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INTRODUCTION

- Herbal supplements (HS) are being widely utilized for the self-treatment of various medical conditions.
- HS utilization has resulted in drug induced liver injury (DILI) as well as acute liver failure (ALF).
- Lesser Celandine, also known as pilewort, is a topical and ingestible HS native to Northern Africa, used for the treatment of hemorrhoids.
- Here, we present a case of severe DILI secondary to this rarely reported agent.

CASE PRESENTATION

- A 35F with hemorrhoids and fibroids presented after noticing yellowing of her eyes for one week.
- She traveled to Ghana 10 months prior, at which time she self-initiated hemorrhoid treatment with a HS known as pilewort.
- Physical exam demonstrated enlarged abdominal girth, scleral icterus, and was negative for asterixis.
- Laboratory studies revealed severe hepatocellular injury and hyperbilirubinemia (Table 1).
- Autoimmune and viral hepatitis serologies were negative.
- A CT abdomen and pelvis revealed no hepatosplenomegaly, no biliary ductal dilation, and an enlarged leiomyomatous uterus.
- Non-acetaminophen NAC protocol was initiated with observed improvement in her liver enzymes.
- She subsequently underwent a liver biopsy, which exhibited confluent pericentral necroinflammation, apoptotic hepatocytes, and no evidence of steatosis or fibrosis, consistent with DILI (Figures 1 & 2).
- The patient ultimately left against medical advice and was lost to follow up.

IMAGES

	On Admission	Reference Range
Hemoglobin g/dL	10.6 g/dL	11.5-15.5 g/dL
Alkaline Phosphatase units/L	92 U/L	40-120 U/L
AST units/L	1096 U/L	10-40 U/L
ALT units/L	807 U/L	10-45 U/L
Total Bilirubin mg/dL	4.9 mg/dL	0.2-1.2 mg/dL
Direct Bilirubin mg/dL	3.0 mg/dL	0-0.3 mg/dL
MELD-Na	18	
R Factor	26.3	
Hepatitis A IgM	Negative	
Hepatitis B Surface Ab	Positive	
Hepatitis B Surface Antigen	Negative	
Hepatitis C Ab	Negative	
CMV IgM	Negative	
Alpha-1 Antitrypsin mg/dL	164 mg/dL	90-200 mg/dL
Ceruplasmin mg/dL	25 mg/dL	16-45 mg/dL
Alcohol, blood	Not Detectable	
Acetaminophen	Not Detectable	
Ethyl Glucuronide	Not Detectable	
Urine Toxicology	Negative	
Antinuclear Antibody	Negative	
Antimitochondrial Antibody	Negative	
Smooth Muscle Antibody	1:20	
Liver Kidney Microsomal Antibody	Negative	
HSV-1 IgG Ab	Positive	
HIV-1/2 Ag/Ab Combo	Negative	
Quantitative IgA	165 mg/dL	84-499 mg/dL
Quantitative IgM	220 mg/dL	35-242 mg/dL
Quantitative IgG	2252 mg/dL	610-1660 mg/dL

Table 1: Laboratory studies

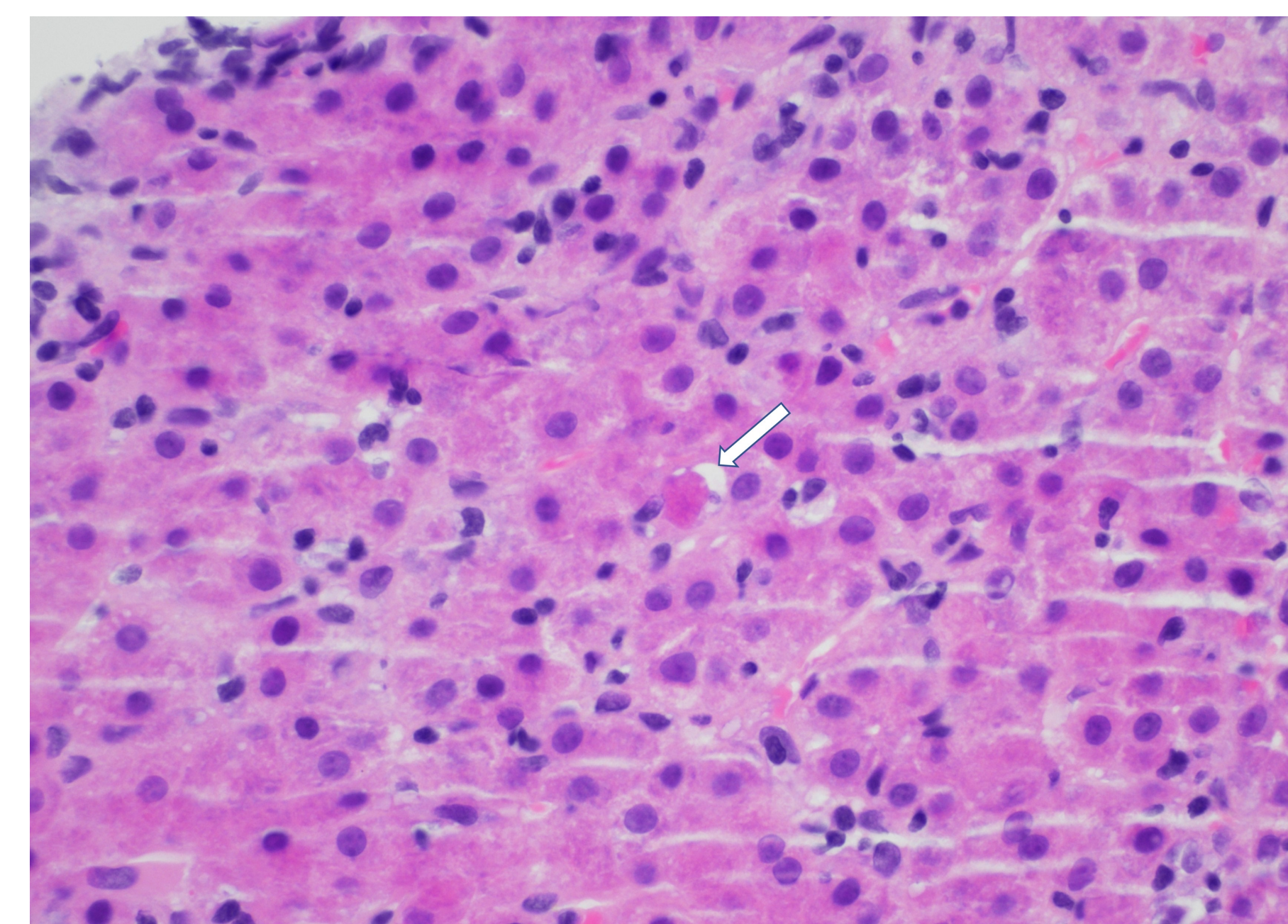


Figure 1: H&E stain revealing apoptotic hepatocyte with dense eosinophilic cytoplasm and loss of hepatocyte nucleus (Arrow).

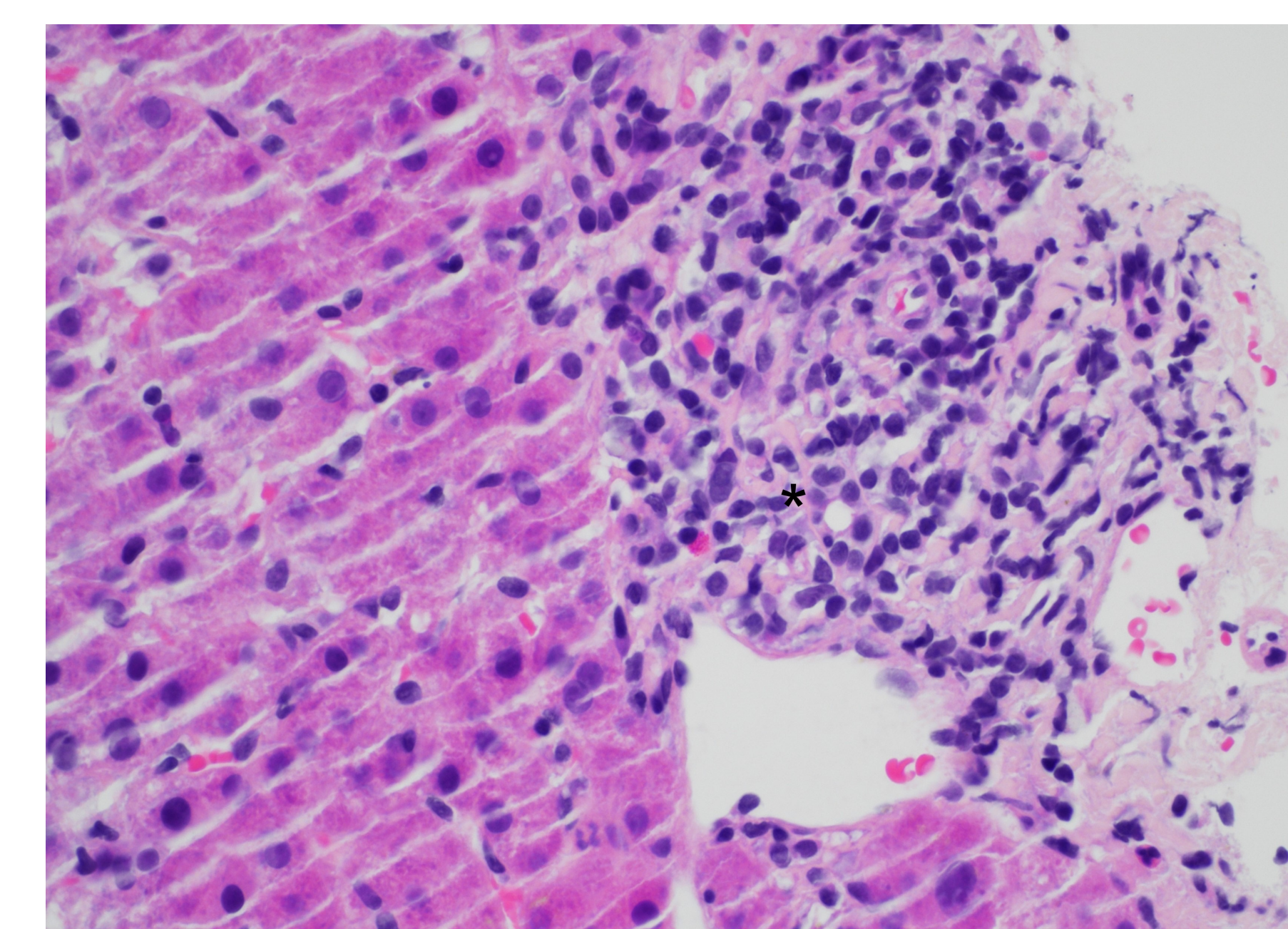


Figure 2: H&E stain of a portal tract with chronic mononuclear pericentral inflammation, rare plasma cells and preserved interlobular bile duct (Asterix).

DISCUSSION

- DILI comprises up to 50% of ALF cases in the United States.
- Reported higher incidence in the Eastern world secondary to increased use of HS.
- Identification remains a challenge, as presentation is highly variable.
- Diagnosis is based on exclusion with the workup largely dependent on pattern of liver injury.
- In patients with hepatocellular injury, ischemia, viral, autoimmune and toxic etiologies must be ruled out.
- A comprehensive medication reconciliation is essential, including a detailed inquiry on the use of herbal medicines, especially in cases of unexplained liver injury.
- Histologic pattern of injury on a diagnostic liver biopsy can also aid in confirming or excluding the diagnosis of DILI.
- Pilewort DILI has been reported once in literature since first described in 1904.

CONCLUSION

- We present this case to raise awareness of the hepatotoxic properties of pilewort.

REFERENCES

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