Medical Treatment Guidelines

Washington State Department of Labor and Industries

Antiepileptic drugs guideline for chronic pain

Purpose and development of the guideline

The purpose of this guideline is to provide guidance to treating physicians in the use of Anti-Epileptic Drugs (AEDs) in the management of neuropathic pain. This guideline was developed by the Department of Labor and Industries and the Department of Social and Health Services Health and Recovery Services in collaboration with expert opinion from actively practicing physicians who regularly treat chronic pain.

The guideline is based on a systematic review of the current scientific literature regarding antiepileptic drugs in the treatment of chronic pain (neuropathic and somatic, musculoskeletal pain) and is limited to the following newer AEDs: gabapentin, lamotrigine (Lamictal), levetiracetam (Keppra), oxcarbazepine (Trileptal), tiagabine (Gabitril), topiramine (Topamax), and zonisamide (Zonegran). (1)

Treatment guideline for antiepileptic drugs for neuropathic pain

Currently there is lack of evidence to demonstrate that AEDs significantly reduce the level of acute pain, myofascial pain, low back pain, or other sources of somatic pain. (2) The evidence of efficacy and safety on AEDs in the treatment of neuropathic pain varies and depends of the specific agent in this drug class.

Neuropathic pain may be defined as pain initiated or caused by a primary lesion or dysfunction in the nervous system, and is characterized by spontaneous pain described as lancinating, paroxysmal, burning, constant, cramping; and evoked pain of dysesthesia, allodynia, hyperalgia, or hyperpathia.

Gabapentin, along with older antiepileptic drugs, may be used as a first line therapy in the treatment of chronic neuropathic pain. Because evidence of efficacy with lamotrigine has been inconsistent and there is no evidence of efficacy and safety for levetiracetam, oxcarbazepine, tiagabine, topiramate, and zonisamide, these drugs will not routinely be covered by the department for the treatment of neuropathic pain. In addition, the Food and Drug Administration (FDA) has recently issued an alert strongly discouraging the off-label use of tiagabine due to a paradoxical occurrence of seizures in patients without epilepsy.

Group 1, neuropathic pain conditions

Gabapentin, and older antiepileptic drug, are most likely to be effective when prescribed for the following neuropathic pain conditions or diseases that are known to cause neuropathy;

-Diabetic neuropathy.
-Post herpetic neuralgia.
-Trigeminal neuralgia.
-Spinal cord injury.
-Cauda equine syndrome.
-Phantom limb pain.
-HIV neuropathy.
-Cancer.
-Traumatic nerve injury, and
-Chronic radiculopathy confirmed by pain radiating to the extremity in a dermatomal pattern and either objective examination findings of motor, sensory, or reflex changes, or abnormal imaging; or EMG/NCV abnormality.

Group 2, questionable neuropathic pain conditions

Gabapentin is less likely to be effective for questionable neuropathic pain conditions with no objective findings of nerve injury. Use of gabapentin for questionable neuropathic pain conditions should be authorized only after consultation and recommendation from a physician specializing in pain therapies, rehabilitation and physical medicine, anesthesiology, or neurology. It is recommended that a physician specializing in pain therapies have a subspecialty certification in pain medicine from the American Board of Medical Specialties.

Group 3, non-neuropathic pain conditions

There is no scientific evidence that antiepileptic drugs are effective in treating acute pain, somatic pain from strains or sprains, or myofascial pain. Gabapentin would not be authorized for non-neuropathic pain conditions such as:

Acute musculoskeletal pain.
Primary somatic pain from chronic musculoskeletal strain/sprain;
Low back pain without radiculopathy;
Tendonitis; or
Repetitive strain without evidence of entrapment neuropathy.

Recommended dosage of gabapentin

Individual drug tolerance and pain-relief dosage may vary considerably; however, gabapentin effectiveness in reducing neuropathic pain should be seen by 4 to 6 weeks. The following is a recommended dosing plan for gabapentin in the management of neuropathic pain.

Gabapentin therapy may be initiated as a 100 to 300 mg dose at bedtime and increased to 600 to 900 mg/day over 3 days (given in three divided doses). If this is tolerated, the dose may be titrated up every 2 to 3 days as tolerated until a daily dose of 1800 mg/day (given in three divided doses) is reached. If significant pain relief is achieved at a lower dose and no increased improvement is noted with further dose increases, the lower dose should be maintained.

If no improvement is seen with gabapentin at 1800 mg/day, the dose may be increased up to 2400 mg/day. If no improvement is seen at 2400 mg/day, consider tapering gabapentin to see if pain level increases. As no additional benefit is seen with does greater than 1800 mg/day and the absorption of gabapentin is NOT dose proportional (an increasing dose of gabapentin results in a decreasing percentage of gabapentin absorption) further increases in doses are not recommended. If pain level remains the same, discontinue gabapentin gradually over a one week period. Referral to a pain specialist may also be indicated if there is no improvement in pain level

The most common side effects associated with the use of gabapentin in adults are dizziness, somnolence, and peripheral edema. Accordingly, patients should be advised not to drive a car or operate other complex machinery until they have gauged whether or not gabapentin affects their mental and/or motor performance.

In addition, patients who require concomitant treatment with morphine may experience increases in gabapentin concentrations and should be observed for signs of CNS depression and the dose of gabapentin or morphine should be adjusted appropriately. Please refer to the FDA labeling for complete prescribing instructions.

References

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