

Connections Between the Ability to Cope with Stress and Tau Burden

Self-ratings of higher stress coping ability correlated with lower tau burden on brain scans in older adults.

The relationship between psychological stress and neurodegenerative syndromes has been established clinically. In animal models, paradigms of chronic stress are associated with exacerbation of tau pathology. In this cross-sectional study enrolling 225 cognitively unimpaired older adults (mean age, 70), researchers assessed the connection between stress coping ability (measured on a 6-item resiliency scale) and tau burden on positron emission tomography (PET).

Higher stress coping ability was correlated with lower tau burden in brain regions relevant to neurodegenerative conditions (e.g., entorhinal cortex). The findings were not affected by amyloid positivity or sex.

COMMENT

The authors speculate that the ability to self-terminate the stress response through higher coping ability might help limit the neurobiological effects of stress on tau deposition. However, the converse relationship could be true (i.e., poor stress coping ability might be an early clinical sign of tau pathology).

With the growing availability of in vivo biomarkers of neurodegeneration (i.e., amyloid- and tau-PET), more studies are focusing on modifiable risk factors for development of neurodegenerative conditions. Clinically, the association between neuropsychiatric symptoms and neurodegenerative disease progression is seen in both directions: these symptoms can be early symptoms of neurodegeneration; can be independent, comorbid risk factors for neurodegeneration; or both might be true. As the authors mention, we need longitudinal studies to truly understand the relationship. Because stress can be largely driven by the individual's environment, we need scales that tap into the psychosocial context unique to dementia sufferers. — **Matthew E. Peters, MD**

Dr. Peters is Assistant Professor, Department of Psychiatry and Behavioral Sciences and Department of Neurology, Johns Hopkins University School of Medicine, Baltimore.

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