



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Risk Assessment and Surveillance TBI and Risk of Dementia in Older Veterans

DoD and CNRM at USUHS sponsored a retrospective cohort study to examine the association between TBI and risk of dementia in Veterans. Participants were US Veterans aged 55 years or older who had at least one inpatient or outpatient visit during both the baseline (2000–2003) and follow-up (2003–2012) periods and did not have a dementia diagnosis at baseline ($n = 188,764$). TBI and dementia diagnoses were determined using International Classification of Diseases, Ninth Revision codes in electronic medical records. Fine-Gray proportional hazards models were used to determine whether TBI was associated with greater risk of incident dementia, accounting for the competing risk of death and adjusting for demographics, medical comorbidities, and psychiatric disorders. During the nine-year follow-up period, 16% of those with TBI and 10% of those without TBI developed dementia. There was evidence of an additive association between TBI and other conditions on risk of dementia. After accounting for competing risks and potential confounders, TBI in older Veterans was associated with a 60% increase in the risk of developing dementia over nine years. These findings suggest that TBI in older Veterans may predispose toward development of symptomatic dementia and raise concern about the potential long-term consequences of TBI in younger Veterans and civilians.