HBV ECHO Case Recommendations

Session 2: August 29, 2022; 49 y/o Korean female with elevated LFTs after buprenorphine initiation and chronic HBV

Case Recommendations and Considerations:

CATEGORY	RECOMMENDATIONS	Relevant Presentation Question or Concern	REFERENCES/ RESOURCE LINKS
History	1. Several cases have been reported where hepatitis C flares occurred after initiating buprenorphine, although the outcome was such that HCV ultimately seemed to be cleared. There are no similar cases reported with involvement of HBV. 2. Acetaminophen use, even at relatively low doses, increases the risk of hepatotoxicity when used concurrently with alcohol. Malnutrition status also increases the likelihood of hepatotoxicity with acetaminophen ingestion. Many OTC cold or sleep aides contain acetaminophen. 3. It is important to ask about supplement use, immunosuppressive drugs, significant life stressors	1. Is there a connection between buprenorphine and an acute flare of hepatitis? 2. Ask about acetaminophen use	https://www.ncbi.nlm.nih.gov/books/NBK548871/ - Book on drug induced liver injury (DILI): Buprenorphine use, per se, not associated with liver enzyme flares. Consider that surreptitious use of buprenorphine or other drugs may cause elevated LFTs.
Physical Exam			
Diagnostic evaluation	1. Fibroscan and fibrosis scoring should not be obtained during acute elevations in LFTs, including during the acute phase of HBV. The definition of a flare, acute hepatitis, or acute on chronic hepatitis is an ALT rise 10x ULN (upper limits of normal) or an increase of 5x ULN from baseline. 2. The differential diagnosis of acute flare includes: a. Viral hepatitis A,B,C,D (if B patient) and E. Other viruses may also be	1. What is the best timing to check a Fibroscan? Are Score such as APRI and Fib-4 accurate during the acute phase? 2. A comment made on genotyping and mutation testing	https://web.brrh.com/msl/GrandRounds/2018/GrandRounds_102318_Abnormal-Liver-Enzymes/Elevated%20Liver%20Enzymes.pdf

	considered in appropriate circumstances. b. Drug induces liver injury (DILI) c. Ischemic hepatitis (shocked liver) d. Massive liver malignancy e. In young adult, consider acute Wilsons disease 3. In alcoholic hepatitis, ALT never rises over 120. Look for other causes if higher 4. Consider waiting 6 months after LFTs return to normal to get a baseline fibroscan. In patients with chronic liver disease who have normal-to-slightly-abnormal LFTs (i.e. not in a flare), a baseline fibroscan can be obtained. Fib-4 and APRI scores will not be accurate during a flare, and will be high since transaminases are elevated. The Fibroscan is helpful for long term, sequential fibrosis assessment, and doesn't affect the immediate clinical decision to initiate treatment. As a rule of thumb, consider deferring Fibroscan when ALT is >100 because the liver will be falsely stiff, and will appear falsely cirrhotic (even, for example, in patients with NAFLD). 5. Genotyping should be obtained prior to treatment. If treatment is successful, too low a viral load makes genotyping unavailable. There are lab orders for HBV viral load that reflex to genotype testing.		https://til.dlslab.com/physicians/test-directory-view-test/?test=55091
Medication Therapy & Adjustments	1. The patient should be referred to a transplant center if the total bilirubin rises to >3 mg/dL, transaminases are >1000 IU/L, or if coagulopathy develops (INR elevation). 2. Early initiation of antiviral treatment against HBV is more important than the choice of antiviral agent. Between TAF and TDF, TAF	1. When should patients be referred to hepatology 2. Comments made on the choice of	tenofovir disoproxil fumarate (TDF), tenofovir alafenamide (TAF)

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	is preferred by some due to higher bioavailability which allows lower dosing and less systemic side effects. Sometimes there will be limitations due to insurance coverage. When using TAF and TDF, be mindful of Fanconi syndrome (a renal tubule disorder). 3. Initiating buprenorphine for opioid use disorder is a positive step to address this condition and reduces the risk for percutaneous exposure to viral hepatitis.	treatment for this case: (TDF)	
Vaccination			
Social Determinants of Health (SDOH)	1. Be mindful of immigrant status. Practically speaking in Hawaii, all immigrants should be screened for HAV, HBV, and HCV		
Behavioral Health			
Screening	1. Everyone over age 18 or at risk should be screened as a baseline, especially in Hawaii. For patients being seen at an FQHC, opportunities exist to leverage the electronic medical record and to use Standing Orders to screen those not already screened, without the need for individual provider orders each time. A complete workup with a full hepatitis evaluation at baseline for hepatitis A (total Ig), B (sAg, sAb, cAb), and C, (HCV Ab with reflex quantitative RNA) makes future management easier should any issues arise. This is particularly important as it pertains to immigrants and children of immigrants. Family members of patients testing positive should also be tested and	1. What is a practical way to recommend HBV screening to providers?	https://www.cdc.gov/hepatitis/hbv/pdfs/HepB-API.pdf See Hawaii Learning Groups resource page https://www.hawaiilearning.org/hepatitis-b-series-resources/ (case 1 on august 22) for appropriate codes to use for screening reimbursement

	vaccinated as indicated (that is, vaccinated if not already immune).		
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.