

RGH Pharmacy E-Bulletin

Volume 39 (2): August 2, 2010

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.

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Central post-stroke pain

Central post-stroke pain (CPSP) is a chronic pain disorder resulting from a lesion or dysfunction of the central nervous system. Previously known as the “thalamic syndrome”, CPSP has been shown in early post-mortem studies and modern imaging techniques to also occur in extrathalamic lesions. Frequent co-existing pain in stroke patients and variability in onset, presentation and intensity of CPSP, as well as the lack of diagnostic criteria, makes diagnosis of this disorder complex. Currently, the Western Australian Therapeutic Advisory Group recommends tricyclic antidepressants as the first line treatment for CPSP and lamotrigine as the second line approach.

The use of amitriptyline, a tricyclic antidepressant, has been shown to be effective in treatment of CPSP. A placebo-controlled, three-phase, cross-over study of 15 patients with CPSP, given either amitriptyline 75mg/day, carbamazepine 800mg/day, or placebo, has shown that amitriptyline produced a statistically significant reduction of pain when compared to placebo in 10 of 15 patients for treatment of CPSP. However, amitriptyline has been shown to be ineffective in preventing CPSP in patients with thalamic stroke in another study. Fluvoxamine, a selective serotonin reuptake inhibitor, has shown some improvement in CPSP patients who had stroke within 1 year, in an open-labeled study of 31 patients.

Antiepileptics that target sodium-channel blockage have also been studied for the treatment of CPSP. Lamotrigine has been shown to be effective in reducing the median pain score when compared to placebo, in a randomized, double-blind, cross-over study of 30 patients with CPSP, at a dose of 200mg/day. Three patients withdrew from this study due to mild rash, severe headache and severe pain. Trials evaluating other antiepileptics such as carbamazepine, gabapentin, phenytoin and topiramate in CPSP, have yielded either inconclusive or negative results.

Anesthetics such as lignocaine and propofol have been evaluated in small trials and may be effective in providing short term pain relief in CPSP. Mexiletine, an oral antiarrhythmic agent, has been trialed for the treatment of CPSP, one study found it to be effective whereas another did not. The potential proarrhythmic effect of mexiletine may limit its use.

Non-drug measures such as deep brain stimulation and repetitive transcranial magnetic stimulation may be considered in CPSP patients refractory to pharmacotherapy. Current available evidence-based treatment for CPSP is limited, further research is required into the management of this disorder.

This E-Bulletin is based on work by Helen Chuah, Clinical Pharmacist, RGH

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