

KRATOM AND THE OPIOID CRISIS

Dear Editor:

On October 26, 2017, the opioid crisis was declared a public health emergency in the United States.¹ Then, on November 14, 2017, the United States Food and Drug Administration (FDA) issued a public health advisory regarding kratom-containing products and highlighted 36 deaths associated with their use.² Here, three cases with adverse events arising from the reported use of kratom are presented.

Case presentations. After a 28-year-old man with a history of opioid use disorder, who was in remission for nearly eight months, relapsed, he attempted to detox at home and bought kratom online to assist with withdrawal symptoms. His wife called 911 because he started having auditory hallucinations of gunshots, became paranoid, and was asking her to hide with him to remain safe from intruders. The patient was extremely paranoid on presentation to the hospital and was noted to be responding to auditory hallucinations.

In a separate case, a 33-year-old man with a history of heroin used kratom in an attempt to detox from drug use. He was brought to the emergency room by family due to a change in behavior. He reportedly was not sleeping and believed the television was talking to him and that he needed to act to save the world.

In both of these cases, while the patients required emergency use of antipsychotics in the hospital, they quickly returned to baseline within 48 to 72 hours of admittance with supportive care, which included safety monitoring by staff and provision of as-needed medications for sleep.

In a third case, a 42-year-old man reportedly relocated to a different state to stay with family in an effort to detox from opiate use. He had new-onset grand mal seizures. Neurology work-up was negative. The patient disclosed later that he had used kratom, which he had bought online, because he thought it was a safer alternative to opiates.

Discussion. Kratom refers to leaves of *Mitragyna speciosa*, a plant native to parts of Southeast Asia. It is consumed by chewing or drinking tea brewed from dried leaves/powder and/or by smoking it.³ It is also referred

to as Herbal Speedball, Biak-biak, Ketum, Kahuam, Ithang, and Thom. Mitragynine and 7-hydroxymitragynine are the main psychoactive compounds of kratom.⁴ They act as partial agonists at μ -opioid receptors and competitive antagonists at κ - and δ -opioid receptors. In addition, they also affect the adrenergic, serotonergic, and dopaminergic pathways. At lower doses, kratom has stimulant-like effects, but, with higher doses, opiate-like effects occur.⁵ Kratom is considered to be a natural herbal treatment in parts of Southeast Asia for common maladies, such as pain, fever, cough, and diarrhea, and it is also considered an anxiolytic and mood enhancer.⁶ Kratom's addictive potential has been noted, which can lead to escalating use and cause side effects, such as loss of appetite, weight loss, increased pigmentation, disrupted sleep pattern, and increased frequency of urination.⁴

The FDA has noted that, because of its action at opiate receptors, which leads to euphoric and analgesic effects, kratom is being increasingly sought out for chronic pain relief and also as a treatment for opiate addiction. Kratom is also being sought to relieve anxiety and mood issues. The FDA cautions that, at present, there is no reliable evidence for the use of kratom in opiate use disorders.² There is also concern that the products being sold as kratom are being laced with other compounds that reportedly have led to an array of adverse effects, including withdrawal symptoms, seizures, psychosis, and liver damage. It has to be noted that the concentration of kratom's psychoactive compounds is variable with the geographical area and time of harvest,⁴ which can lead to different and unreliable results. Healthcare providers should be aware of the increasing prevalence of kratom use and screen for its use in vulnerable populations.

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With regards,

Durga Bestha, MBBS

Dr. Bestha is with the Carolinas Healthcare System in Charlotte, North Carolina.

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Correspondence. *Durga Bestha, MBBS; Email: durga.bestha@carolinashealthcare.org*