 on FAB)
Disease duration at the last visit	N/A	9 years	N/A	N/A	3 years	N/A	N/A	N/A
Oculomotor abnormality at the last visit*	N/A	WEBINO syndrome, followed by alternating exotropia, disturbed convergence, apraxia of eyelid opening	N/A	N/A	WEBINO syndrome, preserved oculocephalic reflex	N/A	N/A	N/A
Brain MRI	Diffuse atrophy with mild atrophy of the midbrain tegmentum	Marked atrophy of the midbrain tegmentum, mild atrophy of frontotemporal lobes	Temporal lobe and midbrain atrophy	Midbrain atrophy without pontine or cerebellar atrophy	Severe atrophy of the midbrain, moderate atrophy of the frontotemporal lobes	Humming-bird sign	Midbrain atrophy	Midbrain and cortical atrophy
Response to levodopa	N/A	Poor	Poor (750 mg/day)	Poor	Poor (300 mg/day)	N/A	Poor (1,000 mg/day)	Poor (300 mg/day)
Diagnosis based on the description	Probable PSP-RS	Probable PSP-PGF	Probable PSP-RS	Probable PSP-RS	Probable PSP-RS	Probable PSP-RS	Probable PSP-PGF	Probable PSP-RS

*oculomotor examination at the last visit was not applicable in patients that were seen only once. WEBINO, wall-eyed bilateral internuclear ophthalmoplegia; PSP, progressive supranuclear palsy; PSP-RS, progressive supranuclear palsy-Richardson's syndrome; M, male; F, female; PSP-PGF, progressive supranuclear palsy-progressive gait freezing; MMSE, Mini Mental State Examination; CDR, Clinical Dementia Rating; MoCA, Montreal Cognitive Assessment; FAB, Frontal Assessment Battery; N/A, not applicable; MRI, magnetic resonance imaging.

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