

Correspondence

Kratom: Facts, Fiction, and the Unknown

To the Editor: The intensive care unit is no stranger to drug reactions and overdoses. However, it is not always clear what substance is causing a certain patient presentation, particularly in the setting of multiple substances. During a recent rotation in the Medical ICU, our team took care of a young, previously healthy patient that presented with suspected drug-induced cardiac arrest. All toxicity and substance screening returned negative. Although the patient quickly recovered, this raised suspicion for an overdose of a substance not routinely tested for in the ICU setting. Kratom is 1 such example of a substance that is rapidly growing in popularity in the United States and is not routinely tested for. We are writing because of kratom's implications for Family Medicine physicians; from use in the outpatient setting, to possibly life-threatening overdoses in the hospital setting.

Kratom comes from the leaves of a tree indigenous to Southeast Asia. It has been used for several centuries to treat a wide range of ailments, including use as a stimulant, pain relief agent, and more recently, mitigating symptoms of opiate withdrawal.¹ It contains alkaloids, including mitragyna, which have partial affinity for the mu opioid receptors. However, they do not seem to activate the β arrestin pathway that results in the respiratory depression.² Kratom is highly addictive and quickly causes dependence and has been banned in Malaysia and Thailand since the midtwentieth century. In the United States, kratom use has been rapidly rising without any restrictions or FDA regulation. The DEA lists it as a "Drug of Concern," though only a handful of states have independently banned or restricted sales of kratom. Although there are urine and blood tests that can detect kratom, it is not included on a standard 5 to 10-panel drug screen. There have been multiple published case reports showing severe adverse effects, including seizures, liver failure, cardiopulmonary arrest, and even death.³ In 2018, the FDA reported 44 cases of kratom-associated deaths, nevertheless they were unable to determine to what degree kratom contributed to the mortality, as most cases also involved ingestion of other potentially lethal substances.²

Despite some of the negative press kratom has received in response to the reports detailed above, there is significant

interest in the potential therapeutic uses of kratom. In the setting of an opioid epidemic, kratom has been touted as a theoretically safer alternative to opiates. Animal studies showed that kratom significantly attenuates symptoms of opioid withdrawal.² Most human studies are currently observational but show that kratom users feel that regular use enhances physical performance, improves mood, and alleviates pain.² In a US-based survey study, nearly half of 8049 respondents indicated that kratom enabled them to reduce or discontinue use of opioids.⁴

The only certain conclusion that can be drawn from the information currently available is that more data are needed to make clear recommendations for patients. Until this happens, we suggest Family Physicians research the availability of kratom in their area, consider screening for kratom use when applicable, and stay updated on studies demonstrating safety and/or efficacy of kratom in humans.

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