

Caveat Emptor: Opioid-like Withdrawal Syndrome After Discontinuation of Kratom

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Introduction

This patient is a previously healthy 46-year-old man who presented with profuse diaphoresis, lacrimation, insomnia, and symptom of restless legs. One day prior to presentation, he abruptly discontinued the use of kratom tea. He had been drinking kratom tea for approximately three years to self-medicate depressive symptoms, and noticed increased tolerance to the tea. One year before his current presentation, he attempted to discontinue kratom, but developed restless legs, anxiety, diaphoresis, low mood, and insomnia. He continued using kratom tea until one day prior to presentation. On exam, blood pressure was 143/94 mmHg with a heart rate of 78 beats per minute. The patient was anxious and profusely diaphoretic; exam was otherwise unremarkable.

The patient's symptoms were felt to be due to acute withdrawal from the kratom tea. He was started on clonidine 0.1 mg TID, and gabapentin 100 mg, up to 200 mg TID PRN to treat the symptoms. Forty-eight hours after presentation he reported medications useful for symptom control and gradual reduction in symptoms.



Kratom plant (below) and forms of ingestion (right)



Reza MM, McCarty CT, Spear DL. Opioid receptors and high Kratom. *Semin Immunopathol Immunol*. 2016;2016:1-12. doi:10.1007/978-94-007-6221-2_12

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Methods

Literature review was performed using PubMed using keywords of "kratom," "kratom withdrawal," "kratom toxicity," and "kratom adverse effects."

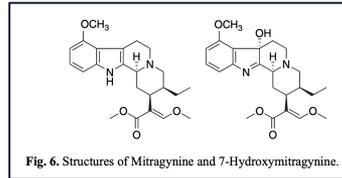


Fig. 6. Structures of Mitragynine and 7-Hydroxymitragynine.

https://www.researchgate.net/publication/304161646/Mitragynine_and_7-Hydroxymitragynine

Kratom

SIDE EFFECTS

- GASTROINTESTINAL**
 - Nausea
 - Continuous vomiting
 - Hepatotoxicity
- BEHAVIORAL**
 - Malnutrition
 - Psychosis
 - Addiction and withdrawal causing aggression and insomnia
- NERVOUS**
 - Excessive sweating
 - Lack of appetite, anorexia, weight loss
 - Dizziness
 - Tremors
 - Seizures
- URINARY**
 - Increased urination
 - Constipation
- SKIN**
 - Diaphoresis
 - Pruritus
 - Hypersensitization
- WITH ACUTE TOXICITY**
 - Possibility of death

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Results

Kratom products are derived from the dried leaves and stem of the kratom tree, a plant indigenous to Southeast Asia. 1 The alkaloids most prevalent in kratom are mitragynine and its metabolite 7-hydroxymitragynine, which show in vitro activity at mu and delta opioid receptors. At low doses, kratom has greater stimulant effects, with increasing doses resulting in opiate agonist effects including analgesia and sedation. 1 While kratom is a controlled substance in many countries, it is not controlled in the United States, and kratom products can be easily purchased.

Research is beginning to elucidate the acute and long-term side effects of kratom ingestion. Acute overdose can result in liver toxicity, and has been implicated in the deaths of over one hundred people, although not as the sole cause of death. 2 Chronic kratom users can develop nausea, vomiting, diarrhea, and tremors. 3 Additionally, evidence is beginning to demonstrate the development of tolerance and addiction in kratom users. 2,4

Our patient experienced well-described withdrawal symptoms from long-term ingestion of kratom, which are similar to the symptoms of opioid withdrawal. Extensive research on withdrawal symptoms after abrupt cessation of kratom-containing products is lacking. However, case reports and surveys have begun to delineate these effects. Psychological symptoms include aggression and emotional lability, and physical symptoms include myalgias, limb jerking, hypertension, excessive lacrimation, rhinorrhea and diarrhea. 2,5



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Conclusion

Kratom is a naturally occurring opioid agonist with unrestricted use and wide availability in the United States. Clinicians should be aware of syndromes of toxicity and withdraw associated with chronic kratom use and discontinuation.

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