

# An Unusual Presentation of DILI: Ketamine-Induced Liver Injury

Authors: Chhoun, Christopher K. <sup>1</sup>; Dasu, Neethi R. <sup>1</sup>; Dasu Kirti ; Khalid Yaser <sup>2</sup> ; Chiesa, Drew <sup>1</sup>

1. Gastroenterology, Jefferson Health - New Jersey, Voorhees, NJ, United States.

2. Wright Center for Graduate Medical Education, Scranton, PA, United States.

## INTRODUCTION

Drug induced liver injury (DILI) is common and it can be secondary to various classes of medication, such as over the counter drugs, antibiotics and herbal and dietary supplements. Antibiotics are the class of drugs that are most frequently associated with DILI.

## AIM

We present a unique cause of DILI caused by long-standing intranasal ketamine abuse in a 36-year-old patient. Ketamine usage appears to becoming more prevalent, and it is imperative that physicians to recognize and be cognizant of its potential to cause DILI.

## DISCLOSURES

None

## CASE DESCRIPTION

- A 36-year-old female with a past medical history of migraines presented for evaluation of elevated liver enzymes.
- On hospital admission, she was found to have a significantly elevated serum alkaline phosphatase (AP) level of 1506 U/L and GgT of 1015 IU/L. Furthermore, the patient's AP had shown persistent elevations for approximately two years. Her daily AP ranged from 957-1506 U/L.
- Further workup was negative for viral hepatitis, autoimmune disease, hemochromatosis or other toxins (tylenol/alcohol). Abdominal ultrasound was unremarkable except for a common bile duct diameter of 3 mm.
- After further investigation, the patient admitted to ketamine abuse which had been ongoing for 5 years prior to admission. She admitted to using intranasal ketamine over 100 times daily, which she has since discontinued.
- However, the patient's AP remained elevated and a liver biopsy revealed prominent lymphocytic cholangitis with acute and chronic pericholangitis, bile ductular proliferation, and bridging fibrosis stage 3/4 consistent with DILI.
- Despite abstinence from ketamine for several months, her AP remains elevated.

## DISCUSSION

- The majority of DILI is benign and resolves after withdrawal of the offending agent. However, it is also the number one cause of acute liver failure in the United States.
- The clinical presentation of cholestatic DILI can be variable with an asymptomatic elevation in AP, ranging from a hepatocellular pattern to rarely having a cholestatic pattern, which depends on the offending drug. Intravenous ketamine-induced DILI is more widely reported in the literature unlike our case of intranasal ketamine-induced DILI.
- As Ketamine becomes more frequently used in the treatment of chronic pain, our case highlights the need for physicians to remain vigilant in recognizing the potentially adverse effects of powerful anesthetics.
- We present an extremely rare case of intranasal ketamine abuse leading to DILI.

## ACKNOWLEDGEMENTS

None

## CONTACT INFORMATION

**Chris Chhoun**

Email: Chhoun@rowan.edu

Twitter: @Chris\_Chhoun