

Cry me a Liver - Ashwagandha induced Liver toxicity

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INTRODUCTION

- Ashwagandha is a derivative of the medicinal plant *Withania somnifera*.
- It has been used for centuries as a tonic to increase energy, reduce fatigue and as anti-aging in Ayurvedic medicine.
- Herbal medicines and dietary supplements (HDS) are categorized as food by the FDA and, unlike prescription medicines, are presumed to be safe unless otherwise reported.
- However, a recent case series has implicated this herb to cause clinically apparent liver injury. This case illustrates the hepatotoxic potential of ashwagandha.

CASE DISCUSSION

- A 20-year-old relatively healthy college student presented to our ER with complaints of yellowish discoloration of skin and worsening abdominal pain for 3 days.
- The discoloration was initially noted in his eyes, associated with excessive itching of skin but no stool changes.
- He also had right upper quadrant abdominal pain, 6/10 in intensity, without any associated aggravating or relieving factors.

CASE

- He denied recent travel, alcohol or drug consumption and his last sexual encounter was 4 months ago.
- His physical examination was significant for a normal BMI, icteric sclera, soft and non-tender abdomen.
- Initial labs showed AST of 659 and ALT of 415 and direct bilirubinemia of 8.6.
- A thorough autoimmune, infective hepatitis panel and hemolytic anemia work up was negative.
- USG and CT abdomen/pelvis showed no abnormalities.
- On further questioning he endorsed consuming over the counter (OTC) Ashwagandha 450mg every day for the past 30 days to “calm his nerves”.
- Over the course of his hospitalization, he symptomatically improved with down trending liver enzymes and bilirubin.
- He was advised to avoid ashwagandha containing supplements in the future.
- Post-discharge 3 week follow up showed a normal hepatic function test.

DISCUSSION

- Withanolides are the active components of Ashwagandha.
- The liver injury presents 2 to 12 weeks after ingestion with a cholestatic or mixed pattern of injury, jaundice and pruritus.
- Jaundice tends to be a dominant feature but ultimately resolves after discontinuation of the offending drug without fatalities or chronic injury.
- Biopsy can be considered if no clinical improvement to evaluate for uncommon etiologies.
- Benefit of ursodeoxycholic acid use in drug induced liver injury remains controversial.
- OTC medication and herbal supplements have been associated with liver injury and it is important to obtain a thorough history in a patient with elevated transaminases.