Prazosin - A dream come true for PTSD nightmares

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Background
Post traumatic stress disorder (PTSD) is a chronic, severe and disabling disorder that can occur when an individual experiences or witnesses a traumatic event. Symptoms of PTSD can include:

- Intrusive Memories
- Avoidance
- Difficulty Sleeping
- Nightmares
- Changes in Emotional Reactions
- Memories
- Reactions
- Invasive
- Thinking
- Intrusive
- PTSD
- Nightmares
- Thoughts
- Mood
- Avoidance
- PTSD

The pathophysiology of PTSD is thought to involve enhanced central nervous system (CNS) adrenergic activity¹. Excessive CNS noradrenergic activity is associated with irritability, sleep disturbance and hyper-arousal symptoms¹. PTSD nightmares can prove difficult to treat, and may lead to insomnia, severe sleep disruption and a reliance on alcohol and other medications to aid sleep¹. Selective serotonin reuptake inhibitors (SSRIs) are considered first line in treating this disorder. There are however, some patients who are resistant to standard treatment and require a combination of medications in order to alleviate their symptoms.

Aim
To present a case where prazosin was successfully used to treat post-traumatic stress disorder nightmares.

Case Background
The patient was a 39 year old female with a complex mental health history of attention deficit hyperactivity disorder, bipolar disorder, alcohol addiction, methamphetamine use, depression and previous suicide attempts. The patient had been taking a number of medications including sertraline, agomelatine, acamprosate and carbamazepine. The patient complained of nightmares as a result of PTSD and began to self-medicate with alcohol. She was initiated on a low dose of prazosin (0.5mg) at night, and within two weeks reported sleeping better with fewer nightmares.

Case Progress

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Table 1. Medication titration schedule¹.

Discussion
Prazosin was initially found to be effective in PTSD nightmares back in 2003, when Raskind et al. conducted a small controlled study of war veterans returning from Iraq and Afghanistan². This study has since been conducted in a larger group of combat veterans with chronic PTSD³. Results from this study also found that prazosin effectively reduced trauma nightmares and sleep disturbances³. The exact mechanism for which prazosin exerts its beneficial effect is unknown. However, according to Raskind et al., PTSD nightmares occur during light sleep and disrupted REM sleep. Light sleep is increased by stimulation of central nervous system alpha-1 receptors and prazosin inhibitory effect on alpha-1 receptors decreases light sleep and normalises REM sleep.

The patient was originally taking 0.5mg at night with good effect. However, after a period of time the beneficial effect decreased. The patient began to consume excessive quantities of alcohol in order to aid sleep. At this point, the decision was made to increase her dose according to the Raskind study. As prazosin has a short half-life it requires twice daily dosing. With an increase in dose, the nightmares are alleviated, and the patient reports sleeping better.

In June 2018, a decision is made to wean the patient off prazosin with a view to ceasing it. The patient slowly weans by 1mg each week. However, by July 2018 and on a dose of 1mg at night, her nightmares return. She is titrated back to 2mg in the morning and 6mg at night. To date the patient, is nightmare free and stable on a dose of 2mg in the morning and 8mg at night.

Conclusion
It was originally hoped that the patient could be weaned off prazosin. However, soon after ceasing her dose, she experienced an increase in nightmares and sleep disturbances. To date, our patient has remained on prazosin at a dose of 2mg in the morning and 8mg at night.

This case study highlights the effectiveness of using prazosin to treat PTSD nightmares. SSRIs are still considered first line therapy for treating PTSD. However, certain patients may receive benefit from the addition of prazosin.

References
1. Raskind et al., Prazosin for combat trauma PTSD with nightmares. 2013 September; AM J Psychiatry 170:9 1003-1010
3. Raskind et al., A parallel group placebo controlled study of prazosin for trauma nightmares and sleep disturbance in combat veterans with post traumatic stress disorder. 2007; Biol Psychiatry 61(8):928-34