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Sleep disturbances in patients with post-traumatic stress disorder: epidemiology, impact and approaches to management.

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Subjective reports of sleep disturbance indicate that 70-91% of patients with post-traumatic stress disorder (PTSD) have difficulty falling or staying asleep. Nightmares are reported by 19-71% of patients, depending on the severity of their PTSD and their exposure to physical aggression. Objective measures of sleep disturbance are inconsistent, with some studies that used these measures indicating poor sleep and others finding no differences compared with non-PTSD controls. Future research in this area may benefit from examining measures of instability in the microstructure of sleep. Additionally, recent findings suggest that sleep disordered breathing (SDB) and sleep movement disorders are more common in patients with PTSD than in the general population and that these disorders may contribute to the brief awakenings, insomnia and daytime fatigue in patients with PTSD. Overall, sleep problems have an impact on the development and symptom severity of PTSD and on the quality of life and functioning of patients. In terms of treatments, SSRI's are commonly used to treat PTSD, and evidence suggests that they have a small but significant positive effect on sleep disruption. Studies of serotonin-potentiating non-SSRI's suggest that nefazodone and trazodone lead to significant reductions in insomnia and nightmares, whereas cyproheptadine may exacerbate sleep problems in patients with PTSD. Prazosin, a centrally acting alpha(1)-adrenoceptor antagonist, has led to large reductions in nightmares and insomnia in small studies of patients with PTSD. Augmentation of SSRI's with olanzapine, an atypical antipsychotic, may be effective for treatment-resistant nightmares and insomnia, although adverse effects can be significant. Additional medications, including zolpidem, buspirone, gabapentin and mirtazapine, have been found to improve sleep in patients with PTSD. Large randomized, placebo-controlled trials are needed to confirm the above findings. In contrast, evidence suggests that benzodiazepines, TCA's and MAOI's are not useful for the

treatment of PTSD-related sleep disorders, and their adverse effect profiles make further studies unlikely. Cognitive behavioural interventions for sleep disruption in patients with PTSD include strategies targeting insomnia and imagery rehearsal therapy (IRT) for nightmares. One large randomized controlled trial of group IRT demonstrated significant reductions in nightmares and insomnia. Similarly, uncontrolled studies combining IRT and insomnia strategies have demonstrated good outcomes. Uncontrolled studies of continuous positive airway pressure for SDB in patients with PTSD show that this treatment led to significant decreases in nightmares, insomnia and PTSD symptoms. Controlled studies are needed to confirm these promising findings.