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Q: What is topiramate?

A: Topiramate is an anticonvulsant medication most-commonly prescribed for epilepsy and migraine headaches. Topiramate is not approved by the U.S. Food and Drug Administration (FDA) for the treatment of alcohol use disorder (AUD), but off-label use for the treatment of AUD has increased in recent years. As topiramate is “off-patent,” it is unlikely to go through the FDA approval process to become an FDA-approved treatment for AUD (Blodgett, Del Re, Maisel, & Finney, 2014).

Q: What are the potential mechanisms of action underlying topiramate for the treatment of AUD?

A: It is hypothesized that topiramate decreases alcohol reinforcement by reducing dopamine release, specifically via facilitation of GABA activity and inhibition of glutamate activity on specific receptors (Johnson et al., 2007).

Q: Is topiramate recommended as a treatment for AUD in the Military Health System (MHS)?

A: Yes. The *2021 VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders* gives a “strong for” strength of recommendation for offering topiramate to patients with moderate to severe alcohol use disorder.

The MHS relies on the VA/DoD clinical practice guidelines (CPGs) to inform best clinical practices. The CPGs are developed under the purview of clinical experts and are derived through a transparent and systematic approach that includes, but is not limited to, systematic reviews of the literature on a given topic and development of recommendations using a graded system that takes into account the overall quality of the evidence and the magnitude of the net benefit of the recommendation. A further description of this process and CPGs on specific topics can be found on the VA clinical practice guidelines website.

Q: Do other authoritative reviews recommend topiramate as a treatment for AUD?

A: Yes. Other authoritative reviews have substantiated the use of topiramate for AUD.

Other recognized organizations conduct systematic reviews and evidence syntheses on psychological health topics using similar grading systems as the VA/DoD CPGs. Most notable of these organizations is Cochrane – an international network that conducts high-quality reviews of healthcare interventions.

- Cochrane: A 2014 systematic review (Pani, Trogu, Pacini, & Maremmanni, 2014) on anticonvulsants, primarily topiramate, for alcohol dependence found that anticonvulsants were more effective than placebo for certain outcomes, including number of drinks per drinking day. However, due to the high degree of heterogeneity and the low number and quality of the studies comparing anticonvulsants to other medications, the authors concluded that there is “insufficient” randomized evidence supporting the use of anticonvulsants to treat alcohol dependence.

Q: What conclusions can be drawn about the use of topiramate as a treatment for AUD in the MHS?

A: Along with naltrexone, topiramate is considered a front-line pharmacological treatment for AUD. Topiramate is associated with certain side effects, including numbness, anorexia, taste abnormalities, cognitive impairment, and rash. Providers should consider factors such as potential adverse effects, comorbidities, and availability when selecting a treatment with patients.

References

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