

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