Early Clinical Predictors of 5-year Outcome after Concussive Blast Traumatic Brain Injury

Purpose
To identify early warning risk factors that may predict long-term or life-long disability after a concussive blast TBI.

Participants
Subjects (n=94) had been engaged in combat in Afghanistan. Individuals who had acquired concussive blast TBIs and others who served as controls were evaluated one year after their injury and five years post-injury.

How was the study conducted?
After enrollment, participants were evaluated by a variety of scale/tests longitudinally. Tests include: Neurobehavioral Rating Scale-Revised, Migraine Disability Assessment, 6-item Headache Impact Test, Neurological Outcome Scale for Traumatic Brain Injury, Quality of Life after Brain Injury, as well as psychiatric evaluations that determined PTSD, anxiety, depression, and alcoholism. Data analysis was conducted using the Fisher Exact Test.

Findings
Scores were compared between year one and year five, looking for declines in areas of functioning. Participants who acquired TBIs maintained long-term disabilities compared to the control group. In the area of cognition, statistically significant differences were not discovered. Diagnoses of anxiety, depression, and PTSD were more severe in this group as well as chronic sleep impairments.

Military Impact
Considerable decline was observed in military service members with concussive blast TBI when comparing 1- and 5-year clinical outcomes. Based on these results, there is a need for treatments to combat the long-term and extremely costly effect of these wartime injuries.

Mac Donald, C., Barber, J., Jordan, M., Johnson, A., Dikmen, S., Fann, J., & Temkin, N. (2017).
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