Has kratom come to BC?

Calls to the BC Drug and Poison Information Centre, 2013–2017

Kratom (*Mitragyna speciosa*) is a plant indigenous to Southeast Asia known for dual therapeutic and toxic properties: at low doses it acts as a stimulant while at higher doses it activates opioid receptors.[1] The use of kratom in North America has been documented only in recent decades.[2,3] In Canada, kratom is a relatively new psychoactive substance, which has not been licensed for human consumption and has been seized from outlets that were selling it as such.[4]

We performed a descriptive analysis of kratom exposure calls received from 2013–2017 at the BC Drug and Poison Information Centre (DPIC), extracting data from mandatory coded fields and case histories in DPIC's call database.

We identified 15 calls involving exposure to kratom. Six were received from the Interior Health Authority, none from Northern Health, and three each from Vancouver Coastal, Fraser, and Island Health. Kratom-related calls increased in number from 2014–2017 (**Figure 1**). Physicians made up 80% of callers, unusual as the proportion of calls to DPIC from physicians about exposure to other psychoactive substances is much lower. All call subjects were adults, with a median age of 25 years; 60% were men.

The Internet, friends, and local distributors were mentioned as procurement sources. Kratom was used for various reasons, including recreational (for its psychoactive effects), pain relief, and opioid withdrawal. Kratom was ingested as powder, root, leaf, tea, capsule, supplement, and liquid extract. One-third of calls reported coexposures including supplements such as phenibut, 5-HTP, L-tyrosine, all used for anxiety and insomnia, other natural products (Maca root), opium poppy tea, alcohol, marijuana, amphetamines, and anxiolytics.

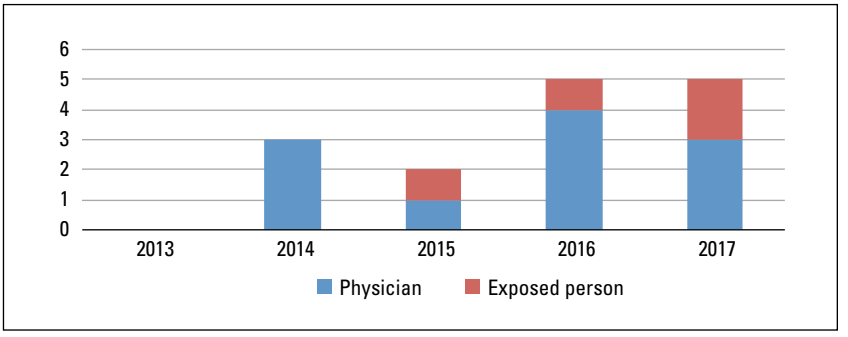

Figure 1. Kratom exposure calls 2013–2017 by caller type (n = 15).

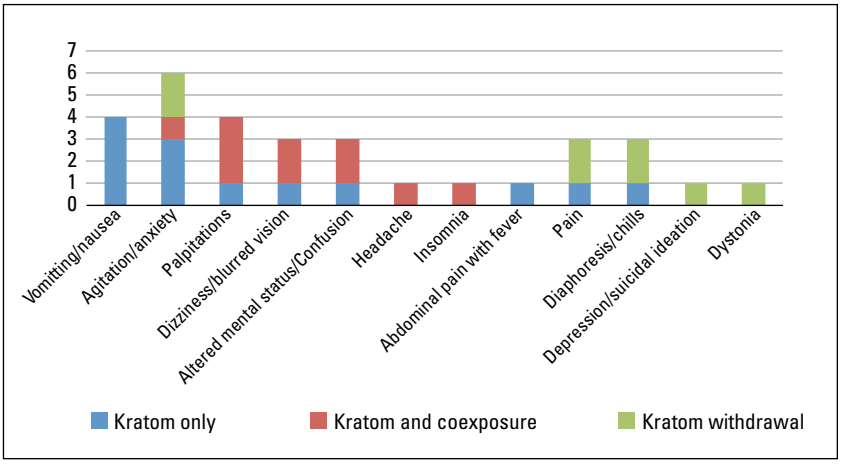

Figure 2. Symptoms documented in kratom-only exposures, kratom with coexposures, and kratom withdrawal (n = 14).

Call subjects were considered to have had minor or moderate clinical outcomes. Supportive treatments following kratom exposure included adenosine for tachycardia, benzodiazepines for anxiety/agitation, and antipsychotics for psychosis. Benzodiazepines were used in the treatment of kratom withdrawal, and one patient was sedated and intubated due to extreme agitation.

Of eight calls describing long-term exposure, three relayed withdrawal symptoms. Eleven cases had symptoms associated with recent kratom exposure (**Figure 2**). Clinical findings included tachycardia (n = 2), hypertension (n = 1), and elevated liver function tests (n = 1).

The increase in kratom-related exposure calls to DPIC, as with rising numbers of US calls,[2] likely reflects an increase in kratom availability. Currently, kratom products are sold

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as "not for human consumption" and, therefore, do not have any dosing recommendations, making individuals vulnerable to overdose/misuse. This is concerning given that members of the public consume kratom believing it to be efficacious for analgesia, mood elevation, anxiety reduction, and opioid withdrawal.[5] In the context of the current North American opioid crisis, kratom exposures are likely to increase.[3] While there is not sufficient evidence of its effectiveness in facilitating opioid withdrawal, there is growing research demonstrating the potential harms of kratom withdrawal.[1,6]

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References

1. Cinosi E, Martinotti G, Simonato P, et al. Following "the Roots" of Kratom (Mitragyna speciosa): The evolution of an enhancer from a traditional use to increase work and productivity in Southeast Asia to a recreational psychoactive drug in western countries. BioMed research int 2015; Article ID 968786.
2. Anwar M, Law R, Schier J. Notes from the Field: Kratom (Mitragyna speciosa) exposures reported to poison centers—United States, 2010–2015. Morb Mortal Wkly Rep 2016;65;748-749.
3. Cumpston KL, Carter M, Wills BK. Clinical outcomes after Kratom exposures: A poison center case series. Am J Emerg Med 2018;36:166-168.
4. Government of Canada. Unauthorized kratom and sexual enhancement products seized from multiple George's Convenience stores in the Greater Toronto Area may pose serious health risks. Accessed 4 June 2018. http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2018/65822a-eng.php.
5. Ulbricht C, Costa D, Dao J, et al. An evidence-based systematic review of kratom (Mitragyna speciosa) by the Natural Standard Research Collaboration. J Diet Suppl 2013;10:152-170.
6. Swogger MT, Hart E, Erowid F, et al. Experiences of kratom users: A qualitative analysis. J Psychoactive Drugs 2015; 47:360-367.

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