

Pregabalin and Gabapentinoids

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Pregabalin is a drug that was developed after gabapentin as a different option in the treatment of seizure disorders. Pregabalin and gabapentin are referred to as gabapentinoids. They have similar dose response relationships; one may be preferable to the other for the treatment of seizures, neuropathic pain, and other off-label clinical conditions. Pregabalin is marketed under the trade name Lyrica and was approved for use in the United States in 2004. It is listed as a controlled substance with the Food and Drug Administration (FDA) as schedule V drug. Currently, pregabalin is not a generic drug and, as such, the cost is quite high. Despite this high cost it is still the 83rd most prescribed drug. Most prescriptions are issued for the treatment of neuropathic pain.

In the treatment of pain, the consensus is that morphine is the preferred choice because of its targeted and specific reduction of pain. The addictive nature of morphine also makes it a drug to be used with great caution and only in specific cases. Pharmaceutical companies have attempted to develop drugs like morphine such as oxycodone, hydromorphone, fentanyl etc., in the hopes to find a drug that can effectively treat pain and is not addictive. The gabapentinoids are the product of this endeavor. They are more powerful drugs than the nonsteroidal anti-inflammatory drugs (NSAIDs), work very well for mild and moderate pain, and they are nonaddictive.

There are two general classifications for pain in humans:

1. Nociceptive pain which represents the normal response to insults or injury to tissue such as skin, muscle, vis-

ceral organs, joints, tendons or bone and any resulting inflammation. The nerves that cause this type of pain, Nociceptors, respond to parts of the body which suffer from damage. This type of pain includes sprains, bone fractures, burns, bumps, bruises, inflammation (from an infection or arthritic disorder), obstructions, and myofascial pain (which may indicate abnormal muscle stresses)

2. Neuropathic pain, which is caused by a primary lesion or disease in the somatosensory nervous system, concerns the conscious perception of touch, pressure, pain, temperature, position, and movement which arises from the muscle, joints, skin, and fascia. This type of pain is also referred to as nerve pain and is usually chronic. Examples of this is the pain associated with diabetes, multiple sclerosis, stroke, cancer and cytomegalovirus.

There are also conditions that do not fit into either of the above two categories. The pain of a crushing injury, migraine, a headache due to flu or cold virus, or splitting headaches due to caffeine withdrawal are all pain, however each will have a different remedy. Neuropathic pain and pain associated with fibromyalgia, which is more of a central nervous system issue, will have a different method of treatment. This may be chronic or acute, and manifests in various body system such as joint, skin, or tissue. On label gabapentinoids have been cited in the literature to have great outcomes for treatment of this second classification of pain. This does not preclude the use of NSAIDs or opioids, should the clinician find it necessary. The use of gabapentinoids have demonstrated to be powerful in the control of seizures and the treatment of mild to medium levels of neuropathic pain. The correct prescribing of the drug and the control of the

dose and frequency are necessary under the guidance of a physician for the patient's safety and efficacy of the drug.

Literature surveys state that approximately 1.1% of the general population and 22% of patients treated at addiction facilities have a history of abuse of gabapentin along with other drugs. This very high number of illicit uses of the gabapentinoids has been shown in treatment clinics as either dependency or addiction. A survey of patients using nonprescription gabapentinoids showed that the drugs are widely distributed and easily obtainable on the internet or black market. A natural question then arises; are these drugs users seeking pain relief or are they addicted to the drug itself for any number of other reasons? Of all the patients using these drugs it was found that none of them sought detoxification treatment for either pregabalin or gabapentin. The animal experimental model also demonstrated that there is only very scarce evidence for misuse in a long-term rewarding and reinforcing manner. The authors of the study concluded that the gabapentinoids were rarely, or not at all, addictive. They further stated that the drugs were inappropriate to prescribe to those in a treatment program and should be avoided; or if absolutely needed, the use should be very carefully controlled.

To summarize the two compounds that make up the class of gabapentinoids, pregabalin and gabapentin, are safe and effective for the treatment of seizure disorders and neuropathic pain. They are effective for mild pain but inappropriate for severe pain. The drugs should not be used in the treatment of patients undergoing drug treatment disorders. The gabapentinoids are not addictive.

References:

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