

Onabotulinum Toxin A for the Management of Migraine and Post-Traumatic Headache in Military Servicemen

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Introduction

- Migraine and post-traumatic headache (PTH) are debilitating conditions that considerably affect the quality of life of many individuals worldwide.
- Particularly, military personnel and veteran populations are also heavily impacted, and arguably to a greater extent.¹
- Due to their exposure to heavy trauma and combat, they exhibit an increased sensitivity to pain that is more challenging to treat.² Hence, it is essential to identify preventative measures to reduce the frequency and burden of these symptoms.
- Onabotulinum toxin A (OTA) has been widely used as a prophylactic intervention for chronic migraine.³
- In our review, we aim to identify the trends of use of OTA in military personnel suffering from migraines and PTH.

Methods

- This scoping review conformed to the guidelines outlined by Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA).
- Medline, Embase, and Google Scholar databases were used for our literature review, including all records until April 1, 2024.

References

1. Bryan CJ, Hernandez AM. Predictors of post-traumatic headache severity among deployed military personnel. *Headache*. 2011;51(6):945-953.
2. Iljazi A, Ashina H, Al-Khazali HM, et al. Post-Traumatic Stress Disorder After Traumatic Brain Injury-A Systematic Review and Meta-Analysis. *Neuro Sci*. 2020;41(10):2737-2746
3. Aurora SK, Dodick DW, Turkel CC, et al. OnabotulinumtoxinA for treatment of chronic migraine: results from the double-blind, randomized, placebo-controlled phase of the PREEMPT 1 trial. *Cephalalgia*. 2010;30(7):793-803

Figure 1. Study Type

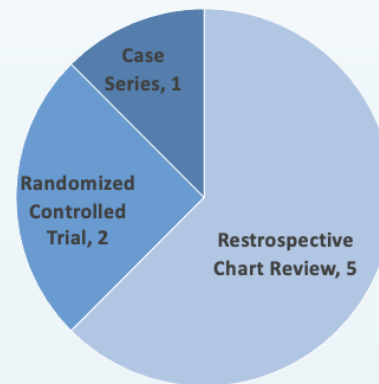
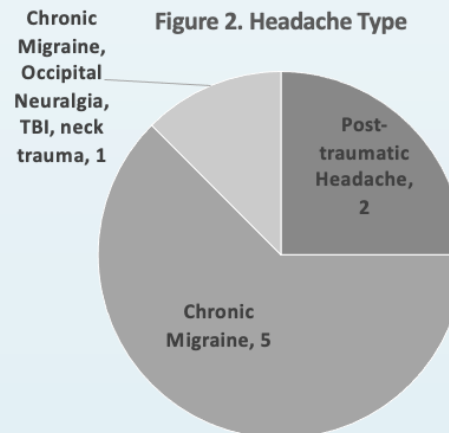


Figure 2. Headache Type



Results

- A total of 43 articles were screened, with 8 meeting the inclusion criteria.
- Most of the studies were conducted in the United States: 5 retrospective chart reviews, 2 randomized controlled trials and 1 case series.
- Studies revealed that the incidence of migraine headache has been greatly increasing and is higher in servicemembers compared with the non-military population.
- Significant improvements in headache intensity and frequency were reported after OTA administration in individuals suffering from migraine and/or PTH.
- It was also found to be helpful in treating migraine with occipital neuralgia as well as migraine-induced photophobia and dry eyes.
- OTA therapy was highlighted to have a great safety profile

Discussion

- OTA therapy is a safe and effective approach to managing chronic headaches, especially in military servicemen.
- There still exists a strong gap in knowledge, and the need for additional quality studies is paramount.
- Given the challenging nature of pain and various associated comorbidities found in this patient population, the potential for growth and advancement is substantial.