https://doi.org/10.5664/jcsm.10204

JCSM | Journal of Clinical Sleep Medicine

COMMENTARY

No time to waste! Acute sleep interventions after trauma

Commentary on Swift KM, Thomas CL, Balkin TJ, Lowery-Gionta EG, Matson LM. Acute sleep interventions as an avenue for treatment of trauma-associated disorders. *J Clin Sleep Med*. 2022;18(9):2291–2312. doi: 10.5664/jcsm.10074

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As health care providers, we often consider our patients and their ailments based on increments of time. There are acute interventions (resuscitation in the emergency room or intensive care unit) and then longer-term management to ensure that a condition is treated effectively over time. In sleep medicine, there are established time frames for care and follow-up. For patients with obstructive sleep apnea who are treated with continuous positive airway pressure (CPAP), we recognize that early interventions are necessary to improve longer term adherence and outcomes. Patients are seen 4–6 weeks after starting CPAP, and then at variable intervals thereafter (but at least yearly). For patients with insomnia who are treated with cognitive behavioral therapy for insomnia, many programs start with a detailed intake at the first visit, followed by shorter visits every 1–2 weeks for a total of 8–12 visits. We recognize the need to create a standard for timing of interventions and check-ins to ensure better outcomes for our patients. Unfortunately, for individuals who experience major psychological trauma or encounter major acute stress events, there is no time frame for care of resulting sleep disturbances. Many patients with post-traumatic stress disorder (PTSD) will see a sleep medicine specialist after years of disrupted sleep and engrained patterns of behavior. The multidisciplinary expertise of our discipline uniquely positions us to help survivors of trauma, whether military combat veterans, victims of intimate partner violence, natural disaster, or violent crime.

In the current issue of the *Journal of Clinical Sleep Medicine*, Swift et al[1] have provided a scoping review that addresses the complicated topic of post-traumatic sleep disturbances. They define the differences between acute stress reactions, acute stress disorder, and how they can evolve into PTSD. It is important to understand that these syndromes are both discrete entities and exist along a continuum, which impacts how we conceptualize our approaches to therapy.

The relationship between sleep disturbance and trauma is complex and remains difficult to understand.[2] Swift et al describe a comprehensive analysis of how sleep becomes dysregulated after an acute event and exacerbates trauma-related symptoms, possibly due to the role of sleep in emotional regulation and memory consolidation. This current article pairs well with, and builds on, an earlier review by Babson and Feldner,[3] which also evaluated how sleep disorders develop in PTSD and the importance of timing in disease progression and intervention. Poor sleep prior to and following trauma appears to increase the risk of developing severe trauma-related symptoms, such as acute stress reaction (ASR) and trauma-related disorders such as acute stress disorder (ASD)/PTSD. Conversely, the treatment of sleep disturbances acutely following trauma appears to lessen the severity of trauma-related symptoms and may decrease the vulnerability to PTSD and other trauma-related disorders. Considering this, the authors suggest that the acute period post-trauma is a potential "window of opportunity" to prevent or alleviate the progression of maladaptive responses to trauma by treating symptoms of sleep disturbance.

Early detection and treatment are indicated if sleep disturbances are present acutely following trauma, regardless of an ASR or ASD diagnosis. Swift et al describe the inconsistent relationship between ASR, ASD, and PTSD, and explain that ASR does not reliably predict the development of ASD and ASR/ASD do not reliably predict the later onset of PTSD. Sleep disturbance is the common factor and should be the primary indicator for treatment need in the acute phase (0–30 days post-trauma). However, it is still unclear how we can quickly and effectively identify sleep disturbances following trauma so an intervention can be utilized during the acute period. How are we reaching individuals during this 0–30-day window? What screening criteria do we have available to effectively identify sleep metrics most impacted by trauma? Regular, preventative screening for sleep disturbances, especially in populations at risk for trauma exposure, may be beneficial and could increase the likelihood of identifying sleep problems during the acute post-trauma period.

Beyond clinical screening, which may occur in primary care, occupation-focused education programs regarding the connection between sleep and trauma symptoms/trauma-related disorders could provide another avenue to reach individuals most at risk, such as first responders, military personnel, and health care workers. These types of programs could encourage individuals to engage in self-monitoring and potentially increase treatment-seeking behaviors early post-trauma. Consumer sleep-monitoring devices may also be a beneficial addition to empower patient

self-monitoring and may help shed light on which sleep metrics are most affected by trauma.

In terms of treatment options, Swift et al provide a transparent, up-to-date account of pharmacologic and nonpharmacologic interventions available to treat sleep disturbance in trauma-related disorders. The authors are cautious about endorsing any approach and comment appropriately on limitations in the evidence regarding overall efficacy, and whether intervening in the acute trauma phase (0–30 days) lessens symptom severity or prevents the later development of trauma-related disorders.

Based on the available evidence, Swift and colleagues suggest that short courses of cognitive behavioral therapy for insomnia could be an effective first-line nonpharmacologic intervention to treat trauma-related sleep disturbances. The authors also bring attention to the considerable potential benefit of utilizing repetitive transcranial magnetic stimulation, a seemingly fruitful area of research that has yet to be assessed in the acute trauma period. Pharmacologic intervention options that appear most effective include prazosin, atypical antipsychotics, trazadone, and nabilone, with each having different caveats for use.

Swift et al also comment that the existing research may not capture some of the contextual elements of traumatic experiences. Perceived threat to life and the emotional fallout cannot be duplicated in a laboratory setting. This review should serve as notice that we need to consider the sleep-related fallout of stress with the same urgency we view physical medical emergencies. There may need to be acute ("resuscitative phase") treatments followed by longer term strategies. There is no "one size fits all" model for treatment of trauma-related symptoms, and with the limited window for treatment initiation in the acute period post-trauma, it seems more critical to detect individual differences in sleep disturbances, so treatments can be tailored to individuals accordingly and effectively. Multicomponent or phased strategies incorporating complementary behavioral and pharmacological interventions may have the highest yield.[4] If intervening in the acute phase specifically is critical to experience reduced symptom severity or mitigation of disorder progression, time is of the essence. In addition to clinical trials exploring the efficacy of treatment options, there needs to be an exploratory dive into the impact of trauma on sleep metrics and a discussion of how to effectively screen for the presence of sleep disturbances post-trauma, to streamline detection of individual differences in sleep disturbance and selection of treatment interventions most suited to patient needs.

CITATION

Stekl EK, Collen JF. No time to waste! Acute sleep interventions after trauma. *J Clin Sleep Med*. 2022;18(9):2091–2092.

REFERENCES

1. Swift KM, Thomas CL, Balkin TJ, Lowery-Gionta EG, Matson LM. Acute sleep interventions as an avenue for treatment of trauma-associated disorders. *J Clin Sleep Med*. 2022;18(9):2291–2312.
2. Freeman D, Sheaves B, Waite F, Harvey AG, Harrison PJ. Sleep disturbance and psychiatric disorders. *Lancet Psychiatry*. 2020;7(7):628–637.
3. Babson KA, Feldner MT. Temporal relations between sleep problems and both traumatic event exposure and PTSD: a critical review of the empirical literature. *J Anxiety Disord*. 2010;24(1):1–15.
4. Coventry PA, Meader N, Melton H, et al. Psychological and pharmacological interventions for posttraumatic stress disorder and comorbid mental health problems following complex traumatic events: systematic review and component network meta-analysis. *PLoS Med*. 2020;17(8):e1003262.

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Submitted for publication July 12, 2022
Accepted for publication July 12, 2022
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DISCLOSURE STATEMENT

The authors report no conflicts of interest.