HBV ECHO Case Recommendations

Session 11: November 7, 2022

Case Recommendations and Considerations: Filipino male ICU nurse with history of HBV vaccination; started treatment for multiple myeloma with worsening liver labs

CATEGORY	RECOMMENDATIONS	Relevant Presentation Question or Concern	REFERENCES/ RESOURCE LINKS
History	1. We recommend verifying hepatitis B vaccination and serologic status with laboratory data, regardless of the reported vaccination history. A reported history of vaccination should not be interpreted as a sign of immunity or a way to rule out hepatitis B. For example, this patient who was likely vertically infected with HBV now presents with reactivation HBV despite receiving immunization 2. The patient is monogamous without reported high risk behaviors for HBV infection. The recent history of starting immunosuppressive medication also leads us to suspect reactivation rather than acute HBV infection. In addition, the presence of Core Ab IgM indicates an acute response	1. Do not assume immunity based on vaccination status alone, whether from patient-reported history or documentation 2. How do we know this patient has reactivation HBV vs. an initial acute HBV infection?	
Physical Exam	1. No evidence of encephalopathy or coagulopathy on physical exam, which is reassuring in regards to urgency and need for hospitalization.		
Diagnostic evaluation	1. Ordering an acute hepatitis panel includes HBV core Ab IgM. Otherwise, ordering a HBV core Ab will result in a total core Ab, including both IgG and IgM. 2. Genotype and resistance are obtained on any patient with hepatitis B infection and an	1. What lab test (IgG vs IgM) is often performed when we order a HBV core Ab? 2. At one point would you assess genotyping and resistance	https://til.dlslab.com/physicians/test-directory-view-test/?test=18010

	active viral load. In this case, antiviral therapy was indicated to treat the reactivation, and genotype or resistance profiles would not change the management. The management would not change because there is virtually no resistance to tenofovir currently. 3. This is not routinely checked. This might be helpful to determine if there is a second etiology of liver injury in addition to reactivation hepatitis B	3. Can we check for ccc DNA activity or CR antigen?	
Medication Therapy & Adjustments	1. Chemotherapy was discontinued in this case due to the concerns of reactivation and hepatic failure. Cessation of chemotherapy, although desirable in the case of HBV reactivation, may not be the best course depending on the oncologic status. Partnering with the rest of the treatment team is the optimal approach. 2. Not directly addressed, but for guidance on duration of Hep B treatment in this patient population, refer to the corresponding lecture by Dr. Roytman 3. The risk for reactivation varies among different chemotherapeutic agents. At this point, patient requires antiviral therapy regardless of what chemotherapy he was on. 4. Vitamin K is beneficial in states of deficiency, such as in alcoholics with poor oral intake. In this patient the coagulopathy is a reflection of poor liver synthetic function and thus vitamin K is unlikely to be helpful 5. A second antiviral should not be started. Lab responsiveness can lag clinical improvement because we expect further	1. Immunosuppressive medications were discontinued in this patient while tenofovir was started. If discontinuation was not an option, how would the management change? 2. When is it safe to restart chemotherapy? 3. If he were on a different chemotherapy, would the approach to this problem be any different? 4. Should we give vitamin K for this patient's elevated INR? 5. At follow up, the AST and ALT are improved, but total bilirubin and INR are increasing. Should we start a second antiviral agent?	

HBV ECHO Case Recommendations

	liver injury to occur due to activation of our own immune response 6. Repeating HBV DNA levels during treatment is not typically necessary due to lack of antiviral resistance to tenofovir 7. NAC helps with mitochondrial recovery of hepatocytes. Only reliable data is in patients with acetaminophen overdose. Some data suggests benefit in patients with any type of liver injury, however, in viral hepatitis there is no significant role for NAC. 8. It will take months, typically greater than 6 months until DNA levels are undetectable	6. Should the HBV DNA be checked during treatment to ensure falling DNA levels? 7. N-Acetylcysteine? 8. How long will it take for DNA to become undetectable while on treatment?	
Vaccination	•		
Social Determinants of Health (SDOH)	•		
Behavioral Health	•		
Screening	•		
Risk Reduction	•		
Other	•		

PLEASE NOTE that case consultations and recommendations for the HBV ECHO do not create or otherwise establish a provider-patient relationship between any participant, Hawaii Learning Groups, and/or any other clinician on the HBV ECHO faculty.