GABAPENTIN ABUSE

Q: I have recently heard reports of gabapentin abuse. Is gabapentin a widely abused drug?

A: Although gabapentin is not a federally controlled substance, there have been numerous reports of gabapentin abuse, which has led some states to make gabapentin a controlled substance, or treat it like a controlled substance. For example, Kentucky has classified gabapentin as a Schedule V controlled substance, in hopes to combat the abuse. Other states, including Ohio, Minnesota, Virginia, and Massachusetts require gabapentin to be reported to their prescription monitoring databases.[1] Gabapentin abuse is particularly associated with patients who have a prior history of substance abuse, especially opioids.

Gabapentin (Neurontin®, Gralise®, Horizant®) is a federally non-controlled prescription medication and is available as a tablet, capsule, and oral solution. Gabapentin is FDA-approved for postherpetic neuralgia, adjunctive therapy for partial seizures (Neurontin® only), and restless leg syndrome (Horizant® only);[2-4] however, it is more commonly prescribed for off-label uses given its relatively favorable side effect profile. Off-label uses include: treatment of neuropathic pain, diabetic peripheral neuropathy, fibromyalgia, bipolar disorder, migraine prophylaxis, hiccups, itching, tremor, and hot flashes.[1,5,6]

The effects of abusing gabapentin are dependent on multiple factors, including the user's history, the dosage, and route of administration. The experiences that have been described by individuals who have abused this medication alone, have included reports of euphoria, a "marijuana-like" high, improved sociability, relaxation, or "zombie-like" effects.[7] Gabapentin is typically abused with other substances such as opioids. Opioid abusers will use gabapentin to increase the high and reduce withdrawal symptoms.[8] Since gabapentin is not a controlled substance in most states, it can easily be obtained and is relatively cheap when obtained illicitly (< $1/pill).[9]

Recent prescribing of gabapentin has increased due to its variety of off-label uses; in 2016, there were 64 million prescriptions of gabapentin dispensed, which is a 164% increase from 2012.[10] Due to its increased availability, there have also been increases in case reports concerning abuse of, and addiction to, gabapentin. U.S. Poison Control Center data illustrated a 4.3-fold increase in abuse of gabapentin or pregabalin from 2006 to 2014.[11] Most cases occur in patients with a prior history of substance abuse. A survey of 250 former inmates living in a correctional community center, showed that 16% of the patients that used medications for a non-medical purpose, misused gabapentin. In the same survey, 26% of the patients with opioid abuse disorder admitted to gabapentin abuse.[12] Another study focused on the misuse of prescription medications in opioid dependent patients. Questionnaires were given to 196 patients seeking detoxification; 13% of opioid dependent patients reported using gabapentin without a prescription, and 40% of opioid dependent patients receiving prescriptions for gabapentin reported using higher doses than prescribed.[13]

Gabapentin is associated with significant withdrawal effects. Withdrawal symptoms have occurred even in patients prescribed normal doses of gabapentin for a short period of time (as little as 3 weeks).[14] The onset of withdrawal symptoms can be as early as 12 hours or may take as long as seven days.[15] Case reports of patients taking gabapentin and tapering off or stopping the medication abruptly describe withdrawal symptoms such as: flu-like symptoms, elevated vital signs, mental confusion, agitation, hyperreflexia, disorientation, nervousness, anxiety, diaphoresis, headache, palpitations, incoherent speech, and bizarre behaviors.[16-21] In one report, a patient who self-escalated his dose to 8,000 mg daily

(typical maximum recommended dose is 3,600 mg daily) experienced 90 minutes of continuous seizure activity after abruptly discontinuing the medication.[20]

Gabapentin abuse has also lead to neonatal abstinence syndrome (NAS). One study reviewed 188 cases of infants that required treatment for NAS, 19 of which had a positive umbilical cord analysis for opioids and maternal admission of use of nonprescription gabapentin during pregnancy. Fifteen of these infants had abnormal behaviors such as tongue thrusting, wandering eye movements, back arching, and continuous extremity movements; ten were unable to wean from methadone treatment without initiating gabapentin treatment and taper. The average length of medication treatment with gabapentin was 47 days.[21]

Although gabapentin is not a controlled substance in most states, it is recommended patients be monitored for indications of self-escalation of prescribed doses or non-prescribed use, especially if the patient has a past history of substance abuse. Signs to be wary of include: increased sedation and/or confusion, seeking early refills of gabapentin, reports of "lost" medications, aggressive behaviors when refusing to prescribe higher gabapentin doses, or obvious exaggeration of symptoms for which gabapentin is prescribed to treat. When discontinuing gabapentin due to a change in the treatment plan or as a result of gabapentin abuse, gabapentin dose should be tapered slowly rather than stopped abruptly, as significant withdrawal effects may otherwise occur. Patients should be carefully monitored, as withdrawal symptoms have occurred in patients during, and following, a gabapentin taper.[2, 21, 24]

Please call our clinical scientists at 1-877-552-3232 if you require additional information.

NOTICE: The information above is intended as a resource for health care providers. Providers should use their independent medical judgment based on the clinical needs of the patient when making determinations of who to test, what medications to test, testing frequency, and the type of testing to conduct.

REFERENCES:

1. Dufrene H. Gabapentin to become a controlled substance in Kentucky. Carlisle Medical. https://www.carlislemedical.com/Knowledge_Center/related_news_update.aspx?ID=1674. April 25, 2017. Accessed November 10, 2017.
2. Neurontin® [package insert]. New York, NY: Parke-Davis Div of Pfizer; 2017
3. Horizant® [package insert]. Atlanta, GA: Arbor Pharmaceuticals; 2017.
4. Gralise® [package insert]. Newark, CA: Depomed, Inc.;2015
5. Gabapentin. In: DRUGDEX® System [database online]. Greenwood Village, CO: Truven Health Analytics. http://www.micromedexsolutions.com/. Accessed July 10, 2017.
6. Gabapentin. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc. http://clinicalpharmacology-ip.com. Accessed July 10, 2017.
7. Pharms – Gabapentin Reports. Erowid Experience Vaults. https://www.erowid.org/experiences/subs/exp_Pharms_Gabapentin.shtml. Updated May 2017. Accessed July 14, 2017.
8. Bonnet U, Scherbaum N. How addictive are gabapentin and pregabalin? A systematic review. Eur Neuropsychopharmacol. 2017; 27(12):1185-1215.
9. Smith RV, Lofwall MR, Havens JR. Abuse and diversion of gabapentin among nonmedical prescription opioid users in Appalachian Kentucky. Am J Psychiatry. 2015;172(5):487-488.
10. QuintilesIMS Institute. Medicines Use and Spending in the U.S: A Review of 2016 and Outlook to 2021. May 2017.
11. Bucher-Bartelson B, Bau G, Severtson SG, Green JL, Dart RC. Increasing abuse of gabapentin and pregabalin as reported to US poison centers 2006 through 2014. RADARS® System. June 2016. http://www.radars.org/Portals/1/ManuscriptAbstracts/2016%20Bucher%20Bartelson%20CPDD.pdf?ver=2016-06-20-092415-297. Accessed December 15, 2017.
12. Bastiaens L, Galus J, Mazur C. Abuse of gabapentin is associated with opioid addiction. Psychiatr Q. 2016;87(4):763-767.
13. Wilens T, Zulauf C, Ryland D, Carrelas N, Catalina-Wellington I. Prescription medication misuse among opioid dependent patients seeking inpatient detoxification. Am J Addict. 2015;24(2):173-177.
14. Rosebust P, MacQueen GM, Mazurek MF. Catatonia following gabapentin withdrawal. J Clin Psychopharmacol. 1999;19(2):188-189.
15. Mersfelder TL, Michols WH. Gabapentin: Abuse, dependence, and withdrawal. Ann Pharmacother. 2016;50(3):229-233.
16. Pittenger C, Desan PH. Gabapentin abuse, and delirium tremens upon gabapentin withdrawal. J Clin Psychiatry. 2007;68(3):483-484.
17. Finch CK, Eason J, Usery JB. Gabapentin withdrawal syndrome in post-liver transplant patient. J Pain Palliat Care Pharmacother. 2010;24(3):236-238.
18. Di Fabio R, D'Agostino C, Baldi G, Pierelli F. Delirium after gabapentin withdrawal syndrome in presence of a taper. Can J Neurol Sci. 2013;40(1):125-126.
19. Mal L, Hart M. Gabapentin withdrawal: case report in an older adult and review of the literature. J Am Geriatr Soc. 2013;61(9):1635-1637.
20. Barrueto F, Green J, Howland MA, Hoffman RS, Nelson LS. Gabapentin withdrawal presenting as status epilepticus. J Toxicol Clin Toxicol. 2002;40(7):925-928.
21. Loudin, S, Murray S, Prunty L, Davies T, Evans J, Werthammer J. An atypical withdrawal syndrome in neonates prenatally exposed to gabapentin and opioids. J Pediatr. 2017;181:286-288.
22. OhmanI, Vitols S, Tomson T. Pharmacokinetics of gabapentin during delivery, in the neonatal period, and lactation: does a fetal accumulation occur during pregnancy? Epilepsia. 2005;46(10):173-177.
23. Tran KT, Hranicky D, Lark T, et al. Gabapentin withdrawal syndrome in the presence of a taper. Bipolar Disorder. 2005;7(3):302-304.

