Learning to Care for Those in Harm's Way

Uniformed Services University
of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814-4799

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Contact: Sarah Marshall, Office of External Affairs

Motor Neuron Drug Shows Promise as Treatment for PTSD Symptoms Linked to Suicide Attempts

Bethesda, Md. – A medication used to treat motor neuron diseases, like Lou Gehrig's disease, might also have the potential to help treat post-traumatic stress disorder (PTSD), particularly the symptoms linked to suicide attempts, according to a study, "Randomized Controlled Trial of Riluzole Augmentation for Posttraumatic Stress Disorder: Efficacy of a Glutamatergic Modulator for Antidepressant-Resistant Symptoms," published Oct. 27 in the *Journal of Clinical Psychiatry* by researchers at the Uniformed Services University of the Health Sciences (USU).

In hopes of finding new ways to help treat this troubling disorder, researchers looked at riluzole, a medication used to treat motor neuron diseases that slowly break down nerves within the brain, and tested whether it could be added to antidepressant medications that combat veterans were already taking for PTSD to help decrease their symptoms. They compared a group of combat veterans who received riluzole to a group who received a placebo. They found that while there was not a significant difference between the groups in their overall symptoms, the group that received riluzole did have significantly greater improvement in a particular cluster of their symptoms, known as hyperarousal symptoms. This is one of the primary symptoms of PTSD that can arise when a person's body suddenly kicks into high alert after thinking about their trauma, and their body acts as though a real danger is present.

Currently, there are few medications recommended for treating PTSD, which can develop after experiencing or witnessing a terrifying event. The medications that are recommended are typically SSRI- and SNRI-type antidepressants that work by increasing levels of serotonin in the brain, explained Dr. Patricia Spangler, the study's first author and a clinical research psychologist employed by the Henry M. Jackson Foundation in USU's Center for the Study of Traumatic Stress (CSTS). Those medications are limited in how well they work, particularly for combat-related PTSD.

According to Spangler, it's important to focus on treating hyperarousal symptoms because prior studies have shown that these symptoms are related to suicide attempts among combat veterans. Also, patients with high hyperarousal are not as responsive to some psychotherapies for PTSD, she added.

"Our results, though they should be interpreted cautiously, indicate that riluzole may reduce hyperarousal symptoms in combat veterans who are continuing to experience these symptoms despite treatment with antidepressants," Spangler said.

"At USU, we were particularly interested in the potential benefits of this medication for persons suffering from combat-related PTSD as persistent symptoms may negatively impact military readiness," said Army Col. (Dr.) David Benedek, chair of USU's Department of Psychiatry and one of the study authors. "But hyperarousal may have a negative social and occupational consequences in civilian life

too, so this augmentation strategy may hold promise for a wide range of persons suffering from residual PTSD symptoms."

The study, was a collaboration between USU, Walter Reed National Military Medical Center, and the Syracuse VA Medical Center. Funding for this study was provided by the Congressionally Directed Medical Research Program/Military Operational Medicine Research Program. To view the study, visit https://doi.org/10/4088/JCP.20m13233.

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