Using Antidepressants & Anticonvulsants in the Treatment of Chronic Pain

There are four reasons for considering antidepressant medications for patients with chronic pain:
1) psychiatric disorders are common in patients with severe or disabling pain, particularly depression,
2) sleep disturbance is common, even in patients who do not meet the criteria for psychiatric diagnosis
3) some antidepressants produce pain relief independent of their impact on psychiatric symptoms, and
4) reduced dependence upon pain medications reduces dependency risk and may enhance functionality.

Depression and pain strongly reinforce each other. Multiple studies have shown that pain patients have depression risk 2 to 5 times that of the general population. This risk is especially true for patients who have multiple pain complaints, greater pain intensity and longer pain chronicity than those without depression.

Sleep problems: 50-80% of patients with chronic pain have significant sleep disturbances. Depressed patients with persistent insomnia are at higher risk for persistence or relapse of their symptoms. Chronic sleep disturbance can and should be addressed in all patients.

In general, tricyclic antidepressants have a more positive effect on sleep continuity than do SSRIs. Amitriptyline (Elavil) and Nortriptyline as well as Sinequan (Doxepin) are “tried and true” tricyclics that can be considered, typically used in the dosage range of 10-50mg HS. Trazodone is another antidepressant often used to help with sleep problems. Mirtazapine (Remeron), particularly in low doses (up to 15mg), may also be effective in improving sleep continuity, but it can promote weight gain as can amitriptyline (Elavil).

Pain syndromes responsive to antidepressants: The most responsive types of pain are neuropathic syndromes such as diabetes and post-herpetic neuralgia. Headache, facial and central pain syndromes may also be helped.

In some studies with patients with fibromyalgia, it is suggested that the optimum treatment is the combination of a tricyclic with an SSRI. Addition of an SSRI allows full antidepressant dosing and the low dose tricyclic portion addresses problems with sleep.

Antidepressant medications with serotonin and norepinephrine reuptake inhibitor properties (SNRIs) may be helpful for diabetic neuropathic pain syndromes. Duloxetine (Cymbalta) has been approved by the FDA for this purpose and venlafaxine and other SNRI medications (mirtazapine, buproprion) may also be helpful for some patients at lower doses.

Headaches, particularly chronic daily headache, may respond to SSRI antidepressants as well as to tricyclic and serotonin-norepinephrine reuptake inhibitor medications (SNRIs) such as mirtazapine. Non-ischemic chest pain may be another area that SSRIs do well.

Anticonvulsants: Anticonvulsants have been studied for treatment of neuropathic pain. They may have be effective in the amelioration of neuropathic pain, especially diabetic neuropathy, post-herpetic neuralgia, and trigeminal neuralgia. Some data suggests that gabapentin is more effective overall than gabapentin in the treatment of these syndromes.

In patients without significant emotional distress, anticonvulsants and antidepressants may be equally appropriate as choices for therapy. For anticonvulsants it is reasonable to start with the ones that have been studied most, gabapentin and carbamazepine. In particular, gabapentin is attractive because it does not interact significantly with other drugs and because of its characteristic adverse effects are reversible with termination of the drug.

Suggestions for Treatment for Co-Morbid Patients: If a patient demonstrates significant depression, anxiety, or sleep disturbance, therapy should include use of an antidepressant at a dose that is effective for treating depression. Combined use of antidepressants and anticonvulsants have shown efficacy in the treatment of neuropathic pain and clearly make sense when pain, mood disorder and sleep problems co-exist.

Take Homes: Use of antidepressant and anticonvulsive medications can be a helpful part in the management of chronic pain syndromes. Evaluation of these patients for symptoms of sleep disorder and depression is recommended so that treatment opportunities can be considered.

PC2 consultation is available to assist you in decision making with these complex patients.

Reference for article:
“Antidepressant and Anticonvulsant Medication for Chronic Pain” Mark D. Sullivan, MD, PhD, James Robinson, MD, PhD; Phys Med Rehabil Clin N Am 17(2006) 381-400