

# RGH Pharmacy E-Bulletin

Volume 29 (4): March 3, 2008

A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

## Anticonvulsants for PTSD

Post-traumatic stress disorder (PTSD) is debilitating and difficult to manage, with treatment often involving a combination of non-pharmacological interventions (e.g. cognitive behavioral therapy; eye movement desensitization and reprocessing) and drug therapy. Although non-pharmacological approaches are generally advocated as the first-line treatments, pharmacotherapy is also commonly used. The most commonly used drugs include the selective serotonin reuptake inhibitors (SSRIs), new generation antidepressants (e.g. mirtazapine), tricyclic antidepressants or monoamine oxidase inhibitors. Although most clinicians working with patients affected by PTSD would agree that the SSRIs are the first line drug therapy to be employed in most cases, it is clear that the broad spectrum of symptoms across a number of domains, as well as variability of response to drug therapy, has necessitated the exploration of various alternative treatment options including those which incorporate the anticonvulsant drugs.

### *Valproate*

Sodium valproate, divalproex sodium and valproic acid are effectively used interchangeably. Valproate has been investigated as a treatment for PTSD, with some research in this area dating back to the early 1990s. Symptoms of PTSD suggest the involvement of sympathetic nervous system hyperarousal and hyperreactivity, and the possibility of stress-activated limbic kindling, and valproate's effects in decreasing limbic kindling have been proposed as a basis for the use of this agent. A recent meta-analysis found that valproate was generally effective for the treatment of symptoms of PTSD by reducing hyperarousal, improving irritability and anger outbursts and improving mood. In contrast, however, a recently published double-blind, placebo-controlled study found that valproate monotherapy was not effective in the treatment of chronic PTSD in a cohort of older, combat veterans. Whilst results remain conflicting, the addition of valproate for PTSD symptoms may be beneficial, particularly where there is prominent hyperarousal, and where a mood-stabilising effect is sought.

### *Topiramate*

An emerging body of evidence suggests that the new generation anticonvulsant drug topiramate can be beneficial as an adjunctive therapy for PTSD. A range of small studies that have recruited subjects with either civilian or combat-related PTSD have revealed therapeutic effects measured across a range of different symptom clusters, most notably in relation to improved sleep and decreased nightmares. Another benefit is that topiramate also appears to assist with the reduction of excessive alcohol consumption, a common problem amongst patients with chronic PTSD.

### *Other anticonvulsants*

A range of other anticonvulsant drugs, both older treatments and newer drugs, have been proposed as treatments for PTSD. A recent placebo-controlled study has demonstrated that patients treated with lamotrigine showed improvement on re-experiencing and avoidance/numbing symptoms compared to placebo patients, with the drug being generally well tolerated. A retrospective chart review has revealed that gabapentin may improve sleep and decrease nightmares amongst patients with PTSD. Results of recent research involving tiagabine have been mixed, and as is the case for all of the more recently anticonvulsants, much more convincing evidence will be needed before this drug can be routinely advocated as an adjunctive treatment for PTSD.

Acknowledgment – This E-Bulletin is based on work by Chris Alderman, Pharmacy Department, RGH

**FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: [chris.alderman@rgh.sa.gov.au](mailto:chris.alderman@rgh.sa.gov.au)**  
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.