Can topiramate reduce nightmares in posttraumatic stress disorder?

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Re-experiencing a previous life-threatening stress through nightmares or recurrent memories is a hallmark of posttraumatic stress disorder (PTSD). In the United States, the lifetime risk of PTSD is 10.1% and the 12-month prevalence is 3.7%.[1] The selective serotonin reuptake inhibitors (SSRIs) sertraline and paroxetine are FDA-approved for treating PTSD; clinicians commonly use any SSRI for this disorder. Although SSRIs can alleviate many PTSD symptoms, at times patients experience only a partial response, which necessitates other interventions.

Rationale for using topiramate

The anticonvulsant topiramate blocks voltage-sensitive sodium channels, augments γ-aminobutyric acid type A, antagonizes the glutamate receptor, and inhibits carbonic anhydrase. Researchers have hypothesized that limbic nuclei become sensitized and "kindled" after exposure to a traumatic event. Anticonvulsants such as topiramate may help mitigate stress-activated kindling in PTSD.[2,3]

What does the evidence say?

Although less compelling than double-blind, placebo-controlled trials, small open-label studies and some case reports indicate a potential role for topiramate in PTSD for specific populations.[4,5] In an 8-week open-label study, Alderman et al[6] found adjunctive topiramate led to a statistically significant reduction in Clinician-Administered PTSD Scale (CAPS) scores and nightmares in 43 male veterans with combat-related PTSD. There was a nonsignificant decrease in high-risk alcohol use.

In a 2002 retrospective case series, Berlant et al[7] found topiramate as monotherapy or adjunctive therapy reduced nightmares in 35 patients with chronic, non-combat PTSD. Nightmares decreased in 79% of patients and flashbacks decreased in 86%, with symptom improvement in a median of 4 days. Limitations of this study included lack of placebo control, a low number of participants, and a high dropout rate (9/35).

Two years later, Berlant[8] used the PTSD Checklist-Civilian version (PCL-C) to assess response to topiramate in an open-label study of 33 patients with chronic, non-hallucinatory PTSD. Twenty-eight patients used topiramate as add-on therapy. PCL-C scores decreased by ≥30% in 77% of patients in 4 weeks, with a median dose of 50 mg/d and a median response time of 9 days.

In a double-blind, placebo-controlled trial, Tucker et al[9] assessed 38 civilian patients who took topiramate monotherapy for PTSD. Using the CAPS, researchers concluded that topiramate reduced re-experiencing symptoms, but the effect was not statistically significant.[9]

Lindley et al[10] conducted a randomized, double-blind, placebo-controlled trial to study the effect of add-on topiramate in 40 patients with chronic, combat-related PTSD. Because many patients in this study had a history of depression and substance use disorders, topiramate was added to antidepressants; no anticonvulsants, antipsychotics, or benzodiazepines were used. Similar to previous studies, researchers found no statistically significant effect on PTSD symptom severity or global symptom improvement. However, the small number of participants and a high dropout rate limited this study.[10]

continued

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Disclosure

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Topiramate might be helpful for PTSD patients with high-risk alcohol use or migraine headaches

Related Resource

- U.S. Department of Veterans Affairs. Nightmares and PTSD. www.ptsd.va.gov/public/pages/nightmares.asp.

Drug Brand Names

Paroxetine • Paxil
Prazosin • Minipress
Sertraline • Zoloft
Topiramate • Topamax
Trazodone • Desyrel, Oleptro

In a 12-week, double-blind, placebo-controlled study of 35 men and women age 18 to 62 with PTSD, Yeh et al[11] found that topiramate (mean dose: 102.94 mg/d) lead to a statistically significant overall CAPS score reduction, with significant improvements in re-experiencing symptoms, such as nightmares.

Our opinion

FDA-approved treatments such as SSRIs should be the first pharmacologic intervention for PTSD. If a patient's response is partial or inadequate, consider additional treatment options. For patients with persistent re-experiencing symptoms, evidence and experience with prazosin and trazodone are more robust than that for topiramate.[12]

Using topiramate to reduce re-experiencing symptoms such as nightmares in PTSD is not supported by statistically significant evidence from double-blind, placebo-controlled trials. However, numerous open-label studies and case reports suggest that there may be a role for topiramate in PTSD patients who do not respond to other treatments. Data indicate that topiramate may be helpful for PTSD patients who have high-risk alcohol use[6] or migraine headaches.[13] Because some patients who take topiramate lose weight, the medication may be useful for PTSD patients who are overweight.[13]

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