



Prolonged Neuropsychiatric Symptoms in a Military Service Member Exposed to Mefloquine

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A little History

- ▶ A team from Walter Reed and the Uniform Services University of Health Sciences
- ▶ Mefloquine usage by DoD
- ▶ Private Opinion, not opinion of DoD or Veteran Affairs

Post-traumatic Stress Disorder

- ▶ PTSD symptoms are generally grouped into four types:
 - ▶ Intrusive memories
 - ▶ Avoidance
 - ▶ Negative changes in thinking and mood
 - ▶ Changes in emotional reactions

What is Mefloquine?

- ▶ Also known as Lariam
- ▶ Used to protect troops against Malaria
- ▶ Used extensively from 2003 until 2013 when DoD decided to use it as a last resort

Mefloquine Toxicity

- ▶ Can be hard to differentiate PTSD and Mefloquine Toxicity Symptoms
 - ▶ The symptoms can be very similar, but MT looks like PTSD with Vertigo or constant dizziness added
 - ▶ The symptoms overlap
- ▶ No Known Treatment for MT, according to the case study

DoD Usage of Mefloquine

- ▶ FDA Approved the Drug in 1989 for protecting troops against Malaria
- ▶ Given to troops involved in Somalia, Afghanistan, and Iraq
- ▶ After 2013 it was pulled for usage, except in extreme cases

Case Study

- ▶ 32 year old male
- ▶ Began standard dose of mefloquine as part of a deployment to East Africa 2009
- ▶ Symptoms began approx. two weeks after dosages began

Case Study

- ▶ Initial Symptoms Included
 - ▶ Vivid Dreams
 - ▶ Anxiety
 - ▶ Balance Problems
- ▶ Continued to take medication as ordered for the remainder of deployment

Case Study

- ▶ After Deployment – Four Years Later
- ▶ Symptoms Persisted and Worsened
 - ▶ Vertigo – “Sea Legs”
 - ▶ Emotional Lability – Sometimes Uncontrollable and/or Fluctuating Emotions
 - ▶ Poor Short-term Memory

Case Study

- ▶ Marital and Professional Problems
 - ▶ Significant problems at home
 - ▶ Doubts if he could parent correctly
 - ▶ Could not perform work related tasks without considerable help from coworkers
- ▶ No known history of these issues before deployment

Why is this important?

- ▶ Early identification of affected veterans
- ▶ By identifying these vets, we can assist in the research process
- ▶ Could become more of an issue as more research is done on the topic

Considerations

- ▶ This case study is based on observations of qualified people
- ▶ The VA must consider a claim for Mefloquine Toxicity, but it is not presumptive
- ▶ If a veteran has a PTSD S/C and possibly received mefloquine, it is worth taking a note or asking the veteran if they were given the medication

Things to look for

- ▶ If a veteran was in service from time of FDA approval (1989) to the drug's removal (2013) and:
 - ▶ Served in a theater where they were exposed to Malaria
 - ▶ Treatment records may show that was given to the veteran
 - ▶ S/C PTSD or PTSD Symptoms with unexplained Vertigo

Reference

- ▶ Department of Veteran Affairs. (2016, June 29). *Mefloquine (Lariam®)*. Retrieved from Department of Veteran Affairs, Public Health: <http://www.publichealth.va.gov/exposures/mefloquine-lariam.asp>
- ▶ Livezey, J., Oliver, T., & Cantilena, L. (2016). Prolonged Neuropsychiatric Symptoms in a Military Service Member Exposed to Mefloquine. *Drug Safety Case Reports*, 6.
- ▶ Mayo Clinic. (2014, April 15). *Post-traumatic stress disorder (PTSD)*. Retrieved from Mayo Clinic: <http://www.mayoclinic.org/diseases-conditions/post-traumatic-stress-disorder/basics/symptoms/CON-20022540>

Questions?



