Conclusions: A small but significant indirect effect of positive aspects of caregiving was observed on the association between dementia severity and burden. Results suggest that as dementia severity worsens, a caregiver who experiences greater positive aspects of caregiving will sustain less burden. Longitudinal examination of these relationships is needed to fully understand causality. Findings may help healthcare providers tailor treatment to alleviate caregiver burden.

Categories: Dementia (Non-AD)
Keyword 1: caregiver burden
Keyword 2: dementia - Alzheimer's disease
Keyword 3: mild cognitive impairment
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56 Stereological Densities of Neuronal Tau Inclusions in Corticobasal Degeneration are Anatomically Distinct in PPA vs bvFTD

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Objective: Primary progressive aphasia (PPA) is a dementia syndrome characterized early in its course by gradual dissolution of language and is associated with asymmetric atrophy in the language-dominant hemisphere (usually left). In contrast, behavioral variant frontotemporal dementia (bvFTD) is a dementia syndrome characterized by a progressive early decline in personality and comportment and is associated with relatively symmetric or rightward predominant bifrontal atrophy. This study analyzed the regional and hemispheric distributions of neuronal tau inclusions of the corticobasal degeneration variant of FTLD-tau pathology (FTLD-CBD) in individuals with PPA or bvFTD. The goal was to establish clinicopathologic concordance between FTLD-CBD and behavioral/comportmental vs aphasic dementia syndromes.
Participants and Methods: Seven participants were clinically diagnosed with PPA and 6 were diagnosed with bvFTD. All had FTLD-CBD as the principal neuropathologic diagnosis at postmortem study. Sections from the following cortical regions were stained immunohistochemically with AT-8 to visualize neuronal tau inclusions: bilateral middle frontal gyrus (MFG), inferior parietal lobule (IPL), superior temporal gyrus (STG); and unilateral occipital cortex (OCC). Bilateral anterior temporal lobes (ATL) were analyzed in PPA cases only. Unbiased stereological analysis was performed to compare regional and hemispheric distributions between and within PPA vs. bvFTD groups.
Results: Overall neocortical (MFG+STG+IPL) tau densities were significantly greater in the PPA group compared to the bvFTD group ($p<0.05$). Within the bvFTD group, the highest densities of tau inclusions were observed in the right MFG (mean=6,871.17; SD=3,220). In the PPA group, highest densities were observed in the left ATL (mean=9,901.81; SD=6,871). There was leftward hemispheric asymmetry of tau inclusions in IPL, STG and ATL which trended towards significance in the latter ($p=0.083$). Cortical distributions were symmetric or rightward predominant within the bvFTD group. Occipital cortex was devoid of inclusions.
Conclusions: Preliminary stereological findings of FTLD-CBD tau inclusions suggest that the distributions of pathologic tau are different across two distinct clinical dementia phenotypes. The presence of left-sided neuronal tau inclusions in PPA is concordant with the aphasic phenotype whereas symmetric and frontal-predominant densities in bvFTD are consistent with comportmental dysfunction.

Categories: Dementia (Non-AD)
Keyword 1: language: aphasia
Keyword 2: executive functions
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57 Clinical Utility of Neuropsychological Evaluation in the Differential Diagnosis Between Late-Onset Primary Progressive

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Aphasia Semantic Variant (PPA-SV) Versus Limbic Predominant Age-Related TDP-43 Encephalopathy (LATE): A Case Report

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Objective: Primary progressive aphasia semantic variant (PPA-SV) is an atypical dementia subtype on the frontotemporal dementia (FTD) spectrum. PPA-SV is clinically defined by naming and semantic deficits, with progressive language decline that generalizes to other domains over time. Typically, it presents as an early-onset dementia with TDP-43 pathology, but 33-46% of PPA-SV cases display initial onset after age 65 with potentially different clinical features. Limbic Predominant Age-Related TDP-43 Encephalopathy (LATE), a more recently discovered neurodegenerative entity, is defined by an older age of onset, hippocampal sclerosis/atrophy, and TDP-43 pathology with a gradually progressive amnestic profile that expands to other cognitive deficits over time. The authors present a case report with overlapping features and suspected TDP-43 neuropathology ante-mortem for two reasons: first, to highlight the need for clinical criteria to formally diagnose LATE, and second, to address a gap in the literature on the possible clinical differences of late-onset PPA-SV.
Participants and Methods: The authors present a case of a 78-year-old Indian bilingual man (English dominant) with 18 years of education, noncontributory medical history, and gradually progressive cognitive complaints reported over the past few years who was seen for outpatient neuropsychological evaluation. Prior workup was notable for negative amyloid PET scan, negative p-tau 217 blood test, and abnormal brain MRI revealing marked bilateral hippocampal atrophy with ex vacuo ventriculomegaly and minimal cerebrovascular disease. He scored 23/30 on prior MMSE, was diagnosed with amnestic MCI, prescribed Namenda and Exelon, and complained of minor memory and word-finding difficulties with reportedly intact IADLs and no signs of NPH.
Results: Neuropsychological testing revealed a profound dysnomia (RBANS Naming raw score = 1/10), and he provided 0 words on two semantic fluency tasks but 15 words on letter fluency. Receptive vocabulary score was also impaired (PPVT-4, <1st %). Memory performance also demonstrated rapid forgetting of information (RBANS List Recall raw = 0/10, Story Recall raw = 0/12) with no benefit to recognition cues (RBANS List Recognition raw = 12/20), but slightly better visual memory recall, albeit still impaired (RBANS Figure Recall raw = 4/20). Grooved pegboard scores were significantly worse with right-hand than left-hand. Irregular word reading (NAART = 16th %ile) was significantly below expectations and thought to reflect more of a surface dyslexia rather than a cultural confounder given that he has lived in the US for over 50 years and his occupational and educational history was completed in English.
Conclusions: Results support the clinical utility of neuropsychological evaluation in the differential diagnosis to support a predominant clinical syndrome of PPA-SV despite overlapping features with LATE and suspected TDP-43 pathology. This case report highlights the diagnostic issue with the lack of literature describing the typical clinical progression or suggested diagnostic criteria of LATE. These findings also indicate that late-onset PPA-SV may include greater memory deficits earlier in the course, but this may also be a clinical masquerade that is more reflective of the extent of language deficits. Further research on late-onset manifestations of PPA-SV and LATE consensus clinical guidelines is advised.

Categories: Dementia (Non-AD)
Keyword 1: dementia - other cortical
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58 Right Anterior Temporal Lobe Atrophy is Associated with Informant-Reported Socioemotional Dysfunction in Patients with Frontotemporal and Early Onset Alzheimer's Dementia

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