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Kratom-induced common bile duct dilation

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Abstract

Kratom is an herb with opioid-like properties that has become readily available in the United States and is being used for self-management of pain and opioid withdrawal. We present a case of common bile duct dilation secondary to use of kratom. Our suspicion is that the mu-opioid agonism associated with kratom use resulted in effects similar to what might be seen in opiate-induced biliary ductal dilation.

KEYWORDS: Bile duct dilation, kratom, opioid

Kratom *(Mitragyna speciosa)* is an herb with opioid and stimulant-like properties that contains

indole alkaloids, principally mitragynine and 7-hydroxymitragynine, with mu-opioid receptor agonism.[1] Kratom leaves produce complex stimulant and opioid-like analgesic effects. Kratom has been used in Asia for the management of pain, fatigue, diarrhea, and opioid withdrawal. It has recently become widely available in the United States at smoke/vape shops. Review of the medical literature indicates that individuals in the United States are increasingly using kratom for the self-management of pain and opioid withdrawal.

CASE DESCRIPTION

A 57-year-old woman with a history of spinal stenosis presented to the hospital with acute on chronic back pain and vague symptoms of abdominal discomfort, decreased appetite, nausea, and constipation. She had no fevers or chills. She used as-needed ibuprofen for back pain but denied any opiate use. She reported using kratom, 10 g daily, over the last year. Her workup in the hospital revealed normal liver and renal chemistries. Computed tomography of the abdomen and pelvis revealed moderate extrahepatic biliary ductal dilation to 9 mm extending to the ampulla. An abdominal ultrasound showed common bile duct dilation to 13 mm. Intrahepatic biliary dilation was present as well. Magnetic resonance cholangiopancreatography (MRCP) revealed mild central intrahepatic and more pronounced extrahepatic bile duct dilatation, with the common bile duct measuring up to approximately 12 mm *(Figure 1)*. No definite filling defects or evidence of stricture or choledocholithiasis was appreciated.

Figure 1.

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MRCP showing mild central intrahepatic and more pronounced extrahepatic bile duct dilatation, with the common bile duct measuring up to approximately 12 mm.

DISCUSSION

Extensive review of previous publications revealed only a few case reports that highlighted the hepatotoxic effects of kratom.[1] These case reports highlighted the resulting cholestatic liver injury pattern that can be associated with kratom, but no cross-sectional imaging was described. Our suspicion is that the mu-opioid agonism associated with kratom resulted in effects similar to what one might see in opiate-induced biliary ductal dilatation, a mechanism that is not fully understood but considered to be related to sphincter of Oddi pressure ultimately altering bile flow into the duodenum. The patient described here did not have any alternative etiologies for common bile duct dilation. She was advised against further use of kratom.

References

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