

3065 — Tinnitus: Prevalence and Comorbidities in a Cohort of Iraq and Afghanistan Veterans

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Objectives:

Tinnitus, or the perception of ringing in the absence of acoustic stimuli, is the most prevalent service-connected disability for Iraq and Afghanistan war Veterans (IAV) and may occur with environmental/occupational exposures including traumatic brain injury (TBI). The purpose of this study was to describe the prevalence of tinnitus and likely associated conditions in a cohort of IAV.

Methods:

This retrospective observational study used data from the national Veterans Health Administration (VA) data repository. We used ICD-9-CM codes to identify IAV who received care for tinnitus (2010-2011). We also identified comorbidities that may be associated with tinnitus using algorithms validated for use with ICD-9-CM codes. Comorbidities examined included TBI, PTSD, and/or depression, as well as conditions associated with these diagnoses (headache, anxiety, memory/attention/cognition, neck pain, insomnia, malaise/fatigue, vertigo). Multivariable logistic regression analysis was used to examine conditions associated with tinnitus.

Results:

Among all IAV, 311,400 received VA care in 2010 and 2011 and 4.8% were diagnosed with tinnitus. Veterans diagnosed with tinnitus in 2010-2011 were more likely to have a diagnosis of TBI alone (AOR 2.25; 99% CI 1.99-2.54), PTSD alone (AOR 1.79; 99% CI 1.67-1.92), TBI+PTSD (AOR 3.20; 99% CI 2.94-3.49), TBI+depression (AOR 1.78; 99% CI 1.42-2.22), PTSD+depression (AOR 1.82; 99% CI 1.70-1.95), TBI+PTSD+depression (AOR 3.30; 99% CI 3.05-3.57), memory loss (AOR 1.69; 99% CI 1.51-1.89), and vertigo (AOR 2.40; 99% CI 2.17-2.66).

Implications:

Our results indicate that both TBI alone and PTSD alone are significantly associated with tinnitus among veterans. However, individuals with comorbid TBI and PTSD demonstrated significantly higher rates of tinnitus than those with either TBI or PTSD alone.

Impacts:

Tinnitus is the top service-connected disability and costs more than \$1 billion annually. Currently, there is no accepted treatment for tinnitus and little is understood about the condition and its common comorbidities. It is therefore imperative that comorbidities with tinnitus be considered to develop more holistic treatment plans to alleviate the myriad of symptoms from which IAV suffer following deployment.