



Drug-Induced Autoimmune-like Hepatitis Secondary to *Gymnema Sylvestre*



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Introduction

- The use of complementary and alternative medicine remains attractive despite not undergoing the same rigorous evaluations as the Federal Drug Administration-Approved medications.
- *Gymnema sylvestre* (GS) is a herbal supplement used for its hypoglycemic effects in patients with diabetes mellitus (DM), despite little evidence supporting its benefits.
- We present a patient who developed acute liver injury, via an autoimmune modality, after initiating therapy with GS.

Clinical Presentation

- A 67-year-old male with a history of hypertension and type II DM, arrived at the Emergency Department with jaundice and acute elevation of liver enzymes, without prior history of liver disease.
- Laboratory workup was remarkable for the marked elevation of liver function tests (LFTs), with AST 2247 U/L and ALT 2100 U/L, elevated total bilirubin levels at 19.8 mg/dL with direct bilirubin predominance.
- R-factor at that time was 16, suggestive of hepatocellular injury.
- Further workup including urine toxicology, anti-mitochondrial antibody, HIV, CMV, EBV, HSV, and ceruloplasmin levels, were unremarkable.

Clinical Presentation

- Anti-smooth muscle antibody (1:80) and HAV antibody were positive.
- Abdominopelvic MRI demonstrated absence of hepatic pathology.
- Drug-induced liver injury (DILI) was suspected from GS, which the patient began taking approximately 2 weeks prior for glucose control.
- IgG and IgA levels were found to be elevated, at 2952 and 663, respectively, resulting in an autoimmune hepatitis score of 4.

Clinical Course

- LFTs started to improve after the discontinuation of GS
- Liver synthetic function continued to deteriorate, as determined by decreasing albumin levels, prolonged coagulation parameters, developing encephalopathy, and worsening thrombocytopenia.
- Interventional Radiology was consulted for liver biopsy (image 1), which yielded findings of necrosis and a marked inflammatory infiltrate pattern of injury, as is seen in autoimmune hepatitis or DILI.
- Upon case discussion with liver transplant center, high-dose steroid therapy was started.
- Patient did not clinically improve with steroid therapy, and workup for liver transplant was sought.

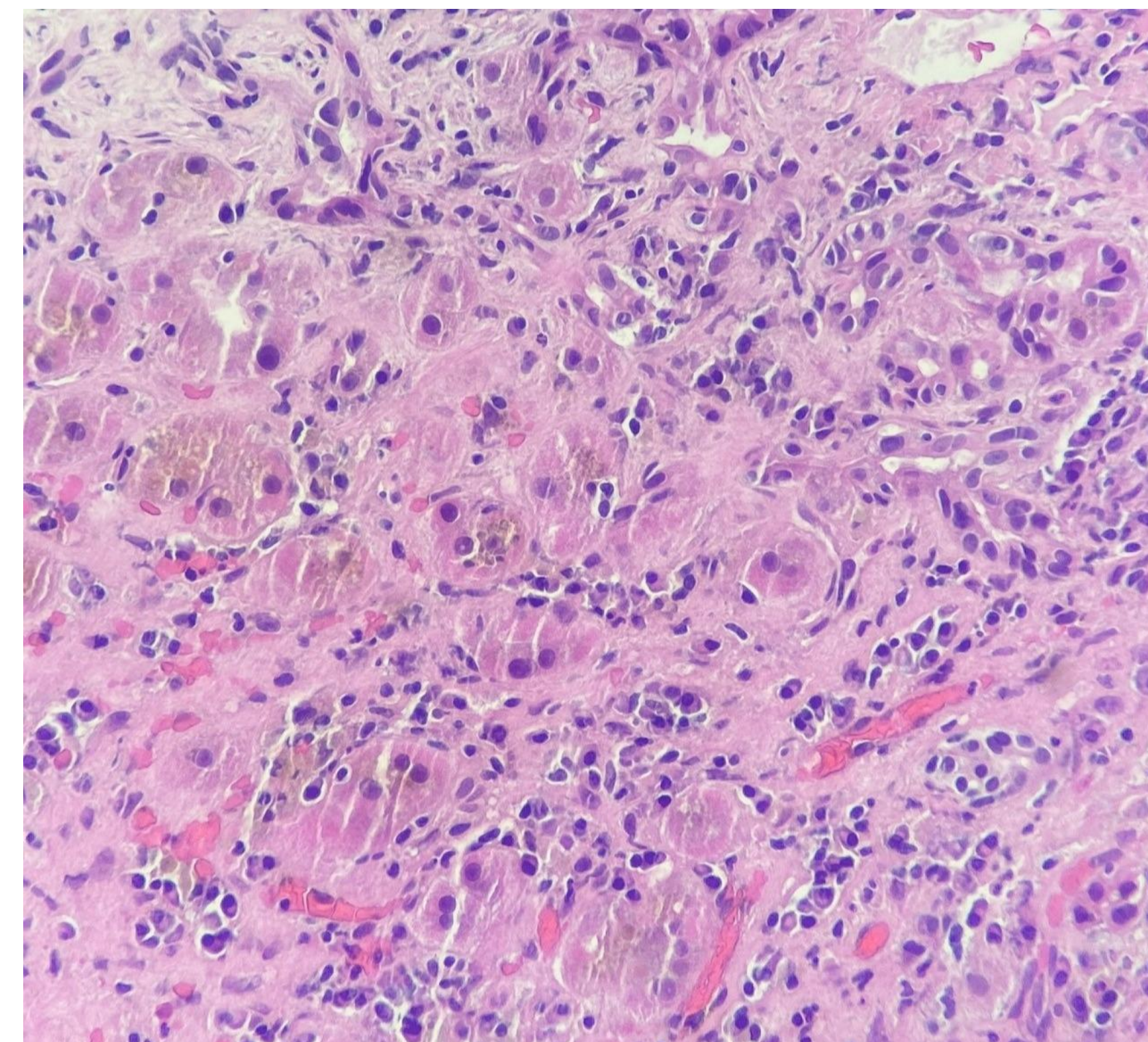


Image 1: Liver biopsy shows portal inflammation with marked increase in plasma cells. Marked interface activity is seen with areas of necrosis

Discussion

- *Gymnema sylvestre*, is commonly used for glucose control in patients with DM, but its reportedly beneficial effects have only been supported in a small amount of non-randomized open-label trials.
- Although LFTs were on a downward trend after discontinuation of the offending agent, the patient's synthetic liver function continued to deteriorate.

Discussion

- Biopsy and lab work were suggestive of classic autoimmune hepatitis (AIH) vs drug-induced autoimmune-like hepatitis (DI-AIH).
- Prednisone was started and, considering poor prognostic factors on histology (necrosis), pre-transplantation workup was initiated.
- Steroid therapy response may determine if the patient's acute liver injury is due to AIH or DI-AIH.
- Patients with acute liver failure secondary to AIH or DILI have shown to benefit less from steroid therapy.
- Nevertheless, *Gymnema sylvestre* played a leading role in this patient's disease process.

Bibliography

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