

### Question 26 – February 5

A 53 year old man presents with ascites. He has a history of chronic hepatitis B, and a liver biopsy 5 years ago showed bridging fibrosis. He has never been treated for hepatitis B. The physical exam is notable for jaundice, spider angiomas, ascites and mild asterixis.

Laboratory values are as follows:

ALT 86 U/L

bilirubin 1.3 g/dL

albumin 2.9 g/dL

INR 1.3

hemoglobin 11.8 g/dL

leukocyte count 49,000/mm<sup>3</sup>

creatinine 1.2 mg/dL

HBsAg, IgG anti-HBc, and HBeAg are all positive

HBV DNA is 600,000 IU/mL

What is the most appropriate next step in management of this patient?

- A. Lamivudine
- B. Tenofovir
- C. Adefovir
- D. Peginterferon
- E. Liver transplantation

### Answer: B

This patient has decompensated liver disease from hepatitis B, with a positive HBeAg and a high HBV DNA level. This is consistent with HBeAg-positive chronic active hepatitis B and therefore treatment is advised. Ideal treatment should result in rapid improvement in HBV DNA accompanied by a low risk of resistance. Tenofovir or entecavir would be the best treatment options for this patient as they have low rates of resistance (1.2% and 0%, after 5 years treatment, respectively). Lamivudine would likely result in a rapid decrease in HBV DNA but is accompanied by a high rate of resistance and generally is not advised for patients with decompensated cirrhosis. Resistance with adefovir is lower than that with lamivudine but is still high enough that it would not be the first choice for a patient with cirrhosis. Peginterferon can be effective for hepatitis B but should not be administered to patients who have decompensated cirrhosis. The patient certainly should be considered for liver transplantation, although therapy before liver transplantation is advised. In addition, decreasing HBV DNA prior to transplantation is recommended in order to reduce the risk of post-transplant HBV recurrence.

**Reference**

Trepo C, Chan HL, Lok A. Hepatitis B virus infection. *The Lancet*. 2014 Jun 18. Epub ahead of print.