

**Keyword 1:** Parkinson's disease

**Keyword 2:** executive functions

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### 67 Three Cases of Clinically Diagnosed Semantic Dementia with Lewy Body Pathology.

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**Objective:** Semantic variant primary progressive aphasia (svPPA) is a progressive neurodegenerative syndrome characterized by prominent impairments in naming, conceptual knowledge, and comprehension, in the setting of preserved fluency, memory, and visuospatial perception. Generally, svPPA is caused by underlying TDP-43 neuropathology. In contrast, the clinical syndrome of Lewy Body Disease (LBD) is characterized by the presence of parkinsonism and prominent attentional and visuo-spatial deficits, with relative preservation of language skills and visual hallucinations. The underlying neuropathology is Lewy bodies. Here, we describe three unique cases from the UT Health San Antonio Brain Bank of patients with clinical diagnoses of svPPA, but primary neuropathological diagnoses of LBD.

**Participants and Methods:** We present three cases who had clinical presentations of svPPA but were found to have LB pathology as opposed to the expected TDP-43 or FTL D pathology. We studied demographic variables in these three patients, along with neuroimaging, clinical symptoms, and patterns of neuropathology, in order to demonstrate and further understand the similarities and connections between LBD and semantic deficits.

**Results:** In Case 1, the patient exhibited fluent but empty speech with profound anomia. Symptoms started in his late 50s and progressed until he lost all purposeful capacity for language before his death at age 66. DaT scan was normal and brain MRI was unremarkable. Underlying neuropathology revealed diffuse LBD throughout the neocortex

with intermediate Alzheimer's disease neuropathic change (ADNC), and moderate cerebrovascular disease. In Case 2, the patient exhibited language comprehension difficulties with symptom onset in his early 70s before passing away at age 76. The patient also developed changes in judgment and trouble with activities of daily living. MRI revealed left more than right mesial temporal atrophy, left more than right mild to moderate frontal and insular atrophy, and moderate small vessel disease. FDG-PET was significant for hypometabolism in the left mid-frontal region and in the bilateral anterior cingulate and medial prefrontal cortices. Neuropathology revealed diffuse LBD throughout the neocortex with a high level of ADNC, along with limbic-predominant age-related TDP-43 encephalopathy (LATE) stage 1 and moderate cerebrovascular disease. In Case 3, the patient displayed dysgraphia and anomia, starting in his mid-50s, as well as REM behavior sleep disorder. The patient's neuropathology revealed a high level of ADNC with diffuse LBD throughout the neocortex, and moderate, non-occlusive cerebrovascular disease. None of the patients exhibited the typical Parkinsonism symptoms associated with LBD, but all had prominent visual hallucinations.

**Conclusions:** This small case series illustrates that a small portion of subjects with underlying LBD pathology may exhibit profound language disturbance suggestive of svPPA. Additional study is warranted, and future endeavors will explore larger pathologically-confirmed samples of subjects with clinical svPPA and high degree of underlying LBD pathology.

**Categories:** Neurodegenerative Disorders

**Keyword 1:** dementia with Lewy bodies

**Keyword 2:** language: aphasia

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### 68 Interactive Effects of Sleep Apnea and Depression Symptoms on Cognition in Older Adults

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