



Introduction

- Herpes simplex virus (HSV) is a rare cause of hepatitis
- Can result in acute liver failure (ALF) in 75% of affected patients and is associated with a high mortality rate (90%)

Purpose

- We present a case of a 38-year-old female with ALF from HSV hepatitis resulting in orthotopic liver transplant (OLT)

Case Description

- Patient presents with abdominal pain, persistent fever, headache, and generalized malaise
- Mental status acutely decompensates and is intubated
- Head CT reveals no acute process for cerebral edema
- Diagnosed with ALF based on liver function tests (Table 1) and complete blood count (Table 2)
- HSV-2 is detected in the blood via polymerase chain reaction
- Given clinical presentation and rapid deterioration, she is urgently evaluated for liver transplantation and undergoes OLT shortly after being listed
- Biopsy of explant revealed underlying HSV viremia (Figure 1)

Post-Transplant Course

- Complicated by acute kidney injury requiring renal replacement therapy with improvement, bile leakage requiring Roux-en-Y hepaticojejunostomy, and neutropenia

- Treated with intravenous acyclovir and then transitioned to oral valacyclovir
- Develops cytomegalovirus viremia and is started on valganciclovir treatment
- Clinically improves but did have recurrent labial lesions with HSV, similarly treated with valacyclovir

Labs and Test Results

Table 1: Liver Function Tests

| Tests | Results |
|-------|------------|
| AST | 5,070 IU/L |
| ALT | 3,000 IU/L |
| TBIL | 3.0 mg/dL |
| INR | 1.38 |

Table 2: Complete Blood Count

| Tests | Results |
|------------------|----------|
| White blood cell | 1.7 K/uL |
| Platelet | 25 K/uL |

Biopsy of Explant

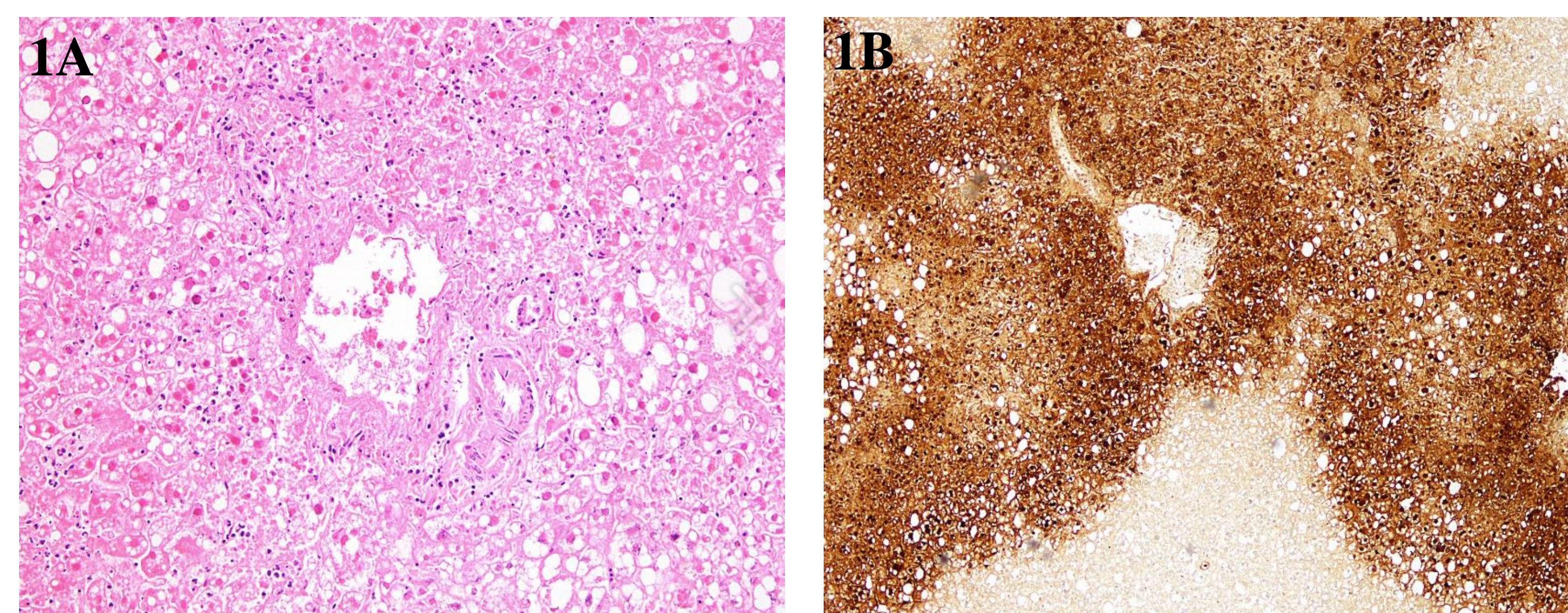


Figure 1: (A) Biopsy of explant revealing submassive hepatic necrosis with mild mixed portal inflammation and diffuse microvesicular steatosis admixed with medium size fat droplets. (B) Positive immunostaining for HSV, predominantly in areas of necrosis. (Representative images from Yubo Wu, D.O.)

Discussion

- HSV hepatitis is a rare cause of ALF
- Clinical presentation often includes fever, encephalopathy, coagulopathy, acute renal failure, leukopenia, and thrombocytopenia
- Mucocutaneous lesions are not present in more than half the patients
- Liver biopsy is the gold standard for diagnosis of HSV hepatitis with histology revealing focal or confluent areas of acidophilic-type necrosis with little inflammation
- Treatment with acyclovir early in the course may result in a better prognosis and reduce the need for OLT
- Once ALF is diagnosed, OLT is the definitive treatment

Conclusion

- Because of its rapid and aggressive progression, consideration of HSV hepatitis in the differential diagnosis and timely treatment is critical

References

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