



Longitudinal changes in neuroimaging and neuropsychiatric status of post-deployment Veterans: A CENC pilot study

Purpose

To evaluate preliminary data on longitudinal changes in psychiatric, neurobehavioral, and neuroimaging findings in Iraq and Afghanistan combat Veterans following blast exposure.

Participants

Researchers used post deployment Veterans.

How was the study conducted?

Participants were invited to participate in two research projects approximately 7 years apart. For each project, Veterans completed the Structured Clinical Interview for *DSM-IV* Disorders and/or the Clinician-Administered PTSD Scale, Neurobehavioral Symptom Inventory, and magnetic resonance imaging (MRI).

Findings

Chi-squared tests indicated no significant changes in current psychiatric diagnoses, traumatic brain injury (TBI) history, or blast exposure history between assessment visits. Wilcoxon signed-rank tests indicated significant increases in median neurobehavioral symptoms, total number of white matter hyperintensities (WMH), and total WMH volume between assessment visits. Spearman rank correlations indicated no significant associations between change in psychiatric diagnoses, TBI history, blast exposure history, or neurobehavioral symptoms and change in WMH.

Military Impact

MRI WMH changes were not associated with changes in psychiatric diagnoses or symptom burden, but were associated with severity of blast exposure. Future, larger studies might further evaluate presence and etiology of long-term neuropsychiatric symptoms and MRI findings in blast-exposed populations.

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