P-985 - CHRONIC PITUITARY DYSFUNCTION ASSOCIATED WITH COGNITIVE AND NEUROPSYCHIATRIC DEFICITS AFTER BLAST-RELATED MILD TRAUMATIC BRAIN INJURY

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Introduction: Studies of traumatic brain injury (TBI) from all causes have found evidence of chronic hypopituitarism, defined by deficient production of one or more pituitary hormones, in 25-50% of cases. Hypopituitarism, particularly growth hormone deficiency (GHD), is associated with symptoms that can be mistaken for PTSD, including fatigue, anxiety, depression, irritability, insomnia, sexual dysfunction, poor concentration and memory, and decreased quality of life.
Objectives: The objective of this study is to determine the prevalence and consequences of posttraumatic hypopituitarism (PTHP) after blast-related mild TBI (mTBI), an extremely common injury in modern military operations.
Aims: Blood samples are analyzed from US military Veterans with blast mTBI and from Veterans with similar experience but without blast exposure to determine the frequency of PTHP and to characterize specific hormonal defects.
Methods: Concentrations of 12 hormones are measured with radioimmunoassays or enzyme-linked immunosorbent assays and behavioral and neuropsychological testing is conducted on all subjects.
Results: Eleven of 26, or 42%, of subjects with blast mTBI were found with abnormal hormone levels in one or more pituitary axes. Five individuals with mTBI were found with probable GHD, and three mTBI participants showed evidence of hypogonadism. Veterans without blast exposure had no hormonal abnormalities.
Conclusions: There is a high prevalence of PTHP after blast mTBI, the neuropsychiatric symptoms of which are treatable with hormonal replacement. Screening for PTHP after blast mTBI shows promise for appropriately directing diagnostic and therapeutic decisions that may otherwise remain unconsidered.
Support: US Department of Veterans Affairs & DoD Award: PT090753.

https://doi.org/10.1016/S0924-9338(12)75152-0 Published online by Cambridge University Press