TRAUMA ASSOCIATED SLEEP DISORDER:
How PTSD Patients Might Be Suffering From This New, Proposed Parasomnia

By Kate Jacobson
While working at the Madigan Army Medical Center in Washington state, Vincent Mysliwiec, MD, FAASM, and his colleagues started to notice a unique phenomenon. Soldiers coming into the sleep lab were experiencing disruptive nocturnal behaviors and nightmares following traumatic experiences associated with their deployment. These symptoms which occurred frequently at home, would at times occur in the sleep lab where the patients would have REM without atonia (RWA) during polysomnography. It was odd — unlike other instances of PTSD-induced nightmares he had seen — and it made Mysliwiec think there was something more there.

"It was definitely something distinct," Mysliwiec said. "Everyone always goes, 'That's just PTSD.' Yes, those with PTSD very frequently have nightmares, but nowhere in the PTSD criteria do they have disruptive nocturnal behaviors or dream reenactment."

Mysliwiec and his colleagues called the phenomenon "Trauma Associated Sleep Disorder" and classified it as a potential parasomnia. Their first paper on it was published in October 2014 in the *Journal of Clinical Sleep Medicine*. Since then, there are a growing number of clinicians and researchers finding evidence in their own labs that young soldiers, as well as veterans, might be experiencing something more intense than symptoms commonly associated with PTSD. Moreover, they believe further study of this proposed parasomnia could be a major preventative measure for long-term PTSD complications.

"If you can actually say to a solider, veteran — or anyone suffering from traumatic exposure — that we have an established diagnostic criteria for the severe sleep disturbances you are experiencing, then you can begin to evaluate treatments for this disorder and prevent long-term adverse outcomes. We could potentially treat them for this potential parasomnia and improve their sleep and that of their bed partner," he said. "It's an important question — and we need researchers to develop the criteria."

### Trauma Survivors and Sleep

Mysliwiec said his initial research predicated around something he had heard anecdotally but what he had never been able to quantify in a sleep lab: Soldiers said their bedpartners complained of them doing odd things. Shouting in their sleep, thrashing around and sometimes getting violent. And that wasn't all — they were having vivid nightmares related to their traumas.

When they awoke, they often had no idea what they had done during sleep but could recall their nightmares. Prior to their tours in the military, they had no history of disordered sleep.

It wasn't until researchers started examining their patients more closely — and asking specifically about the nightmares and bed behavior — that they started seeing a pattern and were able to record it on a polysomnogram. In the initial 2014 study, they observed four young males, active-duty U.S. Army soldiers, who presented with disruptive nocturnal behaviors and trauma-related nightmares.

About 80% of patients with PTSD have nightmares, and many have nightmare disorder. This diagnosis does not acknowledge the presence of disruptive nocturnal behaviors during sleep. While secondary REM behavior disorder (RBD) can occur in patients from medications, especially SSRIs or SNRIs, or even from PTSD when REM without atonia (RWA) is present on a polysomnogram there are differences with trauma-associated sleep disorder.

All four patients in the initial study had traumatic experiences which were closely followed by the onset of disruptive nocturnal behaviors and nightmares and having RWA captured on a polysomnogram. In addition, their nightmares and dream enactment behaviors related to their actual traumatic experiences, which does not necessarily occur in either idiopathic or secondary REM sleep behavior disorder.

Their findings pointed to previous studies conducted with veterans. In a study of Vietnam veterans with long-standing PTSD, researchers found increased phasic lower extremity EMG tone in REM. In another, researchers studying Operations Iraqi Freedom and Enduring Freedom veterans saw REM behavior disorder — all of whom were taking selective serotonin reuptake inhibitors (SSRIs). Unlike other patients with REM behavior disorder, these were all relatively young men.

"These aren't your prototypical elderly males who have Parkinson's or Multiple System Atrophy or neurological disorders.
that can cause RBD,” Mysliwiec said. “These individuals were recently exposed to trauma and developed trauma-related disorders and didn’t otherwise have a reason to have these types of symptoms.”

There is a difference between people who have PTSD and people who have trauma related nightmares, or those who just have PTSD with daytime symptoms alone and the occasional nightmare.

Long-Term Soldier Care

While the sleep community has not recognized trauma associated sleep disorder as an official parasomnia, research into it has continued to grow. Mysliwiec and his cohort are launching a study of 40 patients to evaluate how trauma associated sleep disorders impact patients.

A 2019 paper studied combat veterans with trauma associated sleep disorder, and found it was extremely disabling to the patients experiencing it — more so than other parasomnias common among that patient population.4 A 2020 paper studied whether a comorbid traumatic brain injury was more likely to cause REM sleep behavior disorder, as well as potentially trauma associated sleep disorder. Researchers there found veterans were saddled with these disorders at an alarmingly high rate — with or without a specific brain injury.5

As more researchers begin studying the effects of PTSD on veterans, it is becoming clearer there are multiple ways the disorder affects sleep in particular. Because long-term sleep problems plague veterans, understanding the difference between PTSD-induced nightmares and trauma associated sleep disorder can help establish potential treatments. This begins with an established diagnostic criteria that can help clinicians determine a patient’s diagnosis, treatment paths and potentially to address other trauma-related disturbances.

“There is a difference between people who have PTSD and people who have trauma related nightmares, or those who just have PTSD with daytime symptoms alone and the occasional nightmare,” Mysliwiec said. “That makes a difference in what treatment options you try over another.”

Understanding this, Mysliwiec says, is important for clinicians and sleep technologists. They need to recognize people who have been exposed to recent traumas and specifically ask about their sleep behaviors when they come in to the sleep lab. Are they having frequent nightmares? Are their bedpartners complaining of erratic behaviors that include movement or speech? In the morning after their test they need to document whether the patient experienced any of these things in real time.

“Denoting where someone has nightmares and if they had a nightmare or didn’t have one on the night of a sleep study is important information that a majority of sleep labs don’t ask about,” Mysliwiec said. “From a technologist perspective, people don’t always do this in sleep labs. It really helps the patient and clinician determine a better approach for treating them.”

Mysliwiec said it is also important to realize this disorder might not be solely occurring in combat veterans. He said while they have not studied other forms of trauma and this disorder — those who have experienced trauma from motor vehicle accidents, assaults, etc. — it is possible that these patients may experience trauma associated sleep disorder as well. Those suffering from PTSD need to understand that having frequent nightmares is not just a symptom of their disorder especially if they have abnormal nighttime behaviors. If they feel their experiences at night are abnormal, they should seek a sleep study.

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“Having an occasional nightmare is normal,” he said. “But if you have nightmares more than once a week, are having other abnormal behaviors and have been exposed to some sort of trauma-related event, you need to seek care.”

References:
2. Ross RJ, Ball WA, Dinges DF et al. Motor dysfunction during sleep in posttraumatic stress disorder. Sleep;1994;17:723-32. 7701184
4. Nathaniel Gordon, MD, Meagan Rizzo, MD, Brian Robertson, MD, Jacob Collen, MD, 1055 Trauma Associated Sleep Disorder Revisited, Sleep, Volume 42, Issue Supplement 1, April 2019, Page A423. https://doi.org/10.1093/sleep/zsz069.1052