

Acute Hepatitis in Pregnancy

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Question: A 19-year-old G1 P0 at 36 weeks gestation presented to our hospital with a 4-day history of fevers/chills, right upper quadrant abdominal pain, and anorexia. On initial examination, she was febrile (39.1°C) and seemed in moderate distress, but was alert and oriented. There was no jaundice, skin lesions, or oral/genital ulcerations. Abdomen was gravid with moderate tenderness to palpation in the right upper quadrant. Laboratory examinations on admission were as follows: white cell count, 7.4 K/ μ L (normal, 4.5–11.5; segmented neutrophils, 79% [9% bands]); hemoglobin, 11.0 g/dL (normal, 12–15); platelet count 162 K/ μ L (normal, 150–400); prothrombin time, 10.4 seconds; albumin, 2.6 g/dL; total bilirubin, 0.5 mg/dL (normal, 0.1–1.5); direct bilirubin, 0.2 mg/dL (normal, 0.1–0.3); alkaline phosphatase, 147 IU/L normal, (40–200), aspartate aminotransferase (AST), 211

IU/L (normal, 7–40); and alanine aminotransferase (ALT), 99 IU/L (normal, 7–40). Serology was negative for hepatitis A, B, and C viruses. Blood, urine, and vaginal cultures were negative. Urine toxicology was negative. Zosyn was initiated because of her fevers and bandemia. A right upper quadrant ultrasound revealed hepatomegaly and increased echogenicity of the portal triads consistent with a starry sky appearance, but no intrahepatic/extrahepatic biliary dilatation (Figure A).

On day 3, she remained anicteric with no evidence of encephalopathy. Laboratory data revealed a white cell count of 6.5 K/ μ L (segmented neutrophils, 26% [39% bands]), total bilirubin of 1.1 mg/dL, direct bilirubin of 0.6 mg/dL, alkaline phosphatase of 232 IU/L, AST of 4482 IU/L, ALT of 1010 IU/L, and prothrombin time of 14.6. Viral serologies for HIV, Epstein-Barr virus, Cytomegalovirus, and Human papillomavirus were all negative. Given the persistent fevers and transaminase elevation, the patient underwent a C-section with a liver biopsy performed without any complications.

What is the diagnosis?

See the *Gastroenterology* web site (www.gastrojournal.org) for more information on submitting your favorite image to Clinical Challenges and Images in GI.

Acknowledgments

The authors give special acknowledgement to Dr Rania Rayes-Danan, Department of Pathology, MetroHealth Medical Center.

Conflicts of interest

The authors disclose no conflicts.

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0016-5085/\$36.00

<http://dx.doi.org/10.1053/j.gastro.2014.02.042>

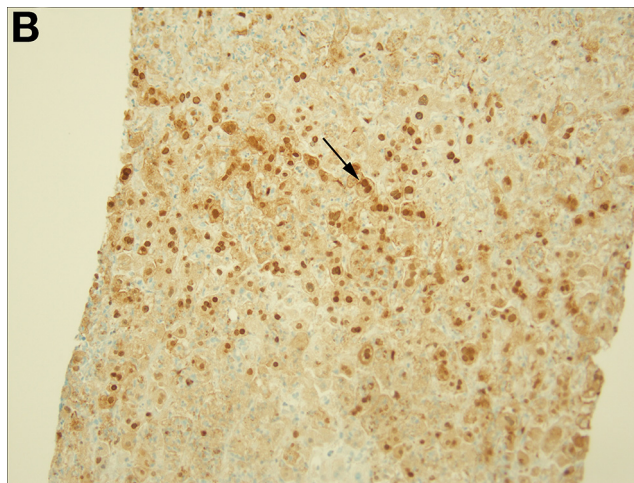
Answer to the Clinical Challenges and Images in GI Question: Image 4: Herpes Simplex Virus Hepatitis

The polymerase chain reaction (PCR) for both herpes simplex virus (HSV)-1 and -2 came back positive and the liver biopsy confirmed the diagnosis of HSV hepatitis demonstrating viral inclusion bodies and immunostaining consistent with HSV (Figure B). Although a positive PCR analyses for both HSV-1 and -2 is rare, the ultrasound findings were related to acute hepatitis and likely nonspecific in nature. After initiating Acyclovir, the patient clinically improved with normalization of liver function tests and was discharged on 14 days of antiviral therapy.

The clinical suspicion of HSV hepatitis on initial presentation was tempered by the moderate elevation in transaminases. Although liver disease in pregnancy may be related to etiologies specific to pregnancy, far more common, are diseases coincident with pregnancy, such as viral hepatitis. HSV remains an uncommon cause of viral hepatitis in pregnancy. Women are particularly at risk in the third trimester of pregnancy because immunologic changes result in suppression of T-cell-mediated immunity.¹

Early diagnosis and initiation of antiviral therapy is critical. In a review of reported cases, a significant delay in treatment initiation was reported in patients who died or required liver transplantation compared to those who survived (4.7 vs 3.5 days; $P = .03$).² Characteristic mucocutaneous lesions are present in less than half of patients; therefore, clinical suspicion and early initiation of antiviral therapy is important.² Acyclovir is inexpensive and evidence demonstrates the risk of birth defects is no different than in the general population.³

HSV should be considered in the differential diagnosis of patients presenting with febrile hepatic dysfunction, particularly pregnant women and immunocompromised individuals. The absence of mucocutaneous lesions should not lower the index of suspicion and delay empiric Acyclovir treatment.



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