



Dementia after moderate-severe traumatic brain injury: Coexistence of multiple proteinopathies

Purpose

We report the clinical, neuroimaging, and neuropathologic characteristics of 2 patients who developed early onset dementia after a single lifetime moderate or severe traumatic brain injury (TBI).

Participants

Two individuals who had developed early onset dementia after moderate or severe TBI and had full neuropathological correlation, including post-mortem imaging after death.

How was the study conducted?

This paper is a case study of two different individuals. The authors did a medical chart review and conducted neuropathological evaluations on the two brains.

Findings

After their analyses, the authors found these diagnoses in the 2 cases: atypical Alzheimer's disease with characteristics of chronic traumatic encephalopathy (CTE) and white matter degeneration in the first case and atypical Alzheimer's disease and dementia with Lewy bodies with white matter atrophy and additional collections of atypical protein aggregates in the second case.

Military Impact

Although this study is of only two individuals, it provides evidence that veterans and service members who sustain moderate to severe TBI may develop dementia that is associated with the accumulation of multiple protein aggregates in patterns that are not consistent with a single neurodegenerative dementia diagnosis.

Kenney, K., Iacono, D., Edlow, B., Katz, D., Diaz-Arrastia, R., Dams-O'Connor, K., Daneshvar, D., ... & Perl, D. (2018). Dementia after moderate-severe traumatic brain injury: Coexistence of multiple proteinopathies. Journal of Neuropathology, 50-63.