Hepatitis B Echo Topic: Co-infections

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HBV and HCV co-infection

HBV and HCV co-infection

- Prevalence not well known
- Occurs mostly in countries where these 2 infections are endemic, and populations higher risk for parenteral transmission
- 2016 study from Taiwan: 111 patients with HBV/HCV co-infection, 10-year follow-up
  - Higher risk of cirrhosis and HCC compared to HBV infected patients alone

HBV and HCV co-infection

- Everyone with HBV infection should be tested for HCV, and vice versa
- Goal of treatment is the same as with mono-infection: to reduce risk of progression of liver disease (cirrhosis and HCC)
- If HCV RNA positive → treatment for HCV is recommended
  - For HB surface Ag positive patients who meet criteria for starting HBV antiviral therapy, start HBV antiviral therapy at the same time as HCV direct-acting antiviral (DAA) therapy
  - No significant drug interaction between HBV and HCV therapy
- For patients with isolated HB core Ab positive, monitor ALT
  - If ALT fails to improve or increases despite HCV RNA downtrending with DAA therapy → Check HBV DNA and surface Ag and start HBV antiviral therapy if positive

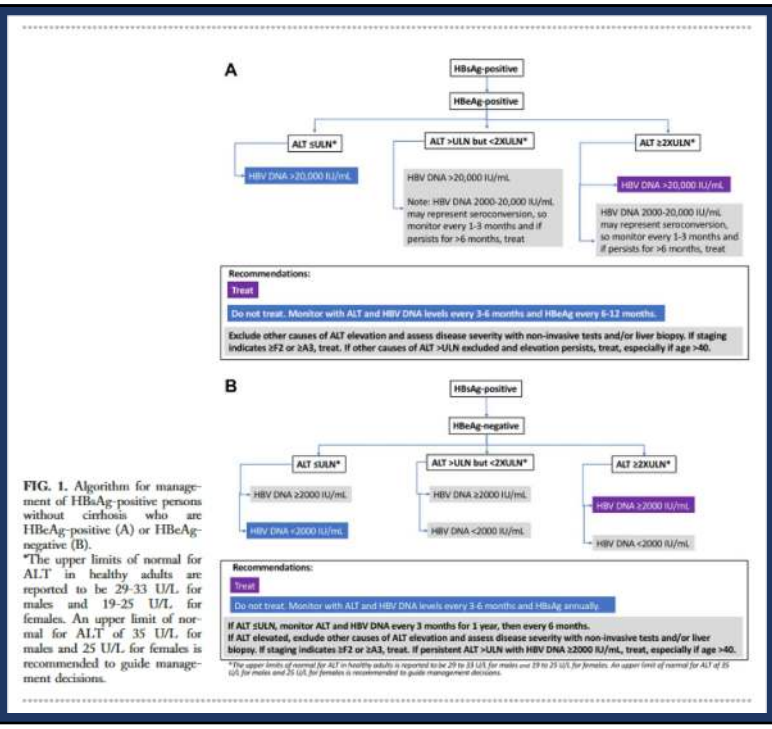

FIG. 1. Algorithm for management of HBsAg-positive persons without cirrhosis who are HBeAg-positive (A) or HBeAg-negative (B).
*The upper limits of normal for ALT in healthy adults are reported to be 29-33 U/L for males and 19-25 U/L for females. An upper limit of normal for ALT of 35 U/L for males and 25 U/L for females is recommended to guide management decisions.

Terrault et al.

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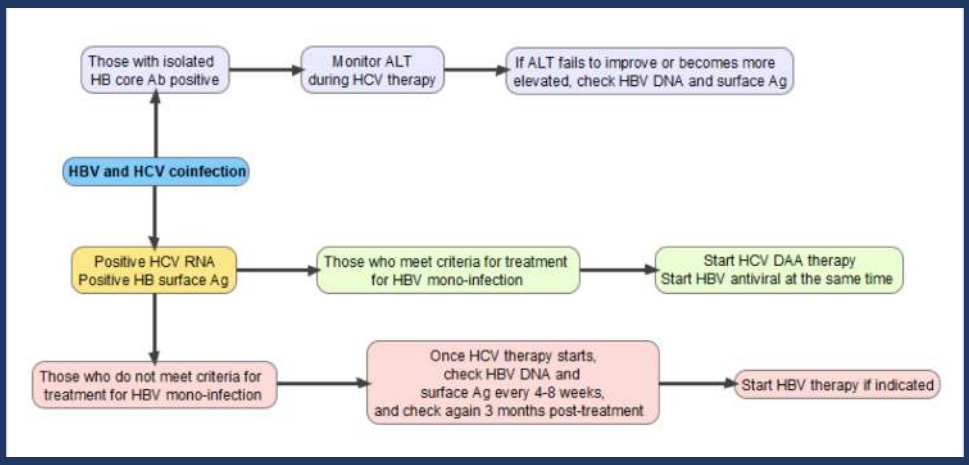

HBV and HIV co-infection

HBV and HIV co-infection

- HIV infection: 37 million people globally
  - 5-20% are co-infected with HBV
- 2012 study in Vietnam
  - 28% of HIV+ subjects who inject drugs were co-infected with HBV
  - 15% of HIV+ subjects who were sex workers were co-infected with HBV
- Liver-related mortality
  - Up to 19 times higher in HIV/HBV coinfected compared to HBV alone
  - Up to 8 times higher in HIV/HBV coinfected compared to HIV alone

HBV and HIV co-infection

- All patients with HBV/HIV co-infection should be started on ARVT (antiretroviral therapy), regardless of CD4 count
- Treatment is recommended indefinitely
- ARVT should have 2 drugs with activity against HBV
  - Tenofovir (TDF or TAF) plus emtricitabine or lamivudine
- If a patient is already on ARVT and found to have HBV infection, ARVT should be changed to cover HBV as above
- When ARVT is altered, make sure to include HBV drugs as above

HBV and HIV co-infection

- IRIS (immune reconstitution syndrome): worsening of symptoms related to an opportunistic infection in an HIV infected patient following initiation of ARVT
  - Typically occurs in the first few weeks of treatment
  - Can occur after drugs with HBV activity are discontinued

Hepatitis D

Hepatitis D infection

- HDV infection requires presence of HBV infection
- Hep D testing is recommended in HB surface antigen positive patients who are considered at higher risk:
  - HIV/HBV co-infected, those who inject drugs, men who have sex with me, those from countries where HDV is endemic
- Also consider HDV testing in patients with high ALT but low/undetectable HBV DNA
- In my practice, we check HDV in all HBV infected patients once
  - Retesting to be considered depending on risk/exposure
- Screening test: HDV Ab, if positive confirm with HDV RNA

Hepatitis D infection

- Treatment limited
- Peg-Interferon for 12 months
- If HBV DNA positive, HBV therapy should be started as well
- New therapy: bulevirtide
  - Binds and inhibits sodium/bile acid cotransporter → blocking entry of HDV and HBV into hepatocytes
  - Approved for use in Europe, not FDA approved yet

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- Terrault N et al. Update on prevention, diagnosis, and treatment of chronic hepatitis B: AASLD 2018 hepatitis B guidance. Hepatology 2018; 67(4): 1560-1599.
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