

HBV ECHO Case Recommendations



Session 4: September 19, 2022

Case Recommendations and Considerations: 69 y/o Korean woman, s/p liver transplant complicated by duodenal perforation and subsequent gastrojejunostomy. Pt with pruritis and mental health changes.

CATEGORY	RECOMMENDATIONS	Relevant Presentation Question or Concern	REFERENCES/ RESOURCE LINKS
History	<ol style="list-style-type: none"> 1. Rule out alternative explanations of pruritis. Review history for the temporal relationship of the onset of pruritis to the transplant or to the introduction of allergens, detergents, medications, etc. Because of the frequency of pruritis s/p transplant, strong suspicion in this case is that it is secondary to a hepatobiliary cause, but important to avoid anchoring bias. 	<ol style="list-style-type: none"> 1. What is the temporal relationship of the pruritis to the transplant or introduction of other possible causes e.g. detergents etc.? 	
Physical Exam			
Diagnostic evaluation	<ol style="list-style-type: none"> 1. Consider serum bile acid measurement if not already done 2. Stepwise evaluation of differential diagnosis of pruritis. 3. Consider sequential “drug holiday(s)” of non-essential medications to evaluate if symptom is drug related (and if each medication is still indicated) 4. Cholestasis is not necessarily equivalent to elevated bilirubin, although most do have an elevation in direct fraction. There are a multitude of other substances whose excretion is altered with cholestasis. Most are related to opioid and dopamine pathways. There is a long list of genetic causes of liver disease +/- cholestasis as well. 5. Cholestasis is associated with a multitude of mental health symptoms including: anxiety, chronic fatigue, sleep disorders (itching disrupts REM sleep, leading to altered daytime performance), amnesia and altered mental performance. 		

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<p>Medication Therapy & Adjustments</p>	<ol style="list-style-type: none"> 1. It seems the transplant team has tried to relieve the biliary stricture which is believed to be the main cause of her pruritus. It was not successful and the team has decided to hold any further intervention due to patient's multiple comorbid conditions. It may be advisable to discuss with transplant team to try when her general condition improves. (Dr. Tsai) 2. For the pruritis, basic measures such as moisturizing, keeping the room cool, and trimming fingernails can be helpful. Also avoid scrubbing in the shower, which can further irritate and dry out the skin 3. Ursodiol can paradoxically also <u>increase</u> pruritis. Consider discussing a trial off ursodiol with the transplant team and see if this might help the itching. Ursodiol is usually continued for life in disorders such as PBC (primary biliary cirrhosis) but in this scenario, the transplant team may be okay with discontinuation 4. Only about 67-80% of cholestatic patients respond to UDCA/URSO. Other considerations would be rifampin, sertraline, obeticholic acid and cholestyramine. Targeted UV light sometimes helps, sometimes makes it worse. I have had patients improve with biliary diversion. (Dr. Haight) 5. There was discussion of the effectiveness of the medication. The current recommendation is to use cholestyramine which is FDA approved for pruritus. There is off label use of other medications such as rifampin, naltrexone, sertraline with varying degrees of efficacy. (Dr. Tsai) 6. The underlying mechanism for pruritus is not known and most people believe there are multiple factors. Currently lysophosphatidic acid and autotoxin may be the reason and factor X was mentioned as the precursor of these substance. (Dr. Tsai) 	<ol style="list-style-type: none"> 1. What other possible treatment plans are available for biliary stricture and/or bile accumulation? 2. Some basic measures to relieve pruritis 3. Are there any pitfalls of using Ursodiol? 	<p>Dr. Tran's pruritis (itching) protocol, which includes both behavioral and pharmacologic measures</p>
<p>Vaccination</p>			

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<p>Social Determinants of Health (SDOH)</p>			
<p>Behavioral Health</p>	<p>1. The reason for mental disturbances could be due to polypharmacy. It is often a challenge in the elderly to sort out the cause and effect of depression and anxiety with their treatments. Advice was to get a clinical pharmacist to evaluate and simplify the medical regimen, particularly the use of benzodiazepines, antihistamines and psychiatric medications. If this is not possible, consider a geriatric consultation.</p>	<p>2. What is the reason for patient's mental disturbances and nightly hallucinations?</p>	<p>Eslimi Esfahani D, Zarrindast MR. Cholestasis and behavioral disorders. Gastroenterol Hepatol Bed Bench. 2021 Spring;14(2):95-107. PMID: 33968336; PMCID: PMC8101523.</p> <p>Xin Yee Jin, Tahir Mahmood Khan, Quality of life among patients suffering from cholestatic liver disease-induced pruritus: A systematic review, Journal of the Formosan Medical Association, Volume 115, Issue 9, 2016, Pages 689-702, ISSN 09296646, https://doi.org/10.1016/j.jfma.2016.05.006.</p> <p>Ostroumova O.D., Shikh E.V., Shikh N.V., Ostroumova T.M., Isaakyan Y.A. Drug-induced liver injury with cholestasis in the neurologist and psychiatric practice. Neurology,</p>

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			Neuropsychiatry, Psychosomatics. 2022;14(1):14-21. https://doi.org/10.14412/2074-2711-2022-1-14-21
Screening			
Risk Reduction	<ol style="list-style-type: none"> 1. Reduce polypharmacy by removing unhelpful, unnecessary medications. This patient is taking multiple medications often for the same indication which could ultimately cause harm via drug-drug interactions or adverse effects. Beware of medications that have sedating effects and discuss discontinuation of the highest risk ones at next follow up appointment with transplant team (every transplant team has a clinical pharmacist) or PCP (for example, if patient is on ursodiol and naltrexone for cholestatic pruritis, may want to investigate if the use of a second agent provides additional benefit). 	<ol style="list-style-type: none"> 1. This patient appears to be affected by polypharmacy given multiple medications prescribed for the same indication 	
Other (this is f/u to 091222 session recommendations)	<ol style="list-style-type: none"> 1. Adjuvanted vaccines are not well-studied in dialysis patients. Three-series high-dose vaccine is recommended for hemodialysis patients. 2. There were reports of using HAV plus HBV vaccination that may increase the immunogenicity of the HBV vaccine. (Dr. Tsai) 3. After discussion with nephrologist, the current state and federal regulation is to separate HBsAg (+) patients in a different room and to use a separate HD machine. Isolation rooms may not be available at every dialysis center. HCV AB (+) patients are not being separated. (Dr. Tsai) 	<ol style="list-style-type: none"> 1. Vaccinations for hemodialysis patients 2. Surface Ag (+) patients at HD centers 	For further information regarding high-dose vaccine in HD patients, see the resources page under “case presentation” at our website.

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.

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