Psychopharmacology for the Clinician

The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians treating patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided.

Treatment of insomnia in posttraumatic stress disorder

A 42-year-old firefighter is referred with insomnia and distressing nightmares. He has a pension for psychological stress injury and he last worked 8 years ago. He had shift work–related insomnia in his early career, but later experienced severe insomnia and nightmares in a context of posttraumatic stress disorder (PTSD) and depression, which he attributed to a buildup of stress from "close shaves" and witnessing injured children. He falls asleep with the television on for distraction, wakes repeatedly, "thrashes around" and now sleeps alone. He sleeps in if he can, but this causes family friction and guilt because his wife can't depend on him with the children. Nightmares occur up to several nights weekly and involve being unable to escape or rescue someone from a field of smoke or a burning building. A previous sleep study excluded apnea but showed awakenings with motor activity from light sleep and decreased total and rapid eye movement (REM) sleep duration.

Prior treatment included psychotherapy, which helped his reactions to triggers, anger and acceptance of changed circumstances. He has tried many medications: selective serotonin reuptake inhibitors (SSRIs), venlafaxine, mirtazapine and amitriptyline in combinations with lorazepam, clonazepam, zopiclone, trazodone, risperidone, olanzapine and nonprescription remedies. Now he takes 150 mg of sertraline daily after stopping other treatments mainly owing to poor response, weight gain or daytime sedation. He restricts his life to his family and pet, the pool and gym, Internet and volunteering.

He meets criteria for current PTSD but not major depression. Review of sleep hygiene shows that he stopped smoking when in the fire service, cut out caffeine owing to insomnia and limited alcohol consumption to special occasions since he began taking medications. He is reluctant to change his sleep habits.

Prazosin is prescribed at a dose of 1 mg at bedtime for 1 week, increasing in 1 mg increments every 3–4 days thereafter. It initially makes him feel light-headed and tired on rising, but this passes. Dry mouth is tolerable after eating breakfast. By week 3 he reports improved sleep and continues taking 6 mg at bedtime after week 4. At follow-up, he reports being less restless and having deeper, longer and more refreshing sleep, with some weeks free of traumatic nightmares. He worries less about sleep and only moves to a separate bed on "bad nights."

Cognitive behavioural therapy, eye movement desensitization and reprocessing, SSRIs and venlafaxine are effective in treating PTSD, but nightmares and insomnia do not respond robustly to the medications and the evidence base for managing treatment resistance and residual symptoms is limited.[1] Suppression of central noradrenergic neuronal firing and release, using α2-adrenergic receptor agonists such as clonidine or guanfacine has been suggested, but guanfacine was not effective in a placebo-controlled trial.[2] Blockade of central α1-adrenergic receptors with antagonists such as prazosin is better supported, with 3 pilot placebo-controlled augmentation trials (2 crossover, 1 parallel group design) showing superiority for prazosin at bedtime for the targeted symptoms of insomnia and nightmares.[3–5] Prazosin also improved total and REM sleep duration.[5]

The use of prazosin to treat PTSD is off-label, but labelled prescribing information stresses avoidance of hypotension by using a 1 mg first dose, slow titration and caution with concomitant medications with hypotensive effects and sedatives/hypnotics. The mean bedtime dose in PTSD studies ranged widely from 3.3–13.3 mg. Although bedtime dosing and a short half-life should limit daytime side effects, labelled safety information is based on dividing a typical daily range of 6–15 mg and upper range of 20 mg into in 3 doses. This should be considered in dosing decisions until further efficacy and safety data become available from multisite trials.

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Competing interests: Dr. Coupland has received research funding from the Alberta Heritage Foundation for Medical Research, the M.S.I. Foundation, the Canadian Institutes of Health Research, the Workplace Safety and Insurance Board of Ontario, the University of Alberta Hospital Foundation, Cephalon, Novartis, Wyeth-Ayerst, Janssen Pharmaceuticals, GlaxoSmithKline, Hoffman–La Roche, Lundbeck , Pfizer and Sanofi-Aventis.

References

1. Berger W, Mendlowicz MV, Marques-Portella C, et al. Pharmacologic alternatives to antidepressants in posttraumatic stress disorder: a systematic review. *Prog Neuropsychopharmacol Biol Psychiatry* 2009;33:169-80.
2. Neylan TC, Lenoci M, Samuelson KW, et al. No improvement of posttraumatic stress disorder symptoms with guanfacine treatment. *Am J Psychiatry* 2006; 163:2186-8.

Psychopharmacology for the Clinician columns are usually based on a case report that illustrates a point of interest in clinical psychopharmacology. They are about 500–650 words long and do not include references. Columns can include a bibliography which will be available only at the journal website and can be accessed through a link at the bottom of the column.
Please submit appropriate columns online at http://mc.manuscriptcentral.com/jpn; inquiries may be directed to jpn@cma.ca.

3. Raskind MA, Peskind ER, Kanter ED, et al. Reduction of nightmares and other PTSD symptoms in combat veterans by prazosin: a placebo-controlled study. *Am J Psychiatry* 2003;160:371-3.
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5. Taylor FB, Martin P, Thompson C, et al. Prazosin effects on objective sleep measures and clinical symptoms in civilian trauma posttraumatic stress disorder: a placebo-controlled study. *Biol Psychiatry* 2008;63:629-32.